

Store and Online Grocery Shopping- A Customer Value Perspective

R Alamelu and L Meena

Abstract

Searching product information and buying goods online are becoming increasingly popular activities, which would seem likely to affect shopping trips. Consumers are posited to make purchasing decisions based on the value they derive from a service provider. It is further argued that the value drivers of shopping for a basic need, such as groceries, are distinct from those for other goods. Within the grocery acquisition activity, it was the contention in this study that the value drivers of online grocery shopping are different than those of store grocery shopping. By relating individual value components to behavioral loyalty in these two grocery shopping formats, the study was able to verify the significance of value in the prediction of loyalty, and compare between consumers of the two shopping mediums in terms of the importance they place on different components of value. Given the physical differences that exist between shopping in a store versus shopping online, this study specifically investigated the influence of the need to touch, smell, and see goods, and the need to interact with people in the grocery-shopping context. Overall the study found that consumers' assessments of value components do predict behavioral loyalty, and that store and online shoppers are indeed influenced by different value considerations. Store shoppers placed the most value on service quality and goods assortment, while online shoppers were most influenced by convenience, service quality, and perceived monetary sacrifice. In addition, desire to touch and the need for social interaction were found to relate significantly to the loyalty of online shoppers, but not store shoppers. Results from this exercise suggest that a meaningful rise in online grocery usage is not likely to occur until over ten years from now. This finding relates closely with the idea that it will take a new generation of consumers to readily, and in critical mass, adopt what today seems like a "new" way of buying groceries.

Keywords: Store grocery shopping, Online grocery shopping, Customer value drivers

1. Introduction

Internet grocery is a unique category of commerce and can provide very interesting insights for a number of reasons including: - Grocery shopping can be considered a routine, basic, and necessary task in consumers' daily lives. Thus, the adoption of Internet

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grocery shopping can be seen as a significant shift in consumer lifestyle. - The Internet grocery business model differs from those of other e-commerce sites. Due to the need to direct distribute to customers (for perishable goods), Internet grocers can establish a relationship with their customers through their delivery personnel. This personal interaction is generally above and beyond that which is Internet grocery is a unique category of commerce and can provide very interesting insights for a number of reasons including: - Grocery shopping can be considered a routine, basic, and necessary task in consumers' daily lives. Thus, the adoption of Internet grocery shopping can be seen as a significant shift in consumer lifestyle. - The Internet grocery business model differs from those of other e-commerce sites. Due to the need to direct distribute to customers (for perishable goods), Internet grocers can establish a relationship with their customers through their delivery personnel. This personal interaction is generally above and beyond that which is provided by other online businesses that rely only on an electronic interface. In the continuum between brick and mortar business and e-commerce, Internet grocers are positioned somewhere in the middle. This position provides an interesting vantage point into issues faced by both ends of the retail spectrum.

2. Purpose of the study

This study seeks to develop and test a framework from which to synthesize consumers' perceptions of value in a grocery-shopping context. It is posited that a customer's loyalty to a particular grocery provider is influenced by a set of value components (Jones & Sasser, 1995; Zeithaml, Berry, & Parasuraman, 1996). In this case, value components are those factors that are received and given by a consumer in an exchange process such as goods and services for money and time/effort. In addition to these utilitarian value components, this study will also evaluate the effect of hedonic factors, such as touch and social contact, on customer loyalty in this context. This study will also compare value drivers pertinent to customers shopping in store versus those shopping on the Internet to confirm anecdotal evidence suggested in existing literature. It is expected that the results of this study will be theoretically sound and will provide practical and descriptive insight into consumer behavior relating to grocery shopping that would be of benefit to industry practitioners.

3. Objectives of the Study

- To find out whether the medium of grocery purchase influences customer loyalty using demographic factors
- To identify the factors act as value drivers towards customer grocery purchase
- To know the impact of the value drivers towards the grocery purchase medium through online and stores.
- To offer valuable suggestions for the online and store shoppers for achieving customer loyalty through the mentioned value drivers.

4. Review of Literature

The Grocery Shopping Context

As per research report, India is the sixth largest grocery market in the world where 41.6 per cent people are below the poverty line. The food and grocery segment constitutes about 70 per cent of the \$470 billion retail market in India. While only 5-8 per cent of this market is organized, the rest are actually disorganised mom and pop shops run by family members. But the trend is fast changing. More and more food and grocery stores are falling in line and growing at a rate of 18.4 per cent year after year. Now with the growth in nuclear urban couples, internet friendly shoppers, rising disposable incomes and rising ecommerce reliability, times are changing. Grocery e-tailing has caught on as one of the new verticals and spawned many a startups, including a few mentioned above. According to a study conducted by D'Essence Consulting, 85 per cent of those who shop for groceries online are in the age bracket of 22-45. While studies show more men shop online, women e-shoppers are also growing rapidly. One main purpose of this study is to provide insight into value components of grocery shopping. To assist in an understanding of how general customer value literature relates to the context at hand, an overview of the grocery shopping context is reviewed here. To simplify the nomenclature in this study, from henceforward the term "grocer" will be used to identify any grocery retail providing firm, whether operating a brick and mortar store or having only an online presence. The term "store" identifies a grocery provider with an actual brick and mortar storefront, or a chain of stores.

Trends in Grocery Shopping

It is generally accepted that making a trip to the grocery store is considered a basic necessity of daily life. Recent statistics find that consumers shop for groceries twice per week on average (FMI, 2000). While this may still be the case, changing consumer lifestyles and increasing marketplace options may alter this routine practice in the future. With the rise in dual income households, consumers are increasingly reporting perceived time shortage and the need for convenience (Dailey, 2000). There are at least two strong implications of this trend. The first is the need to reduce effort in meal preparation and the second is the need to reduce effort in the procurement of groceries. Consequently, these two trends threaten the traditional grocery store in two ways: (1) meal procurement may shift from the grocery store to food service providers, both in the form of take-out and dine-in, and (2) consumers may seek to find an alternative to acquiring groceries without having to physically go to the grocery store. The growing interest in convenient meal preparation has gained significant interest in the food industry. Dubbed with the term "meal solutions", the concept suggests that consumers view meal preparation as a problem and will seek to solve that problem. Growth in meal solution seeking behavior is evidenced by increased business in food service, supermarket delis, and easy-to-use grocery items (e.g. frozen meal kits) (Harrison, 1999). The second implication of increased need for convenience is how to reduce the effort of grocery acquisition. Internet grocers believe that they offer a solution to this need by providing a means for consumers to shop from home and have groceries delivered to the door

(Albertsons.com, 2001). While this shopping medium may seem superior to store shopping, empirical evidence suggest that consumers vary in their affinity for grocery shopping in the store. In other words, while Internet shopping may offer superior value to some consumers, many other consumers still find greater value in store shopping.

Shopping on the Internet

Although originally developed as a channel for communication and information, the Internet has rapidly become a major vehicle for commerce. And as a medium for commerce, the Internet is the epitome of convenience. A typical transaction conducted via the Internet allows a consumer to browse, order, and pay for goods from a computer. After a certain time frame, the customer's order will typically arrive at his/her home allowing for the full sequence of a shopping process to occur in the comforts of his/her own home. The World Wide Internet Opinion Survey by Tech and Talk City suggests that Internet users are continuing to move toward fully embracing marketing and commerce on the Internet. Their study found that 58% of those surveyed stated that the Internet has changed the way they shop (Direct Marketing, 1999). About 70% of all Indian netizens are on Facebook i.e approx 61.5 Mn. (No 3 in the world). 15 Mn Indians are on Twitter. India has the 4th largest base of Twitteratis. 19 Mn Indians have a LinkedIn profile which is the 2nd highest in the world. 35 Mn unique visits in a month with a reach of almost 55% of Indian online population in 2014. This attitude affects purchase decisions using digital influence are of Global Electronics-81% Appliances-77% Books-70% Music-69% Clothing-69% Cars-68% Food/Beverages -62% Personal Hygiene - 62% Personal Health/OTC- 61% Hair Care-60%.

Grocery Shopping on the Internet

In this study, the term Internet grocery shopping is defined as the process of ordering groceries via the Internet and having them delivered to the home. Within this definition, there were at least two business models that initially existed. The first is referred to as "pure-play". These Internet grocers were companies that were not affiliated with a brick and mortar grocery company. An example of a pure-play Internet grocer was Webvan, which maintained warehouses and a fleet of trucks to stock and deliver orders directly to their customers. The second model is a hybrid or partnered online grocer in which inventory is held by a brick and mortar store (or its warehouse) (Lorek, 2001). Thus, this type of model allows the grocer to sell its central inventory through two channels. Given the charm of the Indian consumer, the churn in the Indian online retail scenario will continue. This information report attempts to delineate key trends that are likely to define the Indian online retail sector in 2014.

What can be more exciting than a billion+ people contributing approximately \$700b to \$750b (FY15) retail market with a forecasted growth of about 13-16% (One of the source: India Retail sector report 2013 - Michael Page). A penetration of just 8% to 10% by the organized sector and a 200 million+ urban consumers has captured the imagination of giant corporations on either side of the Atlantic and Pacific oceans. (India Retail sector

report 2013 – Michael Page).E-Commerce (B2C, C2C) revenues have been growing at a whopping ~50% year on year with ~\$10b (2011). This is estimated to be around \$40b (2015) if it sustains the same growth rate. (Rebirth of e-Commerce in India, 2011 – E&Y). 81% of the above e-Commerce transactions are from domestic travel segment. (Rebirth of e-Commerce in India, 2011 – E&Y).Close to 33% of organized retail market is from Clothing and Accessory segment, 22% from consumer electronics and gaming. (India Retail sector report 2013 – Michael Page).Annual household income has been increasing and in FY 15(e), of the total 246m households in India only 29% fall under the bottom of the pyramid as against 64% in FY 06 on a 204m household base. Annual household income increased from \$2632 (2005) to \$3823 (2015e) to \$6790 (2025e). (Source: Rebirth of e-Commerce in India, 2011 – E&Y). Falling communication costs, increasing PC, broadband internet penetration, Internet is up from 5.5m (2000) to 300m in FY15e, broadband user base 51000 (2001) to 150m in FY15e. (Source: Rebirth of e-Commerce in India, 2011 – E&Y). Increasing credit (CC) and debit card (DC) penetration with higher value limits for spending. From 4.2m (CC), 0.3m(DC) in 1999 to 18m(CC), 228m(DC) in 2011 and expected to reach 73m(CC), 350m(DC) in FY15(e).(Source: Rebirth of e-Commerce in India, 2011 – E&Y).Despite the thinning out of the competitive landscape, surviving companies are continuing to grow their businesses to establish an infrastructure for future anticipated growth.

Store vs. Internet Grocery Shopping

There are a number of objective differences that generally exist between shopping for groceries in a store and through an Internet provider. While these objective differences between the two shopping environments exist, consumers may not necessarily perceive or be influenced by these differences. For example, time spent to purchase a selection of grocery items from a store generally takes longer than buying the same items online. However, a consumer may not perceive that store shopping takes materially longer. By specifically testing the relationship between the conception of value and grocery shopping, a better explanation of this phenomenon can be made. It is acknowledged that there are consumers who shop for groceries exclusively from stores and there are consumers who do most of their grocery shopping online. The approach of this study assumes that there are probably no consumers who buy 100% of their groceries online. Thus, the spectrum of shoppers actually ranges from those who never purchase groceries online to those who purchase most of their groceries online. Despite the continuum on which consumers are likely to be distributed, in this study consumers were only investigated in two groups. The two groups were divided based on each consumer's self-report of where they spend most of their grocery purchases: in store or through the Internet. While this simplification may result in minimized variations between the dichotomized groups, it is argued here that this approach will actually allow significant differences between the two groups to emerge. Given the significant differences found in past Internet shopper profiling studies (Donthu & Garcia, 1999; Fetto, 1999), it follows that consumers who regularly purchase most of their groceries online are likely to hold different perceptions and opinions of their shopping experience compared to those who

regularly purchase most of their groceries from stores. In addition, since consumers were asked to provide input specifically related to their experience shopping at their respective primary providers, it was believed that these perceptions and opinions would be different enough to be revealed through statistical analysis of this study.

Components of Value in Grocery Shopping

What is given: Sacrifice = Money + Convenience (Time + Effort). Consumers sacrifice both money and other resources, such as time and effort, to obtain products and services (Zeithaml, 1988). To some consumers, monetary sacrifice is most important, while for others it may be time. Previous investigation into the relationships between price, quality, and value (Dodds & Monroe, 1985; Monroe & Dodds, 1988) support the contention that value is a function of quality and sacrifice. They argued that while there are a number of possible personality traits along which to classify shoppers, two dimensions in particular are most relevant to grocery operators; namely, concern for a store's pricing policy and concern for a store's customer service practices. By presenting the dimensions as dichotomous variables of high and low customer involvement, Williams et al. (1978) identified four grocery shopping orientations are described as follows: - Apathetic Shopper: These shoppers had no preference with regard to price or service, and were found to be quite loyal to their stores. - Convenience Shoppers: The most loyal of all the groups, these shoppers felt that they were receiving convenience, but at a high price. - Price Shoppers: These shoppers had lower loyalty and perceived that their favourite stores charged low prices, but at a sacrifice to quality and convenience. - Involved Shopper: These consumers held positive images of their favorite stores, feeling that they received convenience and high quality for a low price. Interestingly, this group was found to be the least loyal of all the groups. By focusing only on dimensions that are conceptually parallel to monetary sacrifice, convenience, and service quality, Williams et al. (1978) achieved a distinct grouping of consumers. This suggests that consumption choices are driven more by convenience than by cost. Meanwhile, however, price-focused cues continue to dominate the marketing strategies of grocery stores with the aggressive use of comparative advertising, coupons and special deals. What is Received: Product = Service + Goods. Given the chosen approach of this study, while multiple dimensions may exist, emphasis is placed on the conceptualization of a single factor that may serve as a proxy for perceived service quality (rather than on each of the multiple dimensions).

Using available technology, Internet grocery providers are able to customize the user interface with features such as personalized shopping lists and customizable product sorting (e.g. based on nutritional attributes, ingredients, unit price, etc.). To summarise, the present study consists of the following constructs: perceived service quality, perceived goods assortment, perceived information richness, perceived monetary sacrifice, perceived convenience, desire for sensory stimulation and need for social contact.

5. Methodology

A cross-sectional, survey sample design was employed to collect data from two grocery shopper groups (store and online). This study necessitated the collection of data from two types of customers: 1) those who spent most or all of their grocery dollars within stores, and 2) those who spent most of their grocery dollars with an online grocer. The two groups had to be chosen from within the same regional markets to allow both to have the same opportunity of shopping from a store or an online grocer. In this regard, the researchers adopted area sampling method to include four major cities like Chennai, Coimbatore, Trichirappalli and Madurai. Questionnaires were to be completed voluntarily by the households' primary grocery shopper age 18 years and over. The constructs were subjected to reliability analysis using Cronbach alpha during pilot study which extended for a week covering 52 respondents. The survey consisted of 468 respondents. The survey was carried out from April 2014 to May 2014. The responses were analyzed using SPSS 20, inferences statistics, chi-square analysis and linear multiple regression.

6. Data Analysis and Interpretation

Once data was collected, it was subjected to a series of quantitative analyses procedures. In this study, analyses were divided into two major portions: 1) difference between Internet and store grocery shoppers on demographic basis and 2) impact of various customer values on the purchase medium (on store and online). Sample Description

Because the data for this study was essentially a non-randomized, convenience sample within a geographical region, its demographic properties were not expected to resemble that of the population. However, for comparison purposes, secondary demographic information of the sampled region was obtained (Scarborough Research, 2001a). Typically referred to as supermarkets, these stores are defined as full-line, self-service grocery stores and the top ten online grocer websites were contacted for their customer base. From their list, 200 respondents were contacted through mail. In total, two hundred responses from store purchasers and 128 responses from online purchasers were used for the present study.

Demographics

Table 1: Chi-square analysis between opinion about status of online and store purchaser's demographic characteristics of the respondents

Demographic variable	Classification		χ^2	Sig.
	1	2		
No. of adults >18 yrs. in household (Online)	1	2	77.418	0.000#
	53%	47%		
No. of adults >18 yrs. in household (Stores)	1	2		

Household income (Online)	<= Rs.10,000	10001-20000	20001-30000	30001-40000	40001-50000	More than Rs.50000	29.69	0.001#
	8%	12%	20%	28%	14%	18%		
Household income (Stores)	<= Rs.10,000	10001-20000	20001-30000	30001-40000	40001-50000	More than Rs.50000		
	12%	18%	20%	24%	18%	8%		
Education (Online)	Up to primary school level	Higher secondary level	Diploma, ITI, etc	Under graduate level	Post graduate level	Professional	49.509	0.000#
	10%	20%	10%	15%	15%	30%		
Education (Stores)	Up to primary school level	Higher secondary level	Diploma, ITI, etc	Under graduate level	Post graduate level	Professional		
	10%	10%	15%	15%	20%	20%		
Age of primary grocery shopper (Online)	18-24 years	25-34 years	35-44 years	45-54 years	55-64 years	Above 65 years	1.876	0.321
	20%	15%	30%	15%	20%	-		
Age of primary grocery shopper (Stores)	18-24 years	25-34 years	35-44 years	45-54 years	55-64 years	Above 65 years		
	10%	35%	25%	20%	10%	-		
Gender (Online)	Male	Female					2.994	0.224
	35%	65%						
Gender (Stores)	Male	Female						
	35%	65%						

(#denotes association at 5%)

Chi square tests between store and online shoppers found the two groups to be significantly different in income level. Comparison of demographic variables revealed that store and online shoppers significantly differed in the number of children less than 17 years and younger, income, and gender composition of shoppers. Online-shopping households had a greater number of younger children, which is related to the study's findings that online shoppers place greatest importance on the convenience aspect of online grocery shopping. Theoretical and empirical evidence suggests that the number of children in a household is positively related to the amount of time spent on housework (Bianchi, Milkie, Sayer, & Robinson, 2000; Coverman, 1985; Kiger & Riley, 1996). As such, the presence of young children in a household may encourage the use of an online grocery provider in order to reduce both the time and effort necessary to procure

groceries. Although it is accepted that grocery procurement is generally viewed as a domestic and thus, a feminine activity, (Bianchi et al., 2000; Otnes & McGrath, 2001) it was interesting to find that the percentage of male grocery shoppers was significantly greater in store shopping (24.9%) than it was in online shopping (11.8%). This finding is contrary to surveys of Internet shoppers that have found time and again that men tend to “out shop” women when it comes to e-shopping (Donthu & Garcia, 1999; Li et al., 1999).

The lower participation of males in online grocery shopping relative to store grocery shopping may be attributed to the shift in gender attitudes to household work. The sample of this study had over 82% of store and 90% of online shopping households with two or more adults. Although not specifically measured, it is presumed that these households are largely comprised of a man and a woman who are living as a couple. Past studies have found that in such households, tasks are largely specialized by gender whereby women are responsible for core housework like cooking and cleaning, while the men are responsible for yard and home maintenance (Bianchi et al., 2000). While the grocery-shopping task is still largely a woman’s burden, past works have found an increasing proportion of men taking responsibility for this activity (Polegato & Zaichkowsky, 1999). Indeed Otnes (2001) proposes, “in general, gender roles have been influenced by urbanization, the increase of women in the workforce, the women’s movement, the introduction of birth control, and the increase in women earning more than their spouses.” Otnes (2001) suggests that given the factors affecting gender roles in our society, a new theory of male shopping is warranted. While an increasing number of men no longer view shopping as a necessarily feminine activity, it is suggested that men are motivated to shop in order to achieve success; as described by Otnes (2001), “... they can get the job done where others have failed”. From this perspective, it is thus inferred that males performing the grocery shopping activity of the household perceive to be accomplishing a task that significantly contributes to the household by relieving the burden off the woman of the household. With the advent of online grocery shopping, however, the burden of grocery acquisition is greatly diminished. No longer does someone need to take on the challenge of travelling to and from a store and physically shopping for the household’s groceries.

As Otnes (2001) suggests, when a male’s ability to achieve shopping success is blocked, shopping can be very frustrating. Extending this idea, it can be speculated that since males are no longer relieving the physical burden of grocery shopping when groceries are purchased online, there is less motivation to perform the grocery-shopping task. This may explain the lower participation of males in grocery shopping online, relative to shopping in store. The finding that online shoppers in the study possess significantly higher income than store shoppers is consistent with empirical evidence indicating that consumers who shop online tend to have higher income than shoppers in general (Donthu & Garcia, 1999). Certainly the need to have the financial resources to afford access to the Internet acts as a natural barrier for the participation of individuals with lower income in Internet consumption (US Department of Commerce, 2000). However, from a sociological

perspective, Comor (2000) provides further explanation by suggesting that better-paid individuals tend to work longer hours. Consequently, those with higher incomes are more interested and more willing to utilize the Internet in order to gain free time. Those consumers who have more time but less income to spend, on the other hand, are less motivated to do their consumption online. The implication of this line of reasoning is that Internet consumption among the affluent may continue to grow, while a true online mass market lags behind due to the trend of increasing wage disparity between the rich and the poor (Jones & Weinberg, 2000). While there are many other factors that drive the growth of Internet commerce, income and purchasing power are definitely significant factors in shifting consumption from brick and mortar to online retailers (Comor, 2000).

Although the literature suggests that, in general, online shoppers tend to be younger and higher educated (Donthu & Garcia, 1999; Li et al., 1999;), the sample of this study did not reflect a significant difference in age and education levels between the store and online shopper groups. This occurrence may point to the fundamental need for groceries in the daily lives of people. Regardless of their demographic profiles, all households must purchase groceries in order to meet what Maslow (1970) defines as their most basic physiological need. Thus, contrary to findings in studies of online shopping for other discretionary, higher need items, such as apparel, electronics, and books, the incidence of online grocery shopping appears to not be related to age or education levels.

Given the operational difference in how transactions in the two shopping mediums are implemented, it was interesting to find that both store and online groups had the same habits with regard to shopping list preparation. Past studies have found no significant differences in shopping list usage on the basis of age, gender, and household income, and significant difference on the basis of education level and the presence of children (Thomas & Garland, 1993).

Model of status of overall consumer values formed out of opinion towards grocery store purchase

A model of status of overall consumer values has formed from opinion towards grocery store purchases such as perceived service quality, Perceived Goods Assortment, Perceived Information Richness, Desire for Sensory Stimulation, Need for Social contact, Perceived Monetary Sacrifice, Perceived Convenience as predictors.

Table 2: Model of status of overall consumer values formed out of opinion towards grocery store purchases

R	R Square	Sum of Squares	Mean Square	F	Sig.
.921	.813	1024.784	5.992	37.125	.000
		83.023	.188		
		182.623			

Estimation of status of overall physical condition = a + b₁X₁+ b₂X₂+.....+ b₁₅X₁₅

The power of the regression model is represented by the R² is highly healthy .813 and the F test of the model shows that the significance of the model is high as the significance of F is .000 which is less than .05. To decide which variables are good explanatory variables, t-test for each variable is analysed and presented in table below.

Table 3: t-test and regression coefficients accepted by the model for store purchase

Predictors	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Mean	S. D
	B	Std. Error	Beta				
(Constant)	2.623	.191		13.756	.000		
perceived service quality	-.145	.038	-.211	-3.773	.000*	2.9615	.92700
Perceived Goods Assortment	-.227	.038	-.312	-5.934	.000*	2.9487	.87649
Perceived Information Richness,	.281	.032	.430	8.880	.000*	2.7564	.97751
Desire for Sensory Stimulation	.067	.033	.109	2.064	.040*	2.9615	1.03194
Need for Social contact	.052	.032	.068	1.624	.105	2.7051	.84433
Perceived Monetary Sacrifice	.019	.050	.019	.382	.703	3.0641	.64797
Perceived Convenience	.005	.040	.007	.130	.896	2.8846	.80119

* = significant at 5% (If the sig. of t is less than 0.05 it indicates that the concerned variable is significant in the model)

The model's t test shows that the predictors namely, Perceived Goods Assortment, Perceived Information Richness, Desire for Sensory Stimulation and Perceived Monetary Sacrifice are significant at 5% in the estimation of consumer values towards store purchase. Further it shows that the predictors namely, physical health conditions, access to adequate food, fuel, drinking water, telecommunications, are not significant at 5% in the estimation of status of overall store purchases.

Model of status of overall consumer values formed out of opinion towards online grocery purchase

A model of status of overall consumer values has formed from opinion towards grocery store purchases such as perceived service quality, Perceived Goods Assortment,

Perceived Information Richness, Desire for Sensory Stimulation, Need for Social contact, Perceived Monetary Sacrifice, Perceived Convenience as predictors.

Table 4: Model of status of overall consumer values formed out of opinion towards online grocery purchases

R	R Square	Sum of Squares	Mean Square	F	Sig.
.745	.804	789.67	6.238	31.25	.000
		78.76	.286		
		127.120			

Estimation of status of overall physical condition = a + b₁X₁+ b₂X₂+.....+ b₁₅X₁₅

The power of the regression model is represented by the R² is highly healthy .804 and the F test of the model shows that the significance of the model is high as the significance of F is .000 which is less than .05. To decide which variables are good explanatory variables, t-test for each variable is analysed and presented in table below.

Table 5: t-test and regression coefficients accepted by the model for online grocery shopping

Predictors	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Mean	S. D
	B	Std. Error	Beta				
(Constant)	2.623	.191	-	13.756	.000		
perceived service quality	-.227	.038	-.312	-5.934	.000*	2.9487	.87649
Perceived Goods Assortment	.019	.050	.019	.382	.703	3.0641	.64797
Perceived Information Richness,	.281	.032	.430	8.880	.000*	2.7564	.97751
Desire for Sensory Stimulation	.005	.040	.007	.130	.896	2.8846	.80119
Need for Social contact	.052	.032	.068	1.624	.105	2.7051	.84433
Perceived Monetary Sacrifice	-.145	.038	-.211	-3.773	.000*	2.9615	.92700
Perceived Convenience	.067	.033	.109	2.064	.040*	2.9615	1.03194

** = significant at 5% (If the sig. of t is less than 0.05 it indicates that the concerned variable is significant in the model)*

The model's t test shows that the predictors namely, perceived service quality, Perceived Information Richness, Perceived Monetary Sacrifice, Perceived Convenience are significant at 5% in the estimation of status of overall online purchasers. Further it shows that the predictors namely, Perceived Goods Assortment, Desire for Sensory Stimulation and need for Social contact are not significant at 5% in the estimation of status of overall physical condition.

7. Discussion and Conclusion

Within the store grocery-shopping context, only values from goods assortment and service reliability related significantly with loyalty measures. In the online grocery shopping context, however, all value drivers, except for information richness, were significantly related to loyalty. The finding that information richness (in stores or on websites) was not significantly related to customer values in either shopping medium may serve as a confirmation that out-of-store/website information (e.g. advertisements, circulars, etc) may indeed be the primary method by which grocery customers acquire most of their buying decisions (Fletcher, 1987; Thomas & Garland, 1993). The immaterial role that in-store information plays in influencing loyalty in this context has an interesting managerial implication. For grocers this evidence may signal the need to weight promotion resources more toward advertising and information dissemination in non-store settings, as opposed to in-store promotion efforts such as information kiosks and product demonstrations/sampling. Fundamentally, store shoppers valued goods assortment and reliable service the most, while online shoppers were most influenced by convenience, followed by reliable service and, interestingly, monetary sacrifice. The importance of monetary sacrifice to online shoppers can be seen as a warning for online grocers to recognize that while online shoppers may be willing to make the trade-off between convenience and monetary sacrifice, the monetary sacrifice they are willing to endure for convenience appears to be quite limited. In addition, the lower importance of goods assortment exhibited by online shoppers suggests that in their quest to reach profitability, online grocers might be well served to focus on category management efforts in order to maximize return through item reduction (i.e. reducing inventory costs).

For store shoppers, on the other hand, goods assortment, , was the most important predictor of customer loyalty. Thus, while store grocers could also benefit from proper category management efforts, a less stringent standard may need to be used with regard to product elimination. Given that retailing is essentially a service business, reliability of service should be a priority in order to maintain the loyalty of both store and online grocery customers. Desire to touch was found to directly relate to loyalty of online shoppers. Since touching products and looking at product displays are two activities that cannot be done in an online shopping medium, these findings point to a distinct disadvantage those online grocers have in the battle to secure large numbers of highly loyal customers, at least in the short term. It has been suggested that as the generations shift, a drastic increase in the level of comfort with online shopping will ensue. It is likely that as the teens of today (who are more computer-savvy and Internet-dependent) begin

to take on food shopping duties, online grocery shopping will begin to see a growth rate that will take it to critical mass level (Lewis, 2001). Finally, the importance of tasting in the prediction of online shopper loyalty suggests an opportunity for online grocers to increase value to their customers by serving as a conduit for new product introductions and distributing product samples from manufacturers. Such an effort would be beneficial for all parties involved as the manufacturer can reduce their sample distribution costs (e.g. targeted and tracked sampling, reduced labor and postage costs), the online grocer improves its standing with its customers, and the shoppers receive the opportunity try a product they may not have tried before.

8. Implications

The findings of this study generate a number of implications for the grocery industry, academia, and society as a whole. For online grocers, it is critical that convenience and reliable service is constantly at the top of these companies' priority lists. Online grocers need to be diligent in ensuring that total grocery costs relative to the service convenience to their customers, are closer in line with those of store shoppers. While the convenience of online shopping deserves a premium in shoppers' eyes, there is a limit as to how high the premium can go. A wide product assortment may not be necessary to secure loyalty of online shoppers. As such, this is an opportunity for online grocers to improve the bottom line by minimizing their inventory costs. The ability of online grocers to efficiently distribute product samples is a significant advantage that would benefit manufacturers, the grocer, and its customers. The absence of opportunity to touch products in an online shopping medium is a significant disadvantage that may, in the short term, be a limiting factor in the adoption of online grocery shopping. For store grocers, the primary focus of store grocers should be on goods assortment. While bigger may not be better, a sufficiently large selection may be necessary to meet the preferences of a large customer base. As with the case of any service business, reliable service should never be relaxed. Out-of-store advertising promotion efforts such as newspaper circulars and other advertising media may be a better use of resources compared to in-store information disseminating efforts such as product demonstrations/sampling. In addition, past studies on Internet shopping have mostly explored customer value in a context of discretionary shopping. In other words, value was associated with customer opinions regarding a retail outlet whose goods are not considered a basic necessity. Shopping for groceries, on the other hand, is in most cases a routine and necessary task for a vast majority of households. Thus, findings of this study highlight value considerations in a unique shopping context, which differs from those of other shopping purposes. Finally, given the absence of published academic literature relating to Internet grocery shopping, this study may serve as a departure point for future studies on this subject.

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