Demographic and Socioeconomic Influences Shaping Usage of Online Channel for Purchase of Food & Grocery

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Abstract

The tug-of-war between the physical and online stores has intensified in recent years with an exponential growth in Internet usage and a subsequent boost to online shopping. Consequently, the retail industry is going through a disruptive phase, and the crux of all these disruptions is the change in the channel usage and preferences of the buyers. The adoption and usage of online channels by the buyers has been different for different product categories. In order to realize the market potential of online food & grocery retail, it is necessary to understand the buyers' characteristics that impact the online channel usage for purchase of food & grocery. The objective of the study was to understand the influence of demographic and socioeconomic factors among the Indian populace on online channel usage and non-usage for purchase of food & grocery.

The study is based on an empirical analysis of the profile of buyers of food & grocery in Bangalore, India. The findings in the context of the Indian urban population revealed that demographic factors do not impact online channel usage for food & grocery purchase. The study showed that socioeconomic factors, pertaining to the respondent buyer, did have a significant impact ; whereas those pertaining to the chief wage earner in the household did not impact the online channel usage. The marketing implications for the online retailers suggest that for increased market penetration, a communication strategy focused on bringing an attitudinal change among the chief wage earners is needed in those households that do not purchase food & grocery online.

Keywords: **E-retail, online shopping, demographics, socioeconomic factors, buyer's characteristics, food & grocery retailing**

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The Indian retail industry is one of the most dynamic and fast paced industries. It accounts for over 10% of the country's gross domestic product (GDP). A report of Boston Consulting Group and Retailers Association of India (2015) estimated India's retail market to double from US$ 600 billion in 2015 to US$ 1.2 trillion by 2020 driven by income growth, urbanization, and attitudinal shifts. Another story playing out in India's retail landscape is the rapid growth in e-retail. India is expected to become the world's fastest growing e-commerce market backed by an unprecedented investment activity in the sector and the rapid increase in Internet users. According to the report of CII and Wazir Advisors (2015), India's e-commerce market is expected to grow from US$ 2.9 billion in 2013 to over US$ 100 billion by 2020.

E-retail is probably creating the biggest disruption in the retail industry. The report of CII and Wazir Advisors (2015) puts the contribution towards retail growth in clear perspective when it states that organized retail in India would grow seven folds and online retail 26 folds by 2025. Over the past decade, competition from online retailers is gradually eating into the revenues and margins of physical retailers. E-retailers are betting on more consumers

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switching to shopping online. For the consumers, it is an opportunity to evaluate one more channel option to get the best deal in the best possible way.

The adoption of online retail by Indian consumers was initiated by online purchase of books/music in early 2000s, followed by electronics and apparels mid-2000 onwards. The last 5 years have witnessed intense activity in the food and grocery segment and recently, in specialty goods such as jewellery and furniture. An article by CRISIL Research (2014) observed that the growth in India's online retail industry will be driven mostly by emerging categories of grocery, jewellery, and furniture segments, while the expansion in apparels and electronics verticals will continue.

India's online grocery market, which is less than $100 million at present, is expected to be worth billions in the coming years. "We anticipate it to cross $20 billion by 2020," said Hari Menon, BigBasket's cofounder and CEO as cited in the online article *Online Groceries in India: Will Consumers Bite?* (Knowledge@Wharton, 2015). This promising trend is evident in the increase in the number of online food and grocery retail outlets from 14 in 2013 to 44 in just a year. According to data analysis by Internet-based payment facility provider PayU India (Etail India, 2015), online grocery shopping is expected to see the highest number of electronic transactions, after mobile recharges, within a year. For all this optimism of industry players to achieve the critical mass and thereafter meet the expected potential, there are numerous challenges in its way. The challenges faced by the category are intensified by those posed by the buyer-specific characteristics. The reason for adoption or non-adoption of online retail is likely to be ingrained in the highly heterogeneous characteristics of Indian buyers with respect to demographic, socioeconomic, behavioural, and psychographic factors.

The big question is : *Will buyers bite into food & grocery E-retail? And will the bite be big enough?* The empirical study presented here examines the demographic and socioeconomic dynamics shaping the buyers' channel usage of online retail for purchase of food & grocery (F&G).

Review of Literature

In this section, we review empirical studies conducted in the past two decades that have sought to directly or indirectly understand the impact and interactions of buyers' characteristics on adoption of various retail formats, particularly online shopping in a different geographical context. These studies have measured adoption of online shopping using diverse yardsticks and most of the studies are generic in nature, overlooking product category differences that may exist in adoption of online channels.

We observed that the adoption of online shopping has been measured by :

(i) Directly by asking about the 'past purchases' made online,

(ii) Indirectly by asking the 'future intentions' of online shopping or,

(iii) Indirectly by understanding the 'current attitude' towards online shopping.

An indirect measure of capturing future online shopping intentions is mainly based on the framework of the technology acceptance model (TAM), (Davis, Bagozzi, & Warshaw, 1989). TAM has identified perceived ease of use (PEOU) and perceived usefulness (PU) as an important construct associated with online shopping intentions.

Understanding attitude towards online shopping is mostly influenced by the theory of reasoned action (TRA), (Ajzen, & Fishbein, 1975, 1980). TRA establishes that if an attitude is held positive, then it will lead to a positive behavior; thus positive attitudes towards online shopping should ,therefore, lead to adoption of online shopping.

Theories focused on direct measure through 'past purchase' behaviour regarding online shopping are greatly influenced by the innovation diffusion theory (IDT) (Rogers, 1995). E-shopping is an innovative application of information technology by retail industries. Therefore, IDT can be applied to explore consumers' e-shopping

behaviour. According to IDT (Rogers, 1995), the adoption of an innovation grows slowly in its initial years, steeply as it reaches its half-way point, and slowly again as it nears maximum penetration. We have attempted to understand online shopping adoption through the direct measure of 'past purchase' of various products online by Indian buyers.

The studies on 'past purchase' behaviour mainly focused on identifying variables which affect shopping behaviours and/ or understanding the barriers and drivers towards online purchases. A number of variables that influence early adoption of technologies include age, wealth, perceived risk (Park & Jun, 2003 ; Vijayasarathy & Jones, 2000; Vijayasarathy, 2002); reference group appeal, retailer's reputation, brand image, and warranty (Tan 1999); drivers of online shopping are time saving, 24 hour shopping, better information on products (Vrechopoulos, Siomkos, & Doukidis, 2001); convenience (Kaufman - Scarborough, & Lindquist, 2002); internet usage time, online shopping experience and trust (Park & Jun, 2003).

Previous studies relevant to e-shopping behaviour have investigated a large number of factors that were empirically found to be significantly associated with e-shopping behaviour. Chang, Cheung, and Lai (2005) reviewed the literature (published before 2004) related to the adoption of online shopping. They classified the antecedent factors of e-shopping behaviour into three categories:

(i) Perceived characteristics of the web as a retail channel,

(ii) Retailer & product characteristics and,

(iii) Consumer characteristics.

In the current study, the review incorporates the contribution of recent studies that partly or solely looked at product characteristics and/ or online buyer characteristics.

(1) Product Characteristics : Phau and Poon (2000) conducted an empirical investigation of Internet shopping in Singapore. Specifically, Internet buying behaviour was compared between potential Internet buyers and non-Internet buyers. It was found that the classification of different types of products and services significantly influenced the consumer choice between a retail store and online store. The types of products and services that are suitable for selling through the Internet were identified as those that have a low outlay, are frequently purchased, have relatively high intangible value, and/ or can be highly differentiated. Thus, it is necessary to explicitly consider product characteristics when evaluating web strategies.

Based on cost outlay and tangibility, Vijayasarathy (2002) classified products into four types. Grocery was placed in the first quadrant of low cost and tangible product. Vijayasarathy investigated differences between Internet shopping intentions for products categorized by cost and tangibility and found that consumer attitudes and beliefs towards online shopping tended to be more positive for intangible products, for example, computer software and music, than for tangibles.

Girard, Silverblatt, and Korgaonkar (2002) examined the influence of product classification (classified as search, experience, and credence products) on consumer preferences for shopping on the Internet. The results indicated that the search category products were more likely to succeed online than the experience and credence category products. These results were supported by Korgaonkar, Silverblatt, and Tulay (2006). However, it could be possible for e-tailers to motivate consumers to purchase difficult-to-sell products online by understanding and providing the attributes that are important to consumers.

Hynes and Ping (2009) evaluated online purchase intentions for 15 different products or services on the Internet, based on a five-point Likert scale. Products showing high online purchase intentions were tickets for entertainment (3.76), online banking (3.70), and travel/vacation (3.58). The online purchase intention score for food/groceries was low at 2.49. The researchers observed that even those Hong Kong shoppers with highly positive attitudes towards online shopping did not show significant interest in purchasing food/groceries (2.49),

furniture (2.19), or household appliances (2.47) on the Internet ; yet, these categories are some of the fastest growing in other countries.

Based on the literature reviewed, we observed that the online food & grocery product category is characterised with low cost, repetitive purchases, and mostly, tangible offerings. It falls in the realm of experience and credence category. Once the e-tailers have succeeded in motivating consumers to experience their product offerings and established credibility, the low cost and repetitive nature of food & grocery shopping is likely to result in favourable online adoption.

(2) Online Buyer Characteristics : Consumers with different characteristics may react to online shopping in different ways. Empirically, previous studies have found that online shopping behaviour is affected by a variety of buyer characteristics, such as personality, psychographics, behaviour, experiences, demographics, and

Table 1. Findings of Previous Studies on 'Demographic and Socioeconomic Influences on Online Channel Usage'

S.No.	References	Country	Demographic Factors	Findings	
1	Lokken, Cross, Halbert, Lindsey, Derby, &	USA	AGE	$\chi 2 = 14.59$ (6 df)	Sig. @ 5%
	Stanford(2003)		GENDER	Not Sig.	
			INCOME	Not Sig.	
2	Hynes & Ping (2009)	Hong Kong	AGE	Not Sig.	
			GENDER	Not Sig.	
			INCOME	Not Sig.	
			EDUCATION	p=0.035	Sig.@ 5%
3	Wu, Cai, & Liu (2011)	China	AGE	Parameter estimates *(SD)* = -0.03 (0.01)	Sig.@ 5%
			GENDER	Not Sig.	
			INCOME	Parameter estimates *(SD)* = 0.36 (0.00)	Sig.@ 1%
			EDUCATION	Parameter estimates *(SD)* = 0.24 (0.11)	Sig.@ 5%
4	Park, Lee, & Chung (2013)	Korea	AGE	t(4296)= -13.56	Sig.@ 1%
			GENDER	t(4296)=8.426	Sig.@ 1%
			EDUCATION (College (XIIth)or Lower)	t(4296)=6.998,	Sig.@ 1%
5	Alijani, Mancuso, Kwun, & Topcuoglu (2014)	USA	AGE (16-24, 25-34 yrs)	t(249)=0.751, p =.453	Not Sig.
			GENDER	t(249)=0.887, p =.376	Not Sig.
6	Dahiya (2012)	Metros in India for Online Ticketing, Net Banking, Books, Electronics	AGE	F (sig)= 1.44(.27)	Not Sig.
			GENDER	F (sig)= 3.3 (.08)	Not Sig.
			MARITAL STATUS	F (sig)=.004 (.95)	Not Sig.
			FAMILY SIZE	F (sig)= 1.59 (.24)	Not Sig.
			INCOME	F (sig)=.417 (0.79)	Not Sig.
			EDUCATION (Graduate vs PG)	F (sig)= 2.628 (.13)	Not Sig.
7	Motwani, Haryani, & Matharu (2014)	India & USA (Online Survey)	AGE	Not Sig.	
			GENDER	Not Sig.	
			INCOME	Not Sig.	
8	Goswami (2014)	Udaipur, India	AGE	Sig. for Past online shopping frequency; Not Sig. for future online shopping intention	
			GENDER	Not Sig. for both	
			EDUCATION	Not Sig. for both	

Source: Secondary Research

socioeconomic characteristics. In this study, detailed review is restricted to understand the impact of demographic and socioeconomic factors on adoption of online shopping. The findings of past studies on these variables are mixed. Generally, researchers (Forsythe, & Shi, 2003; Kau, Tang, & Ghose, 2003; Swinyard, & Smith, 2003) found that men, highly educated people, and people in the higher-income groups are more likely to buy online than are women, the less-well-educated, and lower-income groups. Bhatnagar, Misra, and Rao (2000) found that men are more likely to purchase some products (such as hardware, software, and home electronics) online, but are less likely to buy others (such as apparel and food) via the Internet. We reviewed and have included a tabulation of key facts about some empirical studies that identified differences in buyer characteristics of online and non-online shoppers. These are presented in the Table 1.

Lokken, Cross, Halbert, Lindsey, Derby, and Stanford (2003) classified online shoppers as those who had made purchases via the Internet and compared with those who had not. The results of this study (Table 1, S.No.1) indicated that online U.S. shoppers were younger and had more self-reported computer skills than non-online shoppers. The results from this study indicated age as a differentiating factor but did not indicate a significant relationship of gender and income with online shopping experience. Later, in 2014, a study by Alijani, Mancuso, Kwun, and Topcuoglu (2014) did not find a significant difference in age or gender on online shopping adoption by U.S. consumers (Table 1, S.No.5). This was further supported by a comparative study of Indian and U.S. consumers by Motwani, Haryani, and Matharu (2014), which revealed no significant difference in age, gender, and income parameters (Table 1, S.No.7).

Hynes and Ping (2009) conducted a study with a sample consisting of 121 respondents in Hong Kong (Table 1, S.No.2), which showed no significant differences between males and females or in age brackets in terms of Internet adoption, although differences in education and income were significant. A study conducted in India by Shalini and Kamalaveni (2013) stated that online shoppers are highly educated and knowledgeable. Banerjee, Dutta, and Dasgupta's (2010) study revealed that Internet users with high disposable monthly income are more likely to engage in online shopping.

Wu, Cai, and Liu (2011) conducted a study on a sample of 1620 respondents in five Chinese cities. Despite rapid growth of Internet usage and online purchases in China, the results (Table 1, S.No.3) indicated that there is still a 'digital divide' among Chinese consumers with respect to their demographics and socioeconomic characteristics. Consumers' gender, education level, and income contributed to the gap in Internet usage and online shopping. Park, Lee, and Chung (2013) observed that non-internet shoppers in Korea (a) included more married persons, (b) included people with a high income, (c) included those with low frequencies of Internet access, and (d) those who were relatively older. Age and gender were found to have a significant impact on online shopping adoption in Korea (Table 1, S.No.4). Some studies focussed on Indian consumers (Dahiya, 2012; Goswami, 2014 ; Motwani et al., 2014) revealed no significant differences in age, gender, and income on online shopping adoption (Table 1, S.No. 6,7,8).

Hiser, Nayga, and Capps Jr. (1999) conducted an exploratory analysis on familiarity and willingness to use online food shopping services in Texas, USA. The findings on 'willingness to use' online food shopping revealed that income, the number of people living in the household, the presence of children, and gender were not significant determinants of interest in using an online grocer ; however, age and education were. People over age 50 were less likely to consider using the service (compared to people 18-29 years old) as were those with less education.

The literature on adoption of online shopping seems to be extensive; however, the studies are mostly generic in nature. Despite persistent search, no comparative analysis between online and non-online shoppers for product category- food & grocery was found in the existing literature in any geographical context, particularly on buyer characteristics. The study by Hiser et al. (1999) being based on willingness and not actual use was also limited in understanding the demographic differences in adoption of online grocery shopping. The current research consequently attempts to fill the void in terms of product category, geography, and recency in the context of adoption of online shopping.

Conceptual Framework

In this study, the respondents are classified into two groups: online buyers and non-online buyers of food & grocery (F&G). Online buyers of F&G are those who purchased fresh fruits & vegetables, packaged food or grocery, or personal care & home care products. Non-online buyers are those who had never purchased any of these online. This classification is derived in this study from the primary data collected from respondents on the various products they had ever purchased online. Nine product category options were read out to the respondents, that is,

(1) Books/ music CDs,
(2) Apparels/clothing & footwear,
(3) Electronic goods (eg. TV, computers, mobiles etc.),
(4) Restaurant food (eg. pizza, biryani etc.) ,
(5) Packaged food (eg. cereals, biscuits) & grocery (eg. grains, spices etc.),
(6) Fresh fruits & vegetables,
(7) Personal & home care products (eg. soaps, shampoo, detergents etc.),
(8) Furniture & furnishing (eg. Sofa, Curtains etc.),
(9) Fashion accessories (eg. Handbags, Sunglasses etc.),
(10) Others.

Those respondents who indicated online purchase of any of the product category 5, 6, 7 listed above were classified as online buyers of F&G and non-online buyers were those who did not purchase any of product category 5, 6, 7. This classification of online buyers may include those respondents who purchased :

(i) F&G offline and online,
(ii) F&G online only.

Non-online buyers are those respondents who purchased :

(iii) F&G offline only. They never purchased F&G online, although they may have purchased other products online.

Scope of the Study

The present study was undertaken to analyze the urban consumers of Bangalore in the context of their channel usage for F&G purchases and the impact of various demographic and socioeconomic factors shaping their channel preferences.

The scope and results of the study pertain to:

- **Geography :** Bangalore, Karnataka, India.
- **Product Category :** Food & Grocery.
- **Channel Type:** Physical store formats, that is, kirana store, modern convenience store, retail chain store (supermarket, hypermarket) and online store.
- **Time Period of Data Collection:** August 2015.

The study is restricted to all those consumers who connect to the Internet.

Objectives of the Study

- To understand the channel usage among buyers of F&G.
- To examine the impact of demographic factors – age, gender, family size, family type (nuclear / joint), and proximity of store and analyze the differences between online buyers and non-online buyers of F&G.
- To examine the impact of socioeconomic factors – education, occupation, and income and analyze the differences between online buyers and non-online buyers of F&G.

Hypotheses

Hypothesis 1: There is a significant difference in demographic profile of online and non-online buyers of food & grocery (F & G).

Hypothesis 2: There is a significant difference in the socioeconomic profile of online and non-online buyers of F&G.

Methodology

The present study is based on primary and secondary research. The primary research involved an empirical analysis of the profile of buyers of F&G in the city of Bangalore. The population considered for the study were the people in Bangalore who make purchases of F&G for their households and who also connect to the Internet. Mall-intercept method (interviewers positioned themselves outside F&G stores) was used for data collection and the respondents were identified using judgment sampling. This data collection effort was supplemented by taking an appointment from potential customers listed in the database provided by an online F&G store. Essentially, non-probability sampling method was used for data collection. The tool used for primary data collection was a structured questionnaire consisting of single response and multiple choice questions. Though 125 respondents were covered in the data collection, the final sample size of the study was 104 after excluding incomplete questionnaires.

Collected data was coded and entered in the SPSS 16 software and raw data were classified into suitable tabular forms for analysis. Statistical tools like frequency, percentage analysis, mean, and cross-tabulation were used to summarize the data. Chi-square method was applied to test the hypotheses. Chi-square test is a statistical tool (Gould, 1980) used to examine differences between nominal or categorical variables. The test is strongly recommended for demographic and socioeconomic variables which in this study are nominal or ordinal in nature. The relevant secondary data were collected from various journals, research papers, and industry reports. The study of secondary data helped in the formulation of the questionnaire, making comparisons, and arriving at conclusions.

Analysis and Results

(1) Sample Description : The sample consisted of 104 respondents.

(2) The Demographic Profile of the Respondents : The sample respondents, as shown in the Table 2, were well-distributed across gender groups with a slightly higher number of women respondents. This may be due to the nature of the F&G category, where the wife takes the prime responsibility of the purchase decision. Majority of the respondents (87%) were in the age group of 21-40 years. The purchasing activity in half of the cases was done jointly with majority of the households having a nuclear family, with family size of 2-5 members ; 60% of the

Table 2. Demographic Profile of the Respondents

Factors	Variables	Sample Size *(n)*	Percentage
1. Gender	Male	48	46.2%
	Female	56	53.8%
2. Age (years)	<21	2	1.9%
	21-30	58	55.8%
	31-40	33	313.7%
	41-50	10	9.6%
	>50	1	1.0%
3. HH Member who Purchases Food, Grocery, Daily Needs Items	Myself Alone	44	42.3%
	Myself & My Spouse	50	48.1%
	Myself & My Son/ Daughter	10	9.6%
4. Residence Type	Independent House	44	42.3%
	Apartment/ Flat	60	57.7%
5. Family Type	Nuclear	56	53.8%
	Joint/ Extended	27	26.0%
	Living Alone	20	19.4%
6. No. of Family Members staying here	1	18	17.3%
	2-5	42	40.4%
	6-8	12	11.5%
	No record	32	30.8%
7. Distance of Physical Store from Residence	< 1 Km	31	29.8%
	2-3 kms	23	22.1%
	3-5 kms	28	26.9%
	> 5 kms	14	13.5%
	No record	8	7.7%

respondents resided in an apartment. The distance of a F&G store from the respondents' residence was less than 5 km in most instances due to the ubiquitous nature of retail stores. The sample in the study fairly represents the demographics of Bangalore, where majority of the population is young, has a nuclear family, and lives in an apartment.

(3) The Socioeconomic Profile of the Respondents : As shown in the Table 3, more than 3/4th of the respondents had at least a graduate degree. The women respondents (36/56 = 64%) were mostly homemakers and the men respondents were mostly company employees. Majority of the respondents belonged to SEC A households and had an MHI in the range of ₹ 30k – 75k.

(4) Online Purchases Indicated by Respondents Across Product Categories : An analysis of the Table 4 reveals that electronic goods, followed by apparels & footwear are widely purchased online. Nearly 60% of the sample respondents had purchased food &grocery online. Thus, in the study, 58 respondents were online buyers of F&G and the remaining 46 were non-online buyers of F&G out of the total sample of 104 respondents.

Table 3. Socioeconomic Profile of the Respondents

Factors	Variables	Sample Size *(n)*	%
1. Respondent's Education	Upto 10th/ 12th	5	4.8%
	Some college or Diploma but No Graduate Degree	18	17.3%
	Graduate/ PG (General)	62	59.6%
	Graduate/ PG (Professional)	18	17.3%
2.Respondent's Occupation	Homemaker/ Not Working	36	34.6%
	Private Business	14	13.5%
	Company Employee	32	30.8%
	Self-Employed Professional	16	15.4%
	No record	6	5.8%
3. SEC (is based on the education & occupation of CWE and Items owned in the household (HH))	A1	38	36.5%
	A2	41	39.4%
	B1	5	4.8%
	B2	11	10.6%
	C	2	1.9%
	No Record	7	6.7%
4. Monthly HH Income	< ₹ 30000 p.m.	21	20.2%
	₹ 30k - 50k	47	45.2%
	₹ 50k - 75k	21	20.2%
	₹ 75k - 1 lakh	10	9.6%
	> ₹ 1lakh p.m.	3	2.9%
	No Record	2	1.9%

Table 4. Online Purchases Across Product Categories

Product Category	No. of Responses (*N* = 104)	% of Respondents(*N* =104)
1. F&G	58	59.2%
2. Books/ Music CDs	26	26.5%
3. Apparels/Clothing & Footwear	63	64.3%
4. Electronic Goods	69	70.4%
5. Furniture & Furnishing	20	20.4%
6. Fashion Accessories	43	43.9%

(5) Testing of Hypothesis 1 for Demographic Factors : The chi-square test results, as shown in the Table 5, reveal that there is no significant difference in the demographic profiles of online and non-online buyers of F&G on any of the measured parameters. However, relatively more offline F&G purchases were done by women, whereas online F&G purchases did not have gender dominance (Table 5, S.No.1). This is reinforced by the differences in purchase role - a shared responsibility more among online buyers than offline buyers (Table 5, S.No.3). Online F&G purchases were done mostly by those living in an apartment facility than in independent houses (Table 5, S.No.4).

Table 5. Chi-Square Tests of Demographic Factors Related to Purchase of F&G

S.No.	Factors	Variables	Online Buyers (% within Cols.) (*n*=58)	Non-Online Buyers (% within Cols.) (*n*=46)	χ2 (d.f.)
1	Gender	Male	29 (50.0%)	19 (41.3%)	**0.781 (1)**
					Not Sig.
		Female	29 (50.0%)	27 (58.7%)	
2	Age (years)	<21	1 (1.7%)	1 (2.2%)	
		21-30	32 (55.2%)	26 (56.5%)	**1.007 (4)**
		31-40	19 (32.8%)	14 (30.4%)	Not Sig.
		41-50	5 (8.6%)	5 (10.9%)	
		>50	1 (1.7%)	0 (0%)	
3	HH Member who	Myself Alone	21 (36.2%)	23 (50.0%)	**2.662 (2)**
	Purchases Food, Grocery,	Myself & My Spouse	32 (55.2%)	18 (39.1%)	Not Sig.
	Daily Needs Items	Myself & My Son/ Daughter	5 (8.6%)	5 (10.9%)	
4	Residence Type	Independent House	21 (36.2%)	22 (48.9%)	**1.676 (1)**
		Apartment/ Flat	37 (63.8%)	23 (51.1%)	Not Sig.
5	Family Type	Nuclear	32 (56.1%)	24 (52.2%)	**4.823 (2)**
		Joint/ Extended	18 (31.6%)	9 (19.6%)	Not Sig.
		Living Alone	7 (12.3%)	13 (28.3%)	
6	No. of family members staying here	1	6 (15.4%)	12 (36.4%)	**4.244 (2)**
		2-5	26 (66.7%)	16 (48.5%)	Not Sig.
		6-8	7 (17.9%)	5 (15.2%)	
		No record	32		
7	Distance of Physical Store from Residence	< 1 Km	16 (31.4%)	15 (33.3%)	
		2-3 kms	14 (27.5%)	9 (20.0%)	**0.747 (4)**
		3-5 kms	14 (27.5%)	14 (31.1%)	Not Sig.
		> 5 kms	7 (13.7%)	7 (15.6%)	
		No record	8		

**$P \leq 0.01$ (Significant at 1%); *$P \leq 0.05$ (Significant at 5%)

The distance of the store from the residence plays no role in the adoption of online channel or offline channel usage as 90% of all buyers had a store within 5 km and 30% of online buyers had a store within 1 km (Table 5, S.No.7).

(6) Testing of Hypothesis 2 for Socioeconomic Factors : A comparative analysis of the socioeconomic profile of the respondent buyers (Table 6, S.No.1, 2) revealed that there is a significant difference (sig. at 1%) in the education and occupation of online and non-online buyers of F&G. Nearly 90% of online buyers had a graduate degree or above, but in case of non-online buyers, the figure is only 62%. Thus, 1/3rd of non-online buyers did not have a graduate degree. Regarding working status, while 80% of the online buyers were working, it's only 45% for non-online buyers of F&G.

Regarding the socioeconomic profile of the chief wage earner (CWE) (Table 6, S.No.3, 4), there are no significant differences observed among both groups of buyers. Majority of the respondents belonged to SEC A in both the groups, although a higher percentage of online buyers were SEC A1, while non-online buyers were SEC A2 households. Also, there is no significant difference in the monthly household income of online and non-online buyers.

Table 6. Chi-Square Tests of Socioeconomic Factors Related to Purchase of F&G

S.No.	Factors	Variables	Online Buyers (% within Cols.) (*n*=58)	Non-Online Buyers (% within Cols.) (*n*=46)	χ2 (d.f.)
1	Respondent's Education	Upto 10th/ 12th	1 (1.7%)	4 (8.9%)	**13.216 (3)****
		Some college or Diploma but No Graduate Degree	5 (8.6%)	13 (28.9%)	Sig.
		Graduate/ PG (General)	43 (74.1%)	19 (42.2%)	
		Graduate/ PG (Professional)	9 (15.5%)	9 (20.0%)	
		No record	1		
2	Respondent's Occupation	Homemaker/ Not Working	11 (20.8%)	25 (55.6%)	**15.466 (3)****
		Private Business	10 (18.9%)	4 (8.9%)	Sig.
		Company Employee	24 (45.3%)	8 (17.8%)	
		Self-Employed Professional	8 (15.1%)	8 (17.8%)	
		No record	6		
3	SEC (based on the education & occupation of CWE and Items Owned in the HH)	A1	24 (46.2%)	14 (31.1%)	**4.990 (4)**
		A2	19 (36.5%)	22 (48.9%)	Not Sig.
		B1	4 (7.7%)	1 (2.2%)	
		B2	4 (7.7%)	7 (15.6%)	
		C	1 (1.9%)	1 (2.2%)	
		No Record	7		
4	Monthly HH Income	< ₹ 30000 p.m.	11 (19.3%)	10 (22.2%)	**3.060 (4)**
		₹ 30k - 50k	25 (43.9%)	22 (48.9%)	Not Sig.
		₹ 50k - 75k	13 (22.8%)	8 (17.8%)	
		₹ 75k - 1 lakh	5 (8.8%)	5 (11.1%)	
		> ₹ 1lakh p.m.	3 (5.3%)	0 (.0%)	
		No Record	2		

**$P \leq 0.01$ (Significant at 1%); *$P \leq 0.05$ (Significant at 5%)

Discussion

The results of this study indicate that demographic factors *do not* impact online channel usage for food & grocery purchases. The online and non-online buyers of food & grocery did not reveal any significant differences on demographic factors, that is, age, gender, purchase-role, family type, family size, residence type, and store proximity.

The existing literature on age as a differentiating factor showed mixed results. The time period and the geographic location of these studies may be the cause for this. As adoption of technology improved with time and various geographies moved to higher stages of the innovation adoption curve, the age related differences dissipated. This shows that in the current context, the Internet usage and adoption of online shopping has moved into the Rogers' third stage, with ageing of early adopters and adoption of new technology by early majority, thereby diffusing the age differential. Age is not the differentiator in the current period and in the Indian geography, where Internet adoption in Bangalore is growing at 36% y-o-y and the number of Internet users in Bangalore reached 5.99 million (Source: IAMAI – Nov.2014) out of a total population of approx 10.2 mn.

Significant gender-wise differences did not exist in most of the prevailing literature, although the adoption of online shopping seemed to be higher for men. This male-dominance in generic online shopping ceases to exist

because of female purchase-role dominance in food & grocery category. Consequently, proportion of women online buyers of F&G is at par with that of men online buyers.

With respect to the socioeconomic factors, most of the studies analyzed the influence of education and income and showed mixed results. In the current study, significant differences existed in the educational level between online and non-online buyers, but no significant differences were observed in monthly household income. Almost all online buyers of F&G possessed graduate/post-graduate degrees, while significant proportions of non-online buyers were non-graduates. Shalini and Kamalaveni (2013) (for Coimbatore) also found online shoppers to be highly educated, knowledgeable, and expert users of the Internet.

A deep-dive analysis into the interaction effect of gender and buyers' profile attributes the existence of significant differences in the socioeconomic profile of women buyers belonging to the two buyer groups. Most of the women online buyers had a graduate/PG degree and were working, while most of the women non-online buyers were homemakers/ not working. The differences observed among men respondents are significant only at the 10% and have a low base. A robust sample size representing buyers of all socioeconomic levels for two genders is required to draw a meaningful conclusion.

In the current study, additional factors pertinent to Indian urban demographics such as purchase-role, family type, family size, residence type, and store proximity were explored, and no significant differences were observed. However, it is noticed that the purchase-role was equitably shared between husband & wife among HH of online buyers, while it was undertaken mostly by the wife in case of HH of non-online buyers. Online channel usage was higher among apartment residents as compared to those staying in independent houses. This may be because the apartment residents in Bangalore are mostly migrant population from other states or countries ; whereas, independent house residents are mostly those belonging to the same state/ city. The relative differences in channel usage by residence-type (apartment vs independent house) are a reflection of higher comfort levels with the respective channel options.

We believe that lack of proximity of a physical store may be a trigger for purchase of F&G online. However, this does not hold ground as 1/3rd of online buyers had a store within 1 km and nearly all respondents had a store within the 5 km radius. So, it is not the distance of the store from the house ; rather, it appears that the unwillingness of the respondents to step out of the house to purchase F&G acted as a probable trigger factor in adoption of the online channel. This needs to be tested and verified through a psychographic analysis of buyers.

Managerial Implications

The findings of the study have important marketing implications for online retailers. The increased market penetration for online channel usage of F&G in Indian metros like Bangalore will stem from an attitudinal change among non-buyer HHs and increased intensity of online channel usage among online buyer HHs.

The study shows that non-online buyers belonged to relatively traditional households where the F&G purchase-role is the forte of the lady of the house who is less educated and non-working. Although the CWE in this HH has a socioeconomic profile similar to that of the male counterpart in online buyer HH, the non-involvement of the CWE in the household tasks is a barrier in the adoption of online purchase channel. The CWE needs to empathize with his spouse and share the purchase responsibility of F&G by initiating and partaking in the online purchase of F&G. He needs to educate (if need be) and encourage his wife to use the online channel option that would save her time and energy for other necessary and/ or leisure activities. Online retailers need to adopt the positioning platform that communicates online purchases of F&G as a source of empowerment and liberation of non-working women which they feel deprived of when compared with the working women. The non-online buyer household needs to be persuaded to adopt a modern progressive lifestyle through attitudinal change in the husband and empowerment of the homemaker wife. Online retailers should also set up user-friendly online shopping system as recommended by Amin and Amin (2010), enabling women non-online buyers to overcome hurdles and barriers to online shopping.

The channel usage data in the current study shows that nearly all online buyers also used offline stores for F&G. Thus, there is a trial and acceptance of online channels among a part of the sample. Although, this study did not capture the frequency and intensity of online-offline channel usage, there may be a lurking danger of shunning online channel by these online buyers. A complete switch to online channels and an unwavering loyalty to online stores still remains a distant goal for online retailers. The online retailers need to work harder to build strong positive opinions about online channels and improve satisfaction among online buyers in order to increase the intensity of online channel usage.

Limitations of the Study and the Way Forward

The findings of this study give focused insights on understanding the role of demographic and socioeconomic influences that impact online channel usage in food and grocery category. The findings may be generalized for the urban Indian population. Future research with more robust sample size and booster samples, if need be, covering higher numbers of men respondents and SEC B and C households may help to verify the conclusions of this study and would also help in further understanding the behaviour of these sub-segments towards online food & grocery shopping.

With a view to avoid respondent fatigue, the study was restricted to the demographic and socioeconomic influences impacting buyer behaviour. In order to enable a wholesome understanding about the impact of buyer characteristics in the adoption of online F&G shopping, research on behavioural, psychographic, and situational factors influencing buyer behaviour may be undertaken. Future research to understand the frequency and intensity of online-offline channel usage in F&G and reasons for the same may be undertaken. This may provide insights into the web-characteristics and retailer characteristics that may act as enablers and disablers of alternate channel usage for F&G purchases.

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