Determining Consumer Preferences and Purchase Drivers for Online Grocery Shopping As Compared To Traditional Brick and Mortar Retail Stores

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Abstract

According to a *Forbes' report*, dozens of online grocery stores have opened up in the past few years. Some of these include Big Basket, LocalBanya, VeggieBazaar, Fresh N Daily etc. Many of these stores currently cater to either single cities or a few metropolitan cities in restricted neighbourhoods. Primary study was conducted by taking a sample size of 150.Conveineince sampling was used, out of 150 results was captured and analysed for 147 questionaires. The results showed that the p-value for purchase frequency comes out to be small and is statistically insignificant at a 5% level of significance. Therefore, the hypothesis that online purchase intent is affected by the frequency of purchase turns out to be false. Hence, even consumers who purchase less frequently might be inclined to purchase online.

Introduction

Indian e-commerce industry, which started around ten years ago, with the launch of Baazee.com has emerged so much that it attracts billions of investment from foreign players. The industry grew by around 33% in 2013 with a market size of $3.5 billion. As per a *Gartner Inc. report*, the industry is expected to grow by 70% over 2014 to reach $ 6 billion worth of business in 2016. According to *Flipkart's CEO*, the e-commerce business in India is expected to grow to $50-$70 billion by 2020.There was a time when the Indian retail consumers had the "can't touch, wont' buy" type of mentality. However, the consumer mentality and shopping patterns are changing very fast. In coming years, online shopping will become mainstream. There are various drivers which contribute to this changing behaviour and growth. Firstly, the steep increase in number of smartphones has resulted in increased usage of internet over phone. This coupled with the ever dropping rates of internet services is driving a large number of people towards online shopping. According to a report by *Accel Partners*, 300 million users are expected to have internet access by 2016. Moreover, the rapidly growing middle class of the country is pressurized by lack of time. All these factors together paint a bright picture of the online retail business. Most of the online retailers sell books, apparels, electronics and accessories while groceries, which form 60-70% of traditional brick-and-mortar-retail, form only a miniscule part of the total online retail space. This stems from the fact that selling perishable products online is very difficult as compared to selling non-perishables. Moreover, selling groceries is a low margin business and entails a lot investment in supply chain and IT infrastructure. In addition to this, scepticism about quality of the product in customers' mind has restricted the growth of online groceries. Despite the above hurdles, there is a large number of online grocery stores mushrooming in recent times. As per *Technopak*, a retail consultancy, the online grocery retail market is currently growing at 25% to 30% on metros and large cities of the country. The main driver as identified by *Technopak* is increasing shortage of time which is fuelling the growth of online grocery. Therefore, it is highly convenient. In essence, online groceries store is expected to grow in coming years. Online grocery stores are up against age-old local grocers who have built their loyal customer base on trust, reliability and quick, customized service. Many of them are now trying to rope in local grocers to expand their business and meet the growing demand apart from ensuring Research Problems corresponding to the above decision problem are as follows

Objective of the Study

Research Problem

To determine consumer preferences and purchase drivers for online grocery shopping as Compared to traditional Brick and Mortar retail stores.

Information Needed

1. Current buying behaviour, decision maker and influencer profile, purchase channels, time spent on grocery shopping.
2. Advantages and disadvantages of online retail over traditional retail as perceived by the customer.
3. Availability and usage of internet and familiarity with internet usage

Research Methodology

Customers were segregated into different segments and a target was selected based on the analyzed data. A positioning strategy was also developed for this segment and the prices they were willing to pay for groceries through an online channel were also estimated. An exploratory research was conducted for gathering data. Two focused group discussions with a diverse set of participants were conducted to understand the consumer behaviour. A total of three interviews, including one with an expert were also conducted. Based on these, insights about online grocery shopping were generated. Convenience and quality were seen as the most important purchase drivers and concerns over quality were also identified. Data from some primary sources were considered. Building upon the understanding gained, a detailed questionnaire was created for of getting quantitative data for the search. Responses from 147 respondents were recorded out of given 150.As a secondary source journals, magazines and other research papers were referred.

Analysis and Findings

Existing Grocery Shopping Avenues

Views of the respondents their current grocery shopping avenues to gauge what is the current trend of grocery shopping, around 45% of the respondents shop from Local Kirana Store and around 15% of the respondents shop from Roadside Greengrocer. Malls, Supermarkets and Online avenues have very little representation amongst the sample respondents.
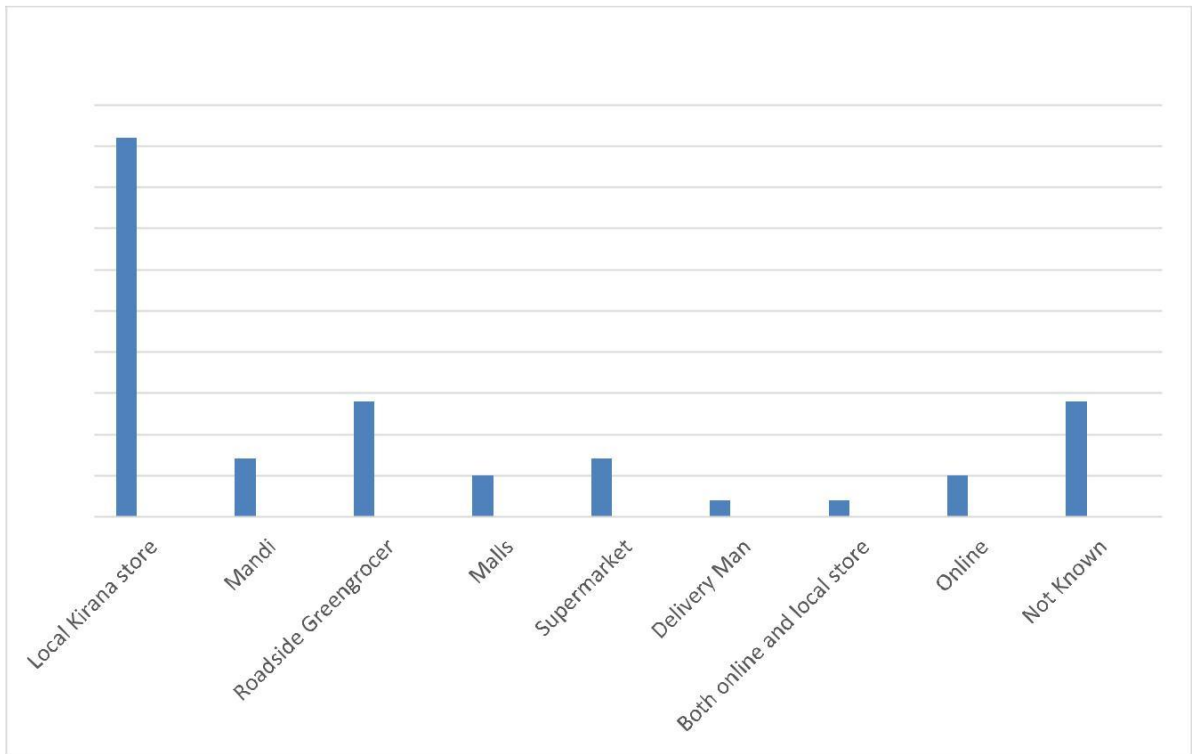
Persons who shopped grocery for Respondents

An important aspect of consumer behaviour is determining who the real shopper is. A consumer is different from a shopper. The respondents about who shops grocery for them around 50% and 30% of respondents got their grocery from Other Family Members and Self respectively.

Channel Perception – Local Vs Online

A lot of purchase is driven through perception. Primary research showed that the people who have not used online grocery channel also had a perception that the goods will not be of good quality. Therefore, it becomes important to capture the perception of channel among the minds of customers. Views of respondents about their perception about online grocery channel vis-a-vis local grocery.

Customer Segments	Worse than local	Same as local	Better than local
Students	40.7%	40.7%	18.5%
Single professionals	23.5	64.7%	11.8%
Married Professionals	30.8%	46.2%	23.1%

The above table shows that all segments, more than 50% of the respondents perceive online channel either same or better than the local channel. It is interesting to note that the 75.5% of Single Professionals segment, which is a major user of the online channel, does not believe that the online channel is worse than local.

Familiarity with Online Shopping

Views regarding to gauge the familiarity and knowledge of the respondents about online shopping in general and online grocery shopping in particular.

Customer Segment	Average no. Of websites used overall	Average no. Of grocery websites known
Students	2.88	1.04
Single Professionals	3.18	1.06
Married Professionals	2.92	0.77

As it can be observed from the table, Single Professionals are the most aware about both online websites (including grocery) as compared to the other two segments. It reiterates the inference from the secondary research that Single Professionals is the segment that currently uses online grocery the most. The awareness about online grocery websites is prevalent among Students segment also. However, the Married Professionals are not very much aware about online grocery websites as the average number of grocery websites known is mere 0.77. This reflects a lot of Married Professionals are not even aware about existence of grocery websites. It will be helpful to use this information to target specific customer segments in the marketing of online grocery business.

Factors influencing consumer purchase intent

A regression analysis was conducted with purchase intent as the response variable and the independent variable as the following:

- Family income
- Frequency of purchase
- Bargaining (to indicate price sensitivity)
- Usage of online shopping websites
- Online shopping experience
- Number of inhibitors which the respondent indicates in his/her response

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Correlation Matrix

The correlation matrix was formed between the different independent variables to find if any two variables had significant correlation (>0.5). The table showed that the variables did not exhibit high levels of correlation and can be used in the regression model

Correlation Matrix	Family Income	Frequency of pur	Bargaining	Usage of online	Online shopping	Inhibitors
Family Income	1.000					
Frequency of pur	-0.093	1.000				
Bargaining	0.008	-0.251	1.000			
Usage of online	0.061	-0.145	-0.112	1.000		
Online shopping	-0.084	0.069	0.153	-0.032	1.000	
Inhibitors	-0.055	-0.157	0.025	-0.146	-0.068	1.000

Regression Results

The results of the regression analysis (found using MINITAB) have been shown below:

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Link Function: Logit


Response Information

Variable  Value | Count
Response  1         40   (Event)
          0         17
          Total     57


Logistic Regression Table

                                                                 Odds
Predictor                        Coef   SE Coef      Z     P   Ratio
Constant                     -6.74738   3.16426  -2.13  0.033
Family Income                0.158832  0.283469   0.56  0.575   1.17
Frequency of purchase         2.63924   1.16722   2.26  0.024  14.00
Bargaining                   0.724106  0.387420   1.87  0.062   2.06
Usage of online shopping sites 0.505134 0.329632  1.53  0.125   1.66
Online shopping experience   0.673401  0.558145   1.21  0.228   1.96
Inhibitors                  -0.0021319 0.346596  -0.01  0.995   1.00

                                 95% CI
Predictor                    Lower   Upper
Constant
Family Income                 0.67    2.04
Frequency of purchase         1.42  137.96
Bargaining                    0.97    4.41
Usage of online shopping sites 0.87   3.16
Online shopping experience    0.66    5.86
Inhibitors                    0.51    1.97


Log-Likelihood = -27.787
Test that all slopes are zero: G = 13.893, DF = 6, P-Value = 0.031
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Goodness-of-Fit Tests

Method             Chi-Square  DF     P
Pearson              47.1222   49  0.550
Deviance             52.8024   49  0.329
Hosmer-Lemeshow       2.6832    8  0.953
Brown:
General Alternative   1.8122    2  0.404
Symmetric Alternative 0.8002    1  0.371


Table of Observed and Expected Frequencies:
(See Hosmer-Lemeshow Test for the Pearson Chi-Square Statistic)

                               Group
Value   1    2    3    4    5    6    7    8    9   10  Total
1
  Obs   1    4    3    3    4    4    4    5    6    6    40
  Exp 1.4  2.5  3.3  3.1  4.1  4.6  4.1  5.2  5.7  5.9
0
  Obs   4    2    3    2    2    2    1    1    0    0    17
  Exp 3.6  3.5  2.7  1.9  1.9  1.4  0.9  0.8  0.3  0.1
Total   5    6    6    5    6    6    5    6    6    6    57


Measures of Association:
(Between the Response Variable and Predicted Probabilities)

Pairs        Number  Percent  Summary Measures
Concordant      531    78.1   Somers' D               0.57
Discordant      145    21.3   Goodman-Kruskal Gamma   0.57
Ties              4     0.6   Kendall's Tau-a         0.24
Total           680   100.0
|
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The logistic regression table shows that the co-efficients for all the independent variables except "No. of inhibitors" are positive. This is expected since as the no. of inhibitors mentioned by the respondents grow, so will their aversion to purchase products online.

The p-value for purchase frequency comes out to be small and is statistically insignificant at a 5% level of significance. Therefore, the hypothesis that online purchase intent is affected by the frequency of purchase turns out to be false. Hence, even consumers who purchase less frequently might be inclined to purchase online.

At the same time, family income and past online shopping experience show a much higher level of significance and positively affect the purchase intent. Price sensitivity also shows positive association with the purchase intent and is statistically significant at the 5% level of significance.

Conclusion

Study tried to gauge the price sensitivity that the customer segments might have. Price sensitivity is also another factor that can determine the success of online grocery channel. Therefore, we asked the respondents about their bargain behaviour while buying groceries. Some interesting insights were revealed from the results. Around 53% and 46% of Single Professionals and Married Professionals respectively never bargained while buying groceries through the local channel. In contrast to this, a mere 11% of the Students segment never bargained. This indicates the price sensitivity of the different segment. Logistic regression table shows that the co-efficient for all the independent variables except "No. of inhibitors" are positive. This is expected since as the no. of inhibitors mentioned by the respondents grow, so will their aversion to purchase products online. The p-value for purchase frequency comes out to be small and is statistically insignificant at a 5% level of significance. Therefore, the hypothesis that online purchase intent is affected by the frequency of purchase turns out to be false. Hence, even consumers who purchase less frequently might be inclined to purchase online.At the same time, family income and past online shopping experience show a much higher level of significance and positively affect the purchase intent. Price sensitivity also shows positive association with the purchase intent and is statistically significant at the 5% level of significance. . The familiarity with online shopping is fair however, the awareness about online grocery websites is quite limited. The perception about online channel is also good. More than 50% believe it is as good as the local channel. The price sensitivity is different across different customer segments. The Students segment is price sensitive whereas the Professionals segment is more of premium kind of customers. The groceries for respondents mainly are bought from Local Kirana Stores or Roadside Greengrocer by mainly "Other Family Members" or in some cases by himself.

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