Beyond Kirana Stores: A Study on Consumer Purchase Intention for Buying Grocery Online

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Abstract In India, the use of online grocery shopping platforms—such as Big Basket, Amazon Pantry, Flipkart Supermarket, etc.—has been rising exponentially. The online grocery market value has been increasing steeply in recent years and is going to grow steadily, as the digital natives—the Millennial and the generation after them—grow older and start having families of their own. Given the importance of this growing market, there is surprisingly little research on the factors that are driving the adoption of online grocery in India today. Based on an extensive literature survey we first propose a conceptual model on the factors driving the online and offline grocery shopping behaviour of Indian consumers. We test the model using an online survey and a pan-India sample of 262 consumers. Our analysis suggests that the intention to purchase grocery online is significantly influenced by variety seeking, trust in seller, ease of use of online payments, convenience, purchase decision involvement, and preference for global products.

1 Introduction

Growing e-commerce business boosted by rising demand, an increasingly young earning population, and a generation that is willing to adapt faster has enabled the e-commerce industry to evolve itself to include even the daily used staple products such as grocery. With the increasingly time-crunch lifestyle of millennials and the growth of enhanced logistics and advanced warehousing techniques, both the demand and the supply for online on-time grocery has been rising exponentially.
According to a recent research report, the Indian online grocery market could grow with a compound annual growth rate of 55% in the period of 2016–21.

If the recent national lockdown on account of Covid-19 is any evidence that consumers are more inclined to use a single portal store for all their requirements with reliable delivery services. The market for online grocery is poised for sustainable and explosive growth.

Hence, it’s more important than ever to understand the forces that are underlining the demand growth for the online grocery industry. This could help us identify the demand drivers and expectations of its consumer population. The analysis of these data could enable us to make the necessary tweaks that could refine and streamline its growth.

According to a RedSeer report, the share of online grocery in the total retail market in India will grow to 7% by 2023. The most part of the current growth and market share of online grocery is currently driven only by the major metropolitan and Tier-I cities of India. In spite of rising growth rate and a number of earning digital natives, the number of adopters in Tier-II and Tier-III cities being very low is also a question that needs to be answered. However, there has been surprisingly little academic research on consumer demand drivers for online grocery in India.

This study aims to address this important gap in our knowledge by proposing and empirically testing a comprehensive conceptual model for factors that influence the purchase intention for online grocery products in India.

2 Literature Review

In grocery shopping, the consumers, in general, tend to purchase their groceries from any one of these three places or from a combination of these places—namely local stores, supermarkets or online stores. In order to understand the factors behind these purchase decisions an extensive literature review was conducted.

Trust in a seller is a pre-requisite for the repurchase intention of a consumer. In general, consumers with less or no online shopping experience perceive a notion of risk with e-commerce. Hence, it is important to study the influence of trust placed by consumers on online grocery sellers [1]. Furthermore, consumers who purchase special occasions or periods induced by a unique cause tend to stop using the online platforms once the occasion or period ends [2]. As the world progresses towards the cashless economy, the use of online payment has been drastically increasing as well. Many people find it easier and hassle-free to do transactions in online payments than through cash. Hence, it is crucial to understand its influence on purchase intentions in online grocery shopping.

1“Online Grocery Market in India by Product Type, Consumer Behaviour, Competition Forecast and Opportunities, 2011–2021”.
2“India’s online grocery retail market to touch $10.5 billion by 2023: Redseer”.
Research suggests that online shopping is unique and different from the conventional retail environment, which is typically ranked for its accessibility by its consumers, unlike online retail which is mostly chosen for its convenience, product range or variety, or a time crunch at consumer’s end. Therefore, it is essential to study the influence of convenience and variety on consumer’s online grocery purchase intentions [3]. Lack of tangibility in online shopping raises the question of quality assurance and risk association by the hesitant non-users. Thus, the influence of need for touch on online grocery shopping intentions must be assessed [4].

Most grocery products are edibles and are associated with the health of the individual the purchase decision involvement is usually high. It is also vital to understand the relation between the level of commitment, one holds with their neighborhood or local grocery stores and his intention to purchase online. Further, to understand the product expectations of the consumers, we can analyze the product preference of consumers to purchase local or global versions of products with their online grocery purchase intentions. Thus, the influence of factors such as purchase decision involvement, commitment to local store, and product preference could also be studied to better understand the consumer’s purchase intentions for online grocery. In this research, we propose and test a comprehensive conceptual model on factors that influence the purchase intention of consumers in an online grocery platform. In addition, we also look at the influence of relative preference for the neighborhood stores and local/global versions of products. The dependent variable is purchase intention for online grocery shopping and the independent variables are variety seeking, trust in online sellers, ease of use of online payments, convenience, purchase decision involvement and preference on global or local versions of products, among others.

3 Conceptual Model

See Fig. 1.

4 Hypotheses

H1-Greater the need for variety in shopping, higher the online grocery purchase intentions
H2-Greater the perception that the online payments are easy to use, higher the online grocery purchase intentions
H3-Greater the trust in the online seller, higher the online grocery purchase intentions
H4-Greater the purchase decision involvement in shopping, lower the online grocery purchase intentions
H5-Greater the need for touch in shopping, lower the online grocery purchase intentions
H6-Greater the commitment to local store, lower the online grocery purchase intentions
H7-Greater the need for convenience in shopping, higher the online grocery purchase intentions
H8-Greater the preference for global version of products, higher the online grocery purchase intentions

5 Methodology

5.1 Questionnaire Development

A dedicated primary research study was conducted with a structured online questionnaire to collect the data required for the research. The flow of the questionnaire started by understanding their familiarity in online grocery shopping and its frequency, the average cart value purchased, the preferred medium of purchase and questions analyzing the impact of the independent variables on their purchase intention of online groceries and their demographic information was collected towards the end of the questionnaire.
### Table 1 Constructs and sources of scales

| Constructs                           | References                        |
|--------------------------------------|-----------------------------------|
| Variety                              | Baumgartner and Steenkamp [5]     |
| Online payment                       | Venkatesh et al. [6]              |
| (Ease of use)                        |                                   |
| Purchase intention                   | Swilley [7]                       |
| Trust in online seller               | Thomson [8]                       |
| Purchase decision involvement        | Mittal [9]                        |
| Need for touch                       | Peck and Childers [10]            |
| Commitment to store                  | Cho [11]                          |
| Convenience                          | Noble [12]                        |
| Product preference (global/local version) | Zhang and Khare [13]             |

Table 1 shows the list of the most important constructs and scale items measured in this study.

### 5.2 Data Description

The non-probabilistic sampling technique of quota sampling was used in selecting the respondents and the questionnaire was distributed to people above 18 years of age across tier 1 and tier 2 cities in India. The total number of respondents who answered the questionnaire were 262. Among the respondents, 161 were male and 101 were female. About 236 respondents who participated in the survey had an undergraduate degree or higher.

Figure 2 shows the percentage of female and male respondents of the survey. Figure 3 shows the educational qualification of the respondents.
Fig. 3 Educational qualification of respondents

Table 2 Results of ordinal logistic regression model

| Variables                              | Odds ratio | $z$   | $P > z$ | [95% conf. interval] |
|----------------------------------------|------------|-------|---------|----------------------|
| Online payment (ease of use)           | **1.125*** | 3.1   | **0.002** | **1.043912** - **1.21085** |
| Variety                                | **1.045**  | 2.07  | **0.039** | **1.00224** - **1.089077** |
| Purchase decision involvement          | **1.208*** | **6.22** | **0**         | **1.138068** - **1.28188** |
| Need for touch                         | **1.002**  | 0.14  | 0.889   | **0.970771** - **1.034791** |
| Trust in online seller                 | **1.014**  | **0.46** | 0.648   | **0.955856** - **1.075209** |
| Commitment to local store              | **0.979**  | **−0.77** | 0.441   | **0.926034** - **1.034026** |
| Convenienege                           | **1.114**  | **2.16** | 0.03    | **1.01029** - **1.22927** |
| Product preference (global or local version) | **1.069*** | **3.13** | **0.002** | **1.025303** - **1.115058** |
| Gender                                 | **1.144**  | **0.58** | 0.559   | **0.72866** - **1.79573** |
| Age                                    | **1.123**  | **1.19** | **0.234** | **0.927872** - **1.358852** |

***$P < 0.01$, **$P < 0.05$, *$P < 0.10$

Odds Ratio Logistic Regression tests were performed on the data to obtain the results.

Table 2 shows the results of the Ordinal Logistic regression model

6 Empirical Results and Discussion

From the results, it is evident that trust in the online seller, the availability of product variety, convenience, ease of use of online payment, and global product preference have a significant and positive impact on the consumer’s purchase intention of online grocery.

That is, having trust in an online seller increases the likelihood of consumer’s purchase intention of online grocery by 20.8%, and the perception of online payment
as easy to use increases the likelihood of consumer’s purchase intention of online grocery by 12.5%.

Similarly, seeking variety in purchase increases the likelihood of consumer’s purchase intention of online grocery by 4.5%, and seeking convenience increases the likelihood of consumer’s purchase intention of online grocery by 11.4%.

7 Conclusion

This study is one of the earliest in India to propose and test a comprehensive model which identifies the influence of factors such as variety, trust in the seller, ease of use of online payments, convenience, purchase decision involvement, and preference on the global or local version of products on the purchase intention of consumers in online grocery stores.

From the study, it is evident that factors such as trust in online sellers, ease of use of the online payment, product preference of global version over local version, variety and convenience have a significant and positive impact on the consumer’s purchase intention of online grocery.

Hence, to promote online grocery the sellers must equally try to build trust as much as they are inclined to promotions. Also, providing online payment options in addition to payment by cash can significantly impact the purchase intentions of consumers. Further, the online platforms can ensure that the global version of the product is also displayed when a consumer searches for the local version of the same product.

Similarly, consumer’s purchase intention is also significantly and positively impacted by the availability of variety and convenience provided by the online grocery platforms. Therefore, the firms can ensure that they never trade-off these constructs as consumer’s purchase decision is also influenced by these factors.

8 Limitations and Future Research

This research attempts to contribute to the understanding of factors influencing the purchase intentions of consumers in buying groceries online. The study was only conducted among the Indian population, if a similar study is conducted with respondents world-wide, we can do cross-country comparisons. Also, comparative studies among the independent variables can be conducted to understand the influence and moderation they have on each other, and focus studies can be used to better understand the impact of situational parameters which plays a vital role in the purchase decisions of consumers.
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