

Exploring Consumer Behaviour in Online Grocery Shopping: A Comprehensive Survey Analysis in the Indian Context

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Abstract: This research paper delves into the realm of online grocery shopping in the Indian context, aiming to explore and understand consumer behaviour within this dynamic and evolving landscape. The study investigates the factors that drive consumer choices and preferences, filling a significant literature gap in the field.

The research objectives encompassed the examination of demographic profiles of online grocery shoppers, the identification of key factors influencing their purchase decisions, and an analysis of trust and brand loyalty in this digital shopping environment. Methodologically, the study employed a structured online questionnaire, collecting data from a diverse sample of 1,500 respondents through stratified random sampling. Data analysis was conducted using SPSS, encompassing descriptive and inferential statistics.

Key findings from the study include the paramount importance of price and discounts in driving purchase decisions, with 45.6% of respondents considering them as significant factors. Moreover, trust in online grocery platforms emerged as a pivotal factor, impacting consumer confidence and choices. Brand loyalty was strongly influenced by product quality, emphasizing the importance of maintaining high standards in products offered.

These findings have several implications. Businesses operating in the Indian e-grocery sector can tailor their strategies to emphasize competitive pricing, build trust through reliable services, and maintain product quality to foster brand loyalty. Policymakers can use these insights to craft regulations that protect consumers and promote fair competition. For scholars, this study contributes to a deeper understanding of consumer behavior in the online grocery shopping landscape, offering avenues for further research in this rapidly evolving e-commerce sector.

Keywords: Online grocery shopping, Consumer behavior, India, Price, Trust, Brand loyalty, Product assortment.

1. Introduction

India's journey into the world of online grocery shopping is characterized by both challenges and opportunities. The country's vast geographical expanse and diverse consumer preferences have presented unique hurdles for e-commerce companies. However, the increasing penetration of the internet, coupled with the proliferation of smartphones, has transformed the way Indians shop for groceries (Kumar & Kim, 2020).

Traditionally, grocery shopping in India involved a trip to neighborhood markets or local mom-and-pop stores, where consumers could physically inspect products and negotiate prices. However, this paradigm has shifted significantly with the advent of online grocery platforms. Consumers can now browse a vast array of products, compare prices, and place

orders from the comfort of their homes or on-the-go. The convenience of doorstep delivery and the promise of time-saving have contributed to the rapid adoption of online grocery shopping among Indian consumers.

The Indian online grocery market has witnessed substantial growth in recent years. According to a study by Kumar and Kim (2020), the market was valued at USD 64 billion in 2020, with online grocery shopping being a significant driver of this growth. This transformation is not confined to metropolitan areas; it has penetrated smaller towns and semi-urban regions, making it a nationwide phenomenon. As a result, businesses in the e-grocery sector are vying for a share of this expanding market, intensifying competition and spurring innovation (Singh & Sharma, 2019).

Consumer behavior plays a central role in shaping the e-grocery landscape in India. Understanding why and how consumers make choices in this digital realm is essential for businesses seeking to thrive in this competitive market. Consumer behavior in online grocery shopping is influenced by a myriad of factors, including psychological, social, and economic aspects.

One critical aspect of consumer behavior is trust. Trust in online grocery platforms is paramount as consumers entrust these platforms with their grocery lists and payment information. Trust-building mechanisms, such as secure payment gateways and reliable delivery services, significantly impact consumer choices (Verma & Rani, 2018).

Brand loyalty also holds sway over consumer behavior. In a market teeming with options, consumers often stick with brands they trust. Online grocery platforms must invest in building strong brand identities and maintaining consistency to retain their customer base. Product assortment and pricing strategies also come into play. Consumers are drawn to platforms that offer a diverse range of products at competitive prices. The availability of discounts, deals, and loyalty programs can influence purchasing decisions (Kumar & Kim, 2020).

Moreover, the influence of digital marketing in shaping consumer decisions cannot be underestimated. The online grocery sector heavily relies on digital channels for customer acquisition and engagement. Social media marketing, email campaigns, and personalized recommendations all contribute to shaping consumer preferences (Singh & Sharma, 2019).

Given the dynamic nature of the Indian online grocery shopping market and the multifaceted aspects of consumer behavior, this research paper sets out with a clear objective - to comprehensively analyze consumer behavior in the context of online grocery shopping in India. This analysis will delve into the factors that influence consumer choices and decisions, exploring trust, brand loyalty, product assortment, pricing strategies, and the role of digital marketing.

In alignment with existing literature, our primary objective is to identify and address the existing gap in the understanding of consumer behavior in the Indian online grocery shopping landscape. While studies have touched upon specific aspects of this domain, a comprehensive analysis that considers the interplay of these factors is lacking. By filling this gap, we aim to provide valuable insights that can benefit businesses operating in this sector.

This research paper holds significance on multiple fronts. Firstly, it provides businesses operating in the Indian e-grocery sector with actionable insights to tailor their strategies and offerings to the preferences and needs of their target audience. Understanding consumer behavior allows companies to optimize product assortments, pricing strategies, and marketing approaches. Secondly, it contributes to the academic discourse by addressing a recognized literature gap, shedding light on the complexities of consumer behavior in a unique and evolving market like India.

2. Literature Review

2.1. Review of Scholarly Works

The study of consumer behavior in the context of online grocery shopping has garnered significant attention in recent years. To gain a comprehensive understanding of this dynamic field, we delve into a review of seven seminal scholarly works that have contributed to the development of this domain. Each study, conducted in different geographical and market contexts, offers unique insights into the factors influencing consumer behavior, thereby shaping the landscape of online grocery shopping.

1. Anderson and Simester (2014) were among the early pioneers in examining the impact of pricing strategies on consumer behavior in online grocery shopping. Their study, conducted in the United States, explored the effectiveness of dynamic pricing, where prices fluctuate based on demand and other factors. Employing an experimental design, the authors found that dynamic pricing significantly influenced consumers' purchase decisions. It revealed that consumers were more likely to make immediate purchases when presented with limited-time discounts, thus shedding light on the importance of pricing strategies in e-grocery (Anderson & Simester, 2014).

2. Grewal et al. (2017) conducted a cross-sectional study in Canada to investigate the role of trust in influencing consumers' choices in the online grocery shopping domain. They argued that trust-building mechanisms, such as secure payment gateways and transparent return policies, significantly impacted consumers' trust and, subsequently, their purchase behavior. The study's findings emphasized the importance of establishing trust in e-commerce platforms to encourage repeat purchases and brand loyalty (Grewal et al., 2017).

3. Liang and Huang (2020) explored the effects of digital marketing strategies on consumer behavior in online grocery shopping in China. Employing a mixed-methods approach, they analyzed the influence of social media marketing and personalized recommendations on consumer choices. The study revealed that personalized recommendations based on consumers' preferences and previous purchases had a substantial impact on increasing cart sizes and purchase frequencies. These findings highlighted the power of data-driven marketing in shaping consumer behavior (Liang & Huang, 2020).

4. Chen and Riggins (2017) conducted a longitudinal study in the United Kingdom, focusing on brand loyalty and its evolution in the online grocery shopping sector. By tracking consumer behavior over several years, the study found that brand loyalty in the e-grocery sector was not static but evolved as consumers gained more experience with online shopping. Initial choices were influenced by brand familiarity, but as consumers gained trust and

familiarity with the online platform, brand loyalty became more fluid, subject to factors like product quality, pricing, and delivery efficiency (Chen & Riggins, 2017).

5. Gupta et al. (2018) conducted a comprehensive study in India to examine the influence of product assortment on consumer behavior in the online grocery shopping context. The authors argued that Indian consumers, known for their diverse preferences, were particularly influenced by the variety of products offered on e-grocery platforms. Through surveys and focus groups, the study revealed that consumers valued platforms with extensive product assortments, leading to increased engagement and repeat purchases. This study highlighted the importance of catering to diverse consumer preferences in the Indian market (Gupta et al., 2018).

6. Park and Kim (2019) delved into the effects of e-grocery platform usability on consumer behavior in South Korea. They conducted an extensive usability analysis, measuring factors like website navigation, search functionality, and checkout processes. Their findings indicated that platforms with user-friendly interfaces and smooth, intuitive experiences attracted more frequent and satisfied users. The study underscored the significance of investing in user-centered design to enhance the overall online grocery shopping experience (Park & Kim, 2019).

7. Sharma and Joshi (2016) explored the role of social influence in consumer behavior within the online grocery shopping sector in the United States. Employing a qualitative approach, they examined how social media and peer recommendations influenced purchase decisions. Their study revealed that consumers often turned to social networks for product recommendations and reviews. Positive feedback from peers and influencers significantly impacted consumers' choices, highlighting the power of social networks in shaping e-grocery behavior (Sharma & Joshi, 2016).

8. Wang and Kim (2018) investigated the impact of delivery efficiency on consumer behavior in online grocery shopping in China. The authors argued that prompt and reliable delivery services were crucial factors influencing consumers' trust and satisfaction. Their study, based on surveys and order data analysis, revealed that consumers were more likely to return to platforms that consistently provided timely and error-free deliveries. This study emphasized the critical role of logistics and delivery management in e-grocery success (Wang & Kim, 2018).

These eight seminal works offer a comprehensive panorama of the evolving field of consumer behavior in online grocery shopping. While they have been conducted in diverse geographical and market contexts, they collectively contribute to our understanding of the factors that influence consumer choices in this digital domain. As we embark on our research in the Indian context, these studies serve as valuable benchmarks and sources of inspiration, allowing us to build upon their findings and adapt them to the unique characteristics of the Indian e-grocery market.

3.1. Survey Instrument

The primary data for this research was collected using a structured questionnaire distributed online through the SurveyMonkey platform. The questionnaire was designed to gather

insights into consumer behavior in online grocery shopping within the Indian context. It consisted of multiple-choice questions, Likert scale items, and open-ended questions to ensure a comprehensive exploration of consumer preferences and decision-making factors.

3.2. Sampling Method

To ensure the representativeness of the sample, a stratified random sampling method was employed. The population was divided into strata based on demographic factors such as age, gender, income, and geographical location. Subsequently, random samples were drawn from each stratum to form a diverse and balanced sample of 1,500 respondents.

3.3. Data Analysis Tool

The data collected through the online questionnaire were processed and analyzed using statistical software. Specifically, the Statistical Package for the Social Sciences (SPSS) was employed for data analysis. SPSS facilitated the examination of descriptive statistics, including mean, median, and mode, as well as inferential statistics such as regression analysis and chi-square tests.

3.4.1. Data Cleaning and Preprocessing

Before analysis, the collected data underwent a thorough cleaning process to rectify inconsistencies and missing values. Invalid or incomplete responses were removed to ensure data integrity.

3.5.2. Descriptive Analysis

Descriptive statistics were employed to summarize the characteristics of the sample and provide an overview of key variables. These statistics included measures of central tendency, dispersion, and frequency distributions.

The combination of these data collection methods, tools, and techniques allowed for a comprehensive exploration of consumer behavior in the Indian online grocery shopping context, providing valuable insights into the factors driving consumer choices in this dynamic market.

4. Results and Analysis

4.1. Consumer Demographics

Table 1: Demographic Profile of Respondents

Demographic Variable	Frequency (%)
Age	
18-24	23.5
25-34	42.2
35-44	20.8

Demographic Variable	Frequency (%)
45-54	9.1
55+	4.4
Gender	
Male	51.6
Female	48.4
Education	
High School	15.7
Bachelor's Degree	51.9
Postgraduate Degree	32.4
Monthly Income	
Below INR 20,000	29.2
INR 20,000 - 50,000	47.6
Above INR 50,000	23.2

Explanation: Table 1 provides an overview of the demographic profile of the respondents. It includes information on age distribution, gender composition, educational background, and monthly income levels. The majority of respondents were between the ages of 25-34, with a relatively even gender distribution. A significant portion held Bachelor's degrees, and the majority reported monthly incomes between INR 20,000 and 50,000.

4.2. Online Grocery Shopping Frequency

Table 2: Frequency of Online Grocery Shopping

Frequency of Shopping	Percentage (%)
Daily	6.8
Weekly	42.5
Bi-weekly	31.3
Monthly	19.4

Explanation: Table 2 illustrates the frequency of online grocery shopping among respondents. A substantial number of participants shopped on a weekly basis, while a significant portion

preferred bi-weekly shopping. Monthly and daily shopping frequencies were comparatively lower, highlighting the preferred shopping patterns of the surveyed consumers.

4.3. Factors Influencing Purchase

Table 3: Factors Influencing Online Grocery Purchase

Factors	Percentage (%)
Price and Discounts	45.6
Product Quality and Freshness	31.8
Delivery Efficiency	12.5
Brand Reputation	6.7
User-Friendly Website	3.4

Explanation: Table 3 outlines the key factors influencing online grocery purchase decisions. Price and discounts emerged as the most significant factor, with nearly half of the respondents considering it crucial. Product quality and freshness were also important determinants. Delivery efficiency, brand reputation, and website usability played relatively smaller roles in influencing purchasing decisions.

4.4. Trust in Online Grocery Platforms

Table 4: Level of Trust in Online Grocery Platforms

Trust Level	Percentage (%)
High Trust	54.3
Moderate Trust	33.6
Low Trust	12.1

Explanation: Table 4 categorizes respondents based on their level of trust in online grocery platforms. A majority of participants reported a high level of trust in these platforms, while a significant portion had a moderate level of trust. A smaller fraction expressed low trust levels.

4.5. Brand Loyalty

Table 5: Influence of Brand Loyalty on Online Grocery Shopping

Brand Loyalty Influence	Percentage (%)
Strongly Influential	41.2
Moderately Influential	36.7

Brand Loyalty Influence	Percentage (%)
Slightly Influential	17.9
Not Influential	4.2

Explanation: Table 5 assesses the influence of brand loyalty on online grocery shopping. A substantial number of respondents considered brand loyalty to be strongly influential, followed closely by those who found it moderately influential. A smaller percentage perceived brand loyalty as slightly or not influential in their online grocery shopping decisions.

4.6. Product Assortment Satisfaction

Table 6: Satisfaction with Product Assortment on Online Grocery Platforms

Satisfaction Level	Percentage (%)
Very Satisfied	38.8
Satisfied	42.1
Neutral	14.2
Dissatisfied	4.5
Very Dissatisfied	0.4

Explanation: Table 6 gauges respondents' satisfaction levels regarding the product assortment offered on online grocery platforms. The majority expressed satisfaction, with a significant proportion being very satisfied. Only a small fraction reported dissatisfaction with the product assortment.

4.7. Factors Influencing Online Grocery Shopping Frequency

Matrix Table 7: Factors Influencing Shopping Frequency

	Price and Discounts	Product Quality	Delivery Efficiency	Brand Reputation	User-Friendly Website
Daily	High	Low	Low	Low	Low
Weekly	High	High	Moderate	Moderate	Moderate
Bi-weekly	Moderate	Moderate	High	Moderate	Low
Monthly	Low	High	High	High	High

Explanation: Matrix Table 7 illustrates the factors that influence the frequency of online grocery shopping among consumers. Each cell in the matrix denotes the influence level of a specific factor on a particular shopping frequency category. For example, price and discounts have a high influence on daily and weekly shopping but a low influence on monthly shopping.

4.8. Trust in Online Grocery Platforms by Age Group

Matrix Table 8: Trust in Online Grocery Platforms by Age Group

	High Trust	Moderate Trust	Low Trust
18-24 years	62.1%	32.4%	5.5%
25-34 years	53.7%	36.8%	9.5%
35-44 years	48.2%	37.9%	13.9%
45-54 years	44.5%	36.6%	18.9%
55+ years	39.1%	34.2%	26.7%

Explanation: Matrix Table 8 presents the trust levels in online grocery platforms among different age groups. It illustrates the percentage of respondents within each age group who reported high, moderate, or low levels of trust. Younger age groups tend to have higher trust levels, with trust decreasing as age increases.

4.9. Influence of Product Quality on Brand Loyalty

Matrix Table 9: Influence of Product Quality on Brand Loyalty

	Strongly Influential	Moderately Influential	Slightly Influential	Not Influential
High Product Quality	68.2%	29.8%	1.5%	0.5%
Moderate Product Quality	29.1%	61.9%	8.2%	0.8%
Low Product Quality	8.5%	16.6%	72.2%	2.7%

Explanation: Matrix Table 9 explores the relationship between product quality and its influence on brand loyalty. It depicts the percentage of respondents who found high, moderate, or low product quality to be strongly, moderately, slightly, or not influential in their brand loyalty.

5. Discussion

5.1. Analysis and Interpretation of Results

In this section, we delve into a comprehensive analysis and interpretation of the research findings presented in Section 4. These findings shed light on various aspects of consumer behavior in online grocery shopping within the Indian context, offering valuable insights into the factors that influence decisions and preferences. We compare each finding with relevant literature to demonstrate how our study contributes to filling the existing literature gap.

5.2. Demographic Factors and Shopping Behavior

The demographic profile of respondents (Table 1) revealed that the majority fell within the age range of 25-34, demonstrating the prominence of this age group in online grocery shopping. This aligns with studies conducted in other countries (Chen & Riggins, 2017), emphasizing the appeal of online grocery platforms to young adults.

5.3. Price and Discounts as Key Drivers

Table 3 illustrates that price and discounts play a central role in influencing purchase decisions, with 45.6% of respondents considering them as significant factors. This finding corroborates previous research (Anderson & Simester, 2014), highlighting the importance of pricing strategies in the e-grocery sector.

5.4. Trust in Online Grocery Platforms

Table 4 indicates that a majority of respondents reported a high level of trust in online grocery platforms. This trust factor is crucial in encouraging online shopping adoption (Grewal et al., 2017). Our study echoes the significance of building trust to foster consumer confidence in this digital shopping environment.

5.5. Brand Loyalty and Product Quality

Matrix Table 9 demonstrates that product quality significantly influences brand loyalty, with 68.2% of respondents considering it strongly influential. This finding aligns with the literature (Chen & Riggins, 2017), emphasizing the importance of product quality in building brand loyalty among online grocery shoppers.

5.6. Product Assortment and Satisfaction

Table 6 reveals that a substantial percentage of respondents were either very satisfied (38.8%) or satisfied (42.1%) with the product assortment on online grocery platforms. This indicates that a diverse product assortment appeals to consumers, consistent with Gupta et al.'s (2018) findings.

5.7. Implications and Significance of Findings

The implications of our research are multifaceted and hold significance for various stakeholders. Businesses operating in the Indian e-grocery sector can leverage these insights to refine their strategies. Emphasizing competitive pricing, offering a wide product assortment, ensuring product quality, and building trust through reliable services and secure

payment gateways can enhance their appeal to consumers. Moreover, the study's findings underscore the importance of digital marketing in conveying pricing strategies and promoting discounts to attract and retain customers.

From a policy perspective, understanding consumer behavior in online grocery shopping can aid regulators in crafting policies that protect consumer rights and ensure a fair marketplace. This is particularly relevant in a market characterized by intense competition and rapid growth (Singh & Sharma, 2019).

For scholars and researchers, this study contributes to filling the literature gap by offering a comprehensive analysis of consumer behavior in the Indian online grocery shopping landscape. It corroborates and extends existing findings, providing valuable insights into a dynamic and evolving market.

5.8. Limitations and Future Research

While this research provides valuable insights, it is not without limitations. The study's reliance on self-reported data may introduce bias, and the sample, though diverse, may not fully represent the entire Indian population. Future research could employ a more extensive and diverse sample, include qualitative methodologies for deeper insights, and explore the role of cultural factors in shaping consumer behavior.

In conclusion, this research paper has offered a detailed analysis of consumer behavior in online grocery shopping in India. Through a systematic study, we have identified key factors influencing decisions, compared findings with existing literature, and explored the implications of these insights. This understanding not only benefits businesses and policymakers but also contributes to the academic discourse in a rapidly evolving e-commerce landscape.

6. Conclusion

In this study, we set out to explore and understand consumer behavior in the context of online grocery shopping within the Indian market. Through a systematic analysis of survey data, we have uncovered several key findings that shed light on the preferences, motivations, and decision-making factors of Indian consumers in the e-grocery sector.

One of the central findings of this study is the prominence of price and discounts as significant drivers of consumer decisions. Our research aligns with previous studies emphasizing the importance of competitive pricing and the strategic use of discounts to attract and retain customers (Anderson & Simester, 2014). Indian consumers, like their counterparts in other countries, are sensitive to price and value propositions.

Moreover, our findings underscore the critical role of trust in online grocery platforms. A majority of respondents expressed a high level of trust in these digital platforms, highlighting the importance of building and maintaining trust through reliable services and transparent policies (Grewal et al., 2017). Trust is the foundation upon which consumer confidence is built in the digital shopping landscape.

Brand loyalty was another significant aspect explored in this study. Product quality emerged as a pivotal factor influencing brand loyalty, emphasizing the importance of maintaining high product standards to foster brand loyalty (Chen & Riggins, 2017). The study's results echo the notion that satisfied and loyal customers can become advocates for a brand within the competitive e-grocery market.

Additionally, the research highlights the importance of offering a diverse product assortment to satisfy consumer preferences. A significant portion of respondents reported satisfaction with the product assortment on online grocery platforms (Gupta et al., 2018). This implies that businesses should continually strive to expand and diversify their product offerings to meet the varied demands of Indian consumers.

The implications of this research extend beyond the scope of the study. Businesses operating in the Indian e-grocery sector can leverage these insights to tailor their strategies to the preferences and priorities of their target audience. Policymakers can use these findings to develop regulations that protect consumers and promote a fair and competitive marketplace (Singh & Sharma, 2019). Researchers and scholars can build upon this study to further deepen our understanding of consumer behavior in the dynamic e-commerce landscape.

In conclusion, this research contributes to the growing body of knowledge on consumer behavior in online grocery shopping, particularly in the Indian context. By examining the interplay of factors such as price, trust, brand loyalty, and product assortment, we have provided a comprehensive view of the Indian e-grocery market. As this sector continues to evolve, it is crucial for businesses and stakeholders to remain attuned to the preferences and expectations of consumers, ensuring the continued growth and success of online grocery shopping in India.

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