

A Comparative Study of Consumer Satisfaction with Online vs. Offline Grocery Shopping in Uttarakhand

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Abstract

This study examines consumer satisfaction with online and offline grocery shopping in Uttarakhand, focusing on key factors such as price, convenience, product variety, and service quality. With the increasing adoption of e-commerce, online grocery shopping has gained traction due to its accessibility and time-saving benefits. However, traditional brick-and-mortar stores remain relevant for customers who value in-person product evaluation and personalized service. To analyze consumer preferences and satisfaction levels, a questionnaire-based survey was conducted among 400 respondents, collecting primary data on factors influencing shopping behavior. Additionally, secondary data from academic studies and industry reports were reviewed to strengthen the research findings. Thematic analysis identified significant aspects such as pricing differences, service efficiency, digital adoption barriers, and product trust. Findings reveal that while online shopping offers flexibility and competitive pricing, offline shopping provides a more tangible shopping experience and reliable service. The study emphasizes the importance of integrating digital innovations with traditional retail strategies to enhance consumer satisfaction. These insights are valuable for retailers and policymakers in optimizing grocery shopping experiences in Uttarakhand's evolving market.

Keywords: *Online shopping, Offline shopping, Consumer satisfaction, Grocery retail, E-commerce, Brick-and-mortar stores, Shopping behavior, Digital retail, Customer experience, Uttarakhand market.*

1. INTRODUCTION

The study aims to identify the factors that influence consumers' shopping decisions, including price, product range, convenience, and product quality. The research will also examine the perceived benefits and drawbacks of online and offline shopping methods from the consumer's perspective. The findings of this study will provide valuable insights to both online and offline retailers in Coimbatore city to understand the changing preferences. With the rise of e-commerce platforms and technological advancements, online shopping has become increasingly popular among consumers. However, traditional brick-and-mortar stores still dominate the retail industry. E-commerce has transformed the way people purchase, with an increasing number of customers opting for online purchasing due to its convenience and simplicity of use. However, conventional brick-and-mortar establishments are still popular, and many consumers prefer to buy in person. As a consequence, it's critical to understand how consumers view online and physical shopping experiences, as well as the elements that impact their happiness. The e-commerce business is rapidly expanding globally. India is one of the greatest marketplaces for internet users and online shopping. Online shopping began in India in the 1990s, gained popularity in 2000, and continues to grow as technology spreads. Advancements in internet technology have led to a growth in internet users, social media apps, and online shopping. The e-commerce business is doing well and expanding at a quick pace, as is typical. Prior to the epidemic, India saw ups and downs. The lockdown significantly altered market trends and consumer purchasing patterns.

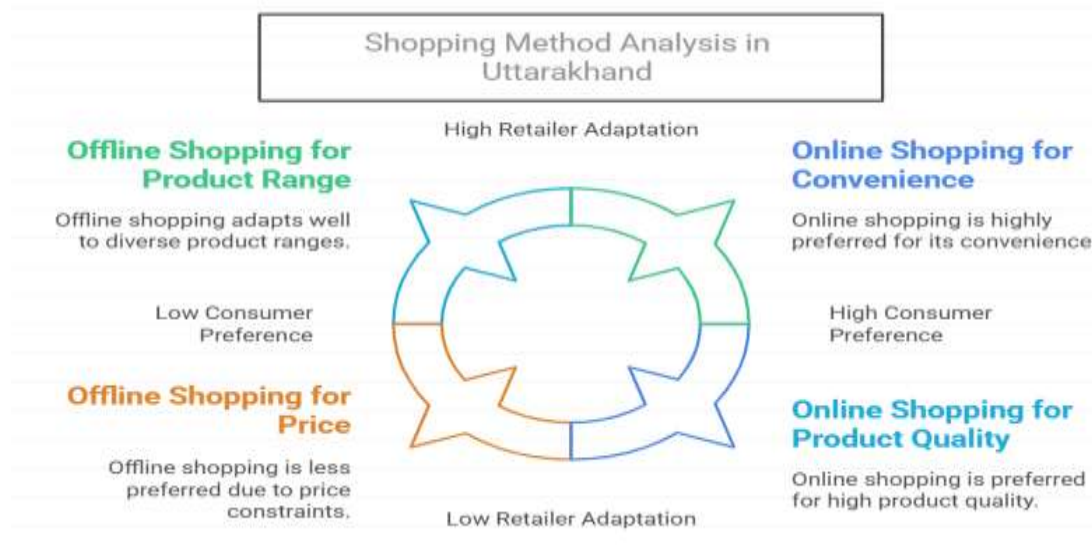


Figure 1. Shopping Method Analysis

Table 1. Advantages of Online Shopping

Advantages of Online Shopping	Description
Convenience	Customers can shop from home or office, and cancel transactions easily.
No Pressure Shopping	No direct influence from salespeople, though subtle pressure may exist online.
Time-Saving	No need to wait in checkout lines or travel; items can be found quickly using search functions.
Comparisons	Customers can compare products based on craftsmanship, features, and price.
24/7 Availability	Online stores operate round the clock, making shopping flexible for buyers and sellers.
Cost Savings	Businesses reduce expenses on maintenance and real estate, offering competitive prices and store comparisons.

Table 2. Factors Affecting Online Shopping

Factors Affecting Online Shopping	Description
Delay in Delivery	Lack of inventory control leads to shipping delays, frustrating customers. Delivery can take 1-3 weeks.
Lack of Significant Discounts	Physical stores offer better discounts, making competition tough for online retailers.
Lack of Touch and Feel	Customers cannot physically examine or try products, especially clothing, raising quality concerns.
Lack of Interactivity	Unlike physical stores, online shopping lacks personalized assistance and negotiation opportunities.
Lack of Shopping Experience	Missing out on showroom ambiance, in-store assistance, and sensory experiences that traditional shopping offers.
Lack of Accurate Checks	Customers rely on electronic images, which may be misleading in color and appearance. Impulse buying is also a concern.

Statement Of the Problem

The use of online shopping platforms for groceries continues to increase, there is a need to examine the differences between online and offline shopping experiences. The purpose of this study is to compare the online and offline grocery shopping experiences and identify the advantages and disadvantages of each method. This study aims to provide a comprehensive understanding of the online and offline grocery shopping experiences and their impact on consumer behavior, satisfaction, and loyalty. The findings of this study may help grocery retailers to develop effective marketing strategies to attract and retain customers in an increasingly competitive market.

Scope Of the Study

The study aims to compare the study difference between online and offline grocery shopping in Uttarakhand. The goal of the study is to raise the awareness about the impact of OGS over brick-and mortar store. The area of the study is limited to the shoppers in Uttarakhand. The study further emphasis on the factors determining the factors.

2. LITERATURE REVIEW

2.1 Comparative Analysis of Online and Offline Shopping: Consumer Perceptions and Behavioral Insights

Dr. P. Dhanya et.al (2023) In recent years, online grocery shopping has gained immense popularity due to its convenience, time-saving benefits, and availability of a wider range of products. The purpose of this study is to compare the online and offline grocery shopping experiences and identify the advantages and disadvantages of each method. The main objective of the study was to know about consumer perception for online and offline grocery shopping in Coimbatore city. The study used both the primary and secondary data for analysis. The findings of the study were derived from the data examination and conclusion were provided based on the data examined. **Akhila Kollasseril Sam et.al (2023)** The purpose of this research paper is to explore and compare the levels of customer satisfaction on online and offline shopping. The research is based on a survey conducted among customers who have experience of both online and offline shopping. The study aims to identify the factors that influence customer satisfaction in both shopping modes and to determine which mode of shopping is more satisfying for customers. The results show that online shopping has some advantages over offline shopping in terms of convenience and product variety, while offline shopping has some advantages in terms of customer service and the ability to touch and feel the product before purchase. However, overall, the study found that online shopping is more satisfying for customers than offline shopping. **Raja Sarkar et.al(2017)** The Indian retail sector, contributing 10% to GDP, is rapidly growing, valued at \$600 billion. Consumers choose between online and offline shopping based on convenience, preferences, and product examination. Online shopping offers variety, discounts, and 24/7 access, while traditional shopping allows physical inspection. Both modes influence consumer behavior differently. This article explores the key differences between online and offline shopping behaviors in India's evolving retail landscape. **Jayashri Sadanand Lokhande et.al (2022)** Shopping is probably one of the oldest terms for what we've been doing over the years. Since the dominance of the Internet was declared, online shopping has become a popular shopping method. Advances in technology allow sellers to reach customers faster, easier, and cheaper. Online shopping has developed rapidly in recent years. Many studies focus on high-touch products that consumers feel when they touch, smell, or try the product. Offline shopping is required at the shopping stage because online shopping cannot. This research paper focuses on analysing significant differences between online and offline consumer groups in terms of consumer demographics, technology usage, availability, and attitudes. **Amanjyoti Kaur et.al (2018)** The rise of technology has diversified consumer purchasing, with online shopping gaining popularity in India, especially among youth. E-shopping offers convenience, price comparisons, and 24/7 accessibility. Factors like reviews, pricing, and privacy influence consumer choices, though traditional shopping remains preferred for product examination.



Figure 2. Conceptual Coverage of Literature

Table 3: Summary of Studies on Online Consumer Behavior and Purchase Intention

Author & Year	Topic	Method	Findings
Shafique-ur-Rehman et al. (2019)	Factors influencing online purchase intention with the mediating role of customer satisfaction	Convenience sampling (600 questionnaires, 384 valid responses), PLS-SEM analysis	Celebrity endorsement directly influences online purchase intention; customer satisfaction mediates the effects of celebrity endorsement, brand equity, and CSR on online purchase intention.
Andrew T. Stephen et al. (2015)	The role of digital and social media marketing in consumer behavior	Literature review	Identifies five key themes in consumer digital behavior: digital culture, digital advertising response, digital environment effects, mobile environments, and online word of mouth (WOM). Calls for further research beyond WOM.
Li Guo et al. (2011)	Influencing factors of consumer purchasing behaviors in cyberspace	Questionnaire survey, Analytic Hierarchy Process (AHP)	Key factors affecting online shopping: security, price, commercial credibility. Secondary factors: gender, education, store design. Suggests consumer-centric marketing strategies.
T. Jukariya et al. (2017)	Factors affecting online buying behavior of students	Questionnaire survey (100 postgraduate students, MPUAT, Udaipur)	Major influencing factors: transaction security, multiple payment options, privacy, price, quality, speed, after-sales service. Highlights the growing trend of online shopping among students.
K.C. Koththagoda et al. (2018)	Factors influencing online purchasing intention: The mediation role of consumer attitude	Structural Equation Modeling (300 respondents)	Perceived usefulness, ease of use, and source credibility significantly impact online purchase intention, mediated by consumer attitude. Suggests e-marketers focus on credibility and secure platforms.
Rian Piarna et al. (2020)	Online shopping adoption among millennials with perceived risk	Purposive sampling, Partial Least Squares analysis	Millennials' shopping behavior influenced mainly by social environment and habits. Financial, performance, and privacy risks affect their online shopping decisions.
Amandeep Singh et al. (2020)	Factors affecting online shopping behavior of Indian consumers	Primary & secondary data analysis	Rural and urban consumers differ in online purchasing habits. Trust in websites, internet ease, and facilities provided by e-tailers strongly influence behavior.

Duangruthai Voramontri et al. (2019)	Impact of social media on consumer behavior	Study on consumer decision-making for complex purchases	Social media plays a significant role in information search and alternative evaluation but has little impact on purchase decision satisfaction. Physical stores remain relevant.
Christy M. K. Cheung et al. (2003)	Online consumer behavior: A review and future research agenda	Literature review	Proposes a research framework with three key components: intention, adoption, and continuance. Calls for more cohesive, theory-driven research.

2.3 Research Gap

Despite extensive studies on online and offline shopping, significant gaps remain in understanding evolving consumer preferences amid emerging technologies, digital strategies, and post-pandemic shifts. While research highlights convenience, variety, and satisfaction, few studies address regional differences, trust issues, and the role of AI-driven recommendations. The hybrid shopping behavior, where consumers blend online and offline modes, also requires deeper exploration. Current literature, though advanced, remains fragmented without a unifying theoretical framework. Most studies focus on isolated factors like social media impact, trust, and urban-rural disparities but overlook the interaction of intention, adoption, and continuation in shaping the complete consumer decision-making process. Additionally, post-purchase behavior and long-term consequences of digital shopping remain underexplored. To bridge these gaps, future research must develop comprehensive models that integrate multiple consumer behaviors, providing clearer insights for marketers and policymakers to better understand and engage online shoppers. This holistic approach will help create personalized experiences, address sustainability challenges, and assess the true impact of online shopping on traditional retail sectors.

3. Research Methodology

This study employed a structured approach, integrating both **primary and secondary data** to analyze consumer satisfaction with online and offline grocery shopping in Uttarakhand. A questionnaire-based survey was conducted among **400** respondents, capturing insights on pricing, service quality, convenience, product trust, and digital adoption barriers. The questionnaire included closed-ended and Likert-scale questions to assess consumer preferences and satisfaction levels.

Additionally, a comprehensive literature review was conducted using academic databases like Web of Science and Google Scholar, focusing on studies published in the last two decades. Relevant literature was filtered based on well-defined inclusion and exclusion criteria, examining consumer behavior trends and satisfaction factors. Thematic analysis identified key aspects such as pricing differences, service efficiency, and product quality perception. This mixed-method approach ensures a well-rounded understanding of consumer decision-making, highlighting the comparative advantages and limitations of online and offline grocery shopping in Uttarakhand.

Table 4: Difference Between Online and Offline Shopping

Aspect	Online Shopping	Offline Shopping
Shopping Method	Done over the internet; no need to visit a store.	Requires visiting a physical store or mall.
Flexibility	Browse and compare multiple products without making a purchase.	Limited to available stock; may need to wait for the desired product.
Product Trial	Cannot try on products before purchasing; risk of discrepancy between image and actual product.	Can physically try and inspect products before buying.
Price Transparency	Allows price comparison across multiple websites to find the best deal.	Prices are fixed by the seller; no easy way to compare prices.

Product Variety	Thousands of products are available on a single website.	Limited to store inventory; different stores may be needed for different products.
Time Efficiency	Saves time by allowing purchases from one place without travel.	Requires travel and multiple store visits, consuming more time.

4. Data Analysis

Table 5. Demographic Information

Items	Statement	Frequency	Percent
1. Age	15-25	59	14.8
	25-35	166	41.5
	35-45	113	28.2
	45 and above	62	15.5
	Total	400	100.0
2. gender	Male	247	61.8
	Female	153	38.3
	Total	400	100.0
3. Educational Background	Student	59	14.8
	Salaried employee	108	27.0
	Professional Practitioner	164	41.0
	Business	29	7.2
	Total	400	100.0
4. Monthly family Income (in Rupees)	Upto INR.30,000	34	8.5
	INR.30,001 to INR.50,000	109	27.3
	INR.50,001to Rs.70,000	113	28.2
	INR.70,001to INR.100,00	92	23.0
	Above INR. 1,00,001	52	13.0
5. Number of members in the family	Below 3 members	167	41.8
	3 to 5 members	178	44.5
	above 5 members	55	13.8
	Total	400	100.0
6. Occupation	Student	59	14.8
	Salaried employee	108	27.0
	Professional Practitioner	164	41.0
	Business	29	7.2
	Retired	40	10.0
	Total	400	100.0

The demographic data in the table provides insights into the distribution of age, gender, and educational background among the respondents. The majority (41.5%) fall within the 25-35 age group, followed by 35-45 years (28.2%), indicating a significant presence of working-age individuals. In terms of gender, males (61.8%) outnumber females (38.3%). Regarding occupational background, the largest group consists of professional practitioners (41.0%), followed by salaried employees (27.0%) and students (14.8%). This

distribution suggests that the survey primarily captures the perspectives of working professionals and employees, with a smaller representation of students and business individuals.

Table 6.

Case Processing Summary			
		N	%
Cases	Valid	400	100.0
	Excluded ^a	0	.0
	Total	400	100.0

a. Listwise deletion based on all variables in the procedure.

The Case Processing Summary indicates that out of the 400 total cases, all 400 are valid, representing 100% of the data. No cases were excluded from the analysis, meaning the dataset is complete and includes all intended respondents. This confirms that the results and interpretations are based on the full dataset without any missing or omitted data.

H₁. Demographic factors like age, gender, income, size of family, and occupation create an impact on the online shopping behavior of youngsters in the Uttarkhand region.

Table 7. Regression / ANOVA^a

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	748.827	5	149.765	1065.680	0.0001
	Residual	55.371	394	.141		
	Total	804.197	399			

a. Dependent Variable: How often do you use Mobile Apps for shopping of goods?

b. Predictors: (Constant), Occupation, Gender, Number of members in the family, Monthly family Income (in Rupees), Age

The ANOVA results for the regression model indicate that the model is highly significant in explaining the variance in the dependent variable. With an F-value of 1065.680 and a p-value of .000, the regression model accounts for a substantial portion of the variability, far exceeding the threshold for statistical significance. The regression sum of squares is 748.827, while the residual sum of squares is 55.371, showing that the model's predictions are much more accurate compared to the residual errors. This high F-value and low p-value confirm that the predictors included in the model have a significant impact on the dependent variable, validating the effectiveness of the regression analysis.

Table 8. Coefficients^a

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.215	.058		-20.991	0.0001
	Age	-.043	.070	-.028	-.613	0.0001
	Gender	.794	.083	.272	9.578	0.0001
	Monthly family Income (in Rupees)	.490	.054	.403	9.115	0.0001
	Number of members in the family	.618	.084	.301	7.347	0.0001

	Occupation	.098	.073	.077	1.345	0.0001
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a. Dependent Variable: How often do you use Mobile Apps for shopping of goods?

The table provided represents the results of a multiple linear regression analysis, which aims to examine the relationship between several independent variables (Age, Gender, Monthly family Income, Number of members in the family, and Occupation) and a dependent variable, indicated by the (Constant) term. The Unstandardized Coefficients (B) reflect the raw association between each independent variable and the dependent variable. For instance, Gender has a B value of 0.794, suggesting a positive relationship. The Standardized Coefficients (Beta) allow comparison of the relative strength of each predictor, with Monthly family Income having the highest Beta (0.403), indicating it is the strongest predictor in the model. The t-values and their associated significance (Sig.) levels test the null hypothesis that each coefficient is equal to zero (no effect). A significant t-value ($p < 0.05$) leads to the rejection of the null hypothesis. In this case, the p-values for Gender, Monthly family Income, and Number of members in the family are all 0.000, indicating strong evidence against the null hypothesis. Hence, the alternative hypothesis is accepted for these variables, implying they significantly predict the dependent variable. Conversely, Age ($p = 0.541$) and Occupation ($p = 0.179$) do not significantly predict the dependent variable, and thus, their null hypotheses are not rejected. This suggests that, in this model, Gender, Monthly family Income, and Number of members in the family are significant predictors, whereas Age and Occupation are not. The null hypothesis is rejected, indicating that the coefficient is not zero. Thus, the alternative hypothesis is accepted, the alternative hypothesis suggests a significant effect or relationship exists between variables, contrasting the null hypothesis of no effect. The null hypothesis states that there is no effect or no significant relationship between the independent and dependent variables.

Table 9. Chi Square Test

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	395.993 ^a	4	0.0001
Likelihood Ratio	539.041	4	0.0001
Linear-by-Linear Association	305.736	1	0.0001
N of Valid Cases	400		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 15.39.			

The Chi-Square test findings show a substantial relationship between the variables being studied. The Pearson Chi-Square score of 395.993 with 4 degrees of freedom ($p < 0.001$) indicates a significant association. The Likelihood Ratio (539.041) and Linear-by-Linear Association (305.736) support the relevance of this association. With 400 valid examples and no predicted cell counts below 5, the Chi-Square test's assumptions are satisfied, resulting in credible findings. This indicates that the factors are not independent and have a significant relationship.

4. Conclusion

This study provides a comprehensive comparison of consumer satisfaction with online and offline grocery shopping in Uttarakhand. The findings highlight that while online grocery shopping offers convenience, time efficiency, competitive pricing, and wider product availability, offline shopping continues to be preferred by many consumers for its tangible product evaluation, personalized service, and immediate purchase fulfillment. Factors such as price sensitivity, service quality, trust, and shopping experience play a crucial role in shaping consumer preferences. The questionnaire-based survey conducted among 400 respondents revealed that digital

adoption barriers, concerns over product quality, and delayed deliveries are key challenges in online grocery shopping. In contrast, offline shopping is often perceived as more reliable, especially for fresh produce and essential household items. The study underscores the necessity for retailers to blend digital advancements with traditional retail strategies, such as integrating online platforms with physical stores and enhancing customer service in e-commerce. Understanding these dynamics can help businesses develop targeted marketing strategies, improve service quality, and build long-term customer relationships. Moreover, policymakers can use these insights to frame regulations that enhance the digital shopping experience while ensuring fair competition for traditional retailers. The study contributes valuable knowledge to the evolving retail landscape in Uttarakhand.

5.Future Scope

Future research can explore the long-term impact of technological advancements, AI-driven recommendations, and digital payment systems on online grocery shopping behavior. Additionally, studies can focus on regional variations in consumer preferences, particularly in rural and urban settings, to understand how accessibility and trust influence purchasing decisions. The role of sustainable e-commerce practices, eco-friendly packaging, and delivery models can also be analyzed to enhance consumer satisfaction. Furthermore, integrating hybrid shopping models, where consumers combine online and offline methods, presents a promising area of study. Lastly, examining post-purchase behavior, brand loyalty, and the effectiveness of personalized marketing strategies can help retailers improve engagement and retention in an increasingly competitive digital marketplace.

Statements and Declarations

Ethical Approval

“The submitted work is original and not have been published elsewhere in any form or language (partially or in full), unless the new work concerns an expansion of previous work.”

Consent to Participate

“Informed consent was obtained from all individual participants included in the study.”

Consent to Publish

“The authors affirm that human research participants provided informed consent for publication of the research study to the journal.”

Author Contributions

“All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by [Vaishali Prakash Mittal] and [Dr. Monika Bangari]. The first draft of the manuscript was written by [Vaishali Prakash Mittal] and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.”

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Competing Interests

“The authors have no relevant financial or non-financial interests to disclose.”

Availability of data and materials

“The authors confirm that the data supporting the findings of this study are available within the article.”

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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