INTERNATIONAL INSTITUTE OF SDGs AND PUBLIC POLICY

(IISPPR)

RESEARCH PUBLICATION

Consumer Preferences Between Online and Offline Shopping in Kolkata

AUTHORS

Sakshi Dayal • Avishikta Basu • Srijanti Chandra

Abhinanda Roy Chowdhury • Zoya Akhtar • Sudiksha Kumari

Published on the IISPPR research publication platform

Publication date: 07 June 2026

iisppr.org.in/consumer-preferences-between-online-and-offline-shopping-in-kolkata/

Consumer Behaviour • Digital Retail • Kolkata

Consumer Preferences Between Online and Offline Shopping in Kolkata

International Institute of SDGs and Public Policy
Sakshi Dayal, Avishikta Basu, Srijanti Chandra, Abhinanda Roy Chowdhury, Zoya Akhtar, Sudiksha Kumari

Date: 07.06.2026

Abstract

This study examines consumer preferences between online and offline shopping in Kolkata, a metropolitan city in India that perfectly balances its rich retail roots with a fast growing digital landscape. It analyses the factors influencing shopping preferences, including convenience, product variety, pricing and trust, along with the impact of demographic variables such as age, gender and income. Primary data were collected via a survey-based methodology targeting different types of consumers in Kolkata, covering various ages, and socioeconomic backgrounds. This study investigates the balance between online and offline shopping and the growth of omnichannel behaviour, where consumers use both channels together. The findings offer ground-level insights to how people in Kolkata make their shopping decisions, and give practical relevance for retailers in other large Indian cities.

Acknowledgements

The authors would like to acknowledge the contribution of Mahika Pawar in the research and writing of this paper. The authors also thank the International Institute of SDGs and Public Policy for their support and guidance throughout this study.

Introduction

Today's economy succeeds by blending digital and physical shopping experiences. Online shopping gives buyers many choices right from home. Still, many prefer going to offline markets, so they can try things out and take them home immediately.

Online shopping is growing rapidly in India, and every single year millions of users are joining. However, on the other side, India’s offline retail sector remains dominant in terms of volume and reach especially in the big cities where consumers have access to both channels and actively choose between them based on personal, social, and situational factors. The fusion of traditional and online retail styles makes Indian cities uniquely educational.

This study focuses on Kolkata as it is one of India's major metropolitan cities that has both the digital ecosystem to support online shopping and a deeply rooted retail culture that keeps physical stores alive and thriving. The majority of people in Kolkata still enjoy going to local markets. At the same time, more people in the city are using smartphones and the internet. Because of this, a majority of people in Kolkata are starting to buy things online. This coexistence of old and new retail structures makes Kolkata an ideal location to examine how and why consumers make the choices they do.

We will explore why shoppers in Kolkata choose between online and offline stores by looking at how new tools and modern gadgets are changing this process. We will also see how different types of people are changing their way of shopping in this modernizing market.

Literature Review

Shopping behaviour has undergone a significant transformation in recent years due to technological advancements, changing lifestyles, and the expansion of digital platforms. Consumer preference now reflects deeper shifts in how they think, decide, and behave. Existing literature highlights various factors influencing consumer shopping preferences, including behavioural patterns, demographic characteristics, and digital transformations in purchasing habits. This thematic literature review maps key findings and highlights gaps that warrant further research.

1. Consumer behaviour and purchase decision making

Consumer behaviour and purchasing decisions have become important areas of study when comparing online and offline shopping channels . The growth of e-commerce, better payment systems, and wider access to the internet has changed how people shop on a day to day basis (Tijer, 2025). As a result, researchers have started to look more meticulously at how the channel a consumer chooses to shop through affects the decisions that they are likely to make.

Several factors influence consumers' shopping preferences and purchasing decisions and when it comes to online shopping: convenience, easy access, a wide range of products, the ability to compare prices, and reading other customers reviews are the most common reasons people prefer it (Schulze, 2020). In contrast , Offline shopping however works quite differently for the people they can physically inspect the product before they decide to buy it, an experience that online shopping still cannot fully replace (Dzyabura & Jagabathula, 2021). This matters more for certain products like clothes or electronics, where actually handling the item makes a huge difference and is crucial to whether someone purchases it or not (Econsultancy, 2021).

The type of product being purchased also has a significant effect on which channel they are more likely to choose . Research from the past 20 years found that shopping behaviour highly dependent on the product, and suggested that more specific research is still required, particularly in developing countries (Tandfonline, 2024).

The COVID-19 pandemic played a significant role in pushing more consumers toward online shopping . This meant that many people got comfortable using both mediums depending on what

they needed, though convenience stayed the biggest factor throughout (Schulze, 2020, Roy & Datta, 2020).

2. Growth of Online Shopping & Consumer Motivations

Now-a-days we see a significant and positive growth towards online shopping. After Covid, a rapid growth in smartphone adaptation and increased use of digital applications resulted in the rise of Online shopping .A great convenience is seen in case of online shopping and also a substantial range is present.Researchers have studied, online growth is what motivates the consumer behaviour. Wolfinbarger and Gilly (2000) shows about the consumer outlay in online shopping mainly for “Goal oriented” or "Experimental reasons”. Monsuwé et al. (2004) examined in their paper about the motivation of the consumers towards online shopping.

There are 3 types of motivations that indulge the consumers to buy the product. Also, it classifies the different types of online shoppers. It also suggests that e-commerce spaces specialize different strategies for different types of shopper categories. Rani et al. (2025) examined in their paper about the convenience of online shopping and what are the various factors that influence the consumer towards online shopping. The study highlights how consumers appreciate the ease of shopping online , where we can find a large variety of products and can be purchased effortlessly .

Li et al. (2025) shows in their paper about the consumer interest in Livestreaming shopping particularly in the context of sustainable clothing. Al Maalouf et al. (2025) examined the consumers ordering of food online. This paper shows the convenience, accessibility, discount structure and time saving which influence the decision of shopping online. Overall the studies show that online shopping growth is driven by convenience, trust, accessibility and more variety.

3. Importance of Offline Shopping and Traditional Retail Preferences

Physical stores remain important , especially for products that necessitate physical interaction prior to purchasing (i.e. tactile, sensory, and experience based). Many shoppers will still visit physical locations in order to check the product quality, receive immediate assistance , as well as take the item home right away , several factors that impact and influence consumer choice between shopping either through an online environment or an offline environment. Consumer

preferences are influenced by factors which include convenience, access, sensory experience, social interaction, and psychological motivations. To remain competitive , retailers too must leverage their physical environment to cultivate a captivating experience that consumers cannot get when shopping online; they should focus on sensory experiences such as visual appeal, aromas, sounds, and haptic feedback to provide customers the ability to engage with multiple senses while enjoying their in-store shopping experience. Research indicates that consumers (70%-90% of consumers) will have a stronger desire to make a decision to purchase based on physical contact with a product. A large majority of consumers (82%) stated that they prefer receiving in person assistance while shopping in retail stores indicates that personalized customer service remains an important role in improving customer satisfaction and strengthening customer loyalty.

Although online sales experienced significant growth during the covid-19 pandemic , most retail purchases still continue to take place through traditional stores. This highlights the continued importance of offline shopping despite the rapid expansion of online retail channels .

4. Demographic Factors Influencing Shopping Preferences

According to Huang et al. (2020) in their research entitled "The Business Analysis of Home Bias in E-commerce Consumer Behavior," the consumption behavior in e-commerce facilities for domestic as well as foreign providers will be induced by characteristics of individual customers such as gender, age, daily internet usage, interaction between buyers and e-commerce web page or application, and repurchase. As stated by the results of the study, consumers will embrace the domestic e-commerce service providers when similar options are offered from domestic and foreign e-commerce sites.

Jain, Reetika (2022) mentioned that the disparities in age were seen to have a significantly higher influence on online consumption behaviour of Indian consumers than variations in gender. The research further noted that the quick expansion of e-commerce websites had changed the purchasing habits of Indian consumers

Astuti et al. (2023) highlighted that demographics aid e-commerce organisations in emerging marketing strategies tailored for the preferences of their consumers on the basis of various

demographic categories. Further insights of the study revealed that it is essential to manage the influence of demographics, along with experience of users, and e-commerce platforms for competitive advantage.

Sawhney, Chavi et al. (2024) noted that a large proportion of individuals prefer purchasing offline. However, there has been a noticeable increase in the pattern of online shopping. The findings of the research also suggest that the quality, price, variety, service and convenience are some factors which demarcate the behaviour of consumers between online and conventional shopping.

Gender, age, income, and education are some aspects which prompt a change in consumer preference, Shareefa Maryam & Dr. Sahera Fatima (2025). Additionally, buyers aged below 18-25 were noticed to favor e-commerce, on the other hand, those aged 46 years and above favoured the conventional shopping method. From the review of the above studies, demographic factors like age, gender, income, education and occupation among others influence consumer purchasing behaviour.

5. Digital Transformation of online shopping

The COVID-19 pandemic forced the retail sector to undergo digital transformation and adopt online shopping. digital transformation and adopting the online shopping mode. According to Szász et al. (2022), the pandemic created a “window of opportunity” for the expansion of online retail. As consumers spent more time online, digital shopping became their habit. This happened in three ways- “lure-in, lock-in, and phase out” described by Jiang and Stylos (2021). Therefore the companies must go digital to beat their competitors.

However, online shopping is growing but physical stores are not disappearing. Diaz-Gutierrez et al. (2023) reported that although 75% of consumers were involved in online shopping during the pandemic, many continued to visit physical stores. This highlights the growing importance of "Omnichannel" shopping. In this system, the website and offline stores work together to provide a better experience to customers.

The transition to digital retailing was not equally beneficial for all businesses.Caon et al. (2024) described this phenomenon as the "Dual Effect," whereby some firms benefited from digitalization while others faced many challenges.

In the future, stores will use more advanced technologies.Mardosaitė et al. (2024) identified artificial intelligence, the Internet of Things (IoT), and robotics as key drivers of retail personalization.Yet, despite fast tech growth, a company's inner culture decides its long-term survival in this market.

6. Comparative Studies on Online vs Offline Shopping

There are several consistent elements found by comparative studies which determine consumer channel preferences from both functional and psychological perspectives. The most prevailing factor appears to be convenience and saving time in e-shops due to lower travel expenses, round-the-clock availability, and direct shipping (Rai, Thomas, & Singh, 2025 ; Hulawale, 2024-25). Nevertheless, there is another aspect when the preference for online shops does not prevail. Tangible goods and the opportunity to feel and test them prior to buying are key advantages of traditional channels for the purchase of clothing, electronics, and luxury goods (Das, 2023; Muntaqheem & Raiker, 2019).

It is also worth mentioning that consumer preferences for either online or offline channels depend on demographic and contextual factors. Indeed, online shoppers tend to be young consumers aged between 18 and 35 years old and people who have high levels of digital literacy, whereas offline shoppers are mostly older age groups who prefer physical shopping (Rai et al., 2025; Saha, 2025). What is more important, it should be noted that online and offline channels can be considered complementary rather than substitutable for each other. Most consumers practice omnichannel shopping when they use online channels to search for products and compare prices and use offline channels to make purchases to avoid risks and get instant satisfaction (Muntaqheem & Raiker, 2019; Zielke & Komor, 2025).

7. Research Gap

From the studies as far we have seen that factors like convenience, product variety, sensory experience, demographic influences and digital transformation most of them focus on nationwide or worldwide trends. But none of them actually focuses on a particular city behaviour like Kolkata. Existing studies scrutinized online and offline shopping separately and what are the factors which affect the consumer to switch between both the channels in their purchase intent. Studies on demographic factors (Jain,2022 and Shareefa & Fatima,2025) shows age, education, income and gender influences consumers' buying intent but does not display how these factors play out at a particular city like Kolkata, where class diversity and varying internet access can significantly shape shopping behaviour. This gap does not fully show what are the factors that influence the consumers of Kolkata to choose between online and offline channels and how the demographic factors actually persuade their preference locally. This study aims to fill that gap.

Research Methodology

This paper implements a quantitative research design to examine consumer preference between online and offline shopping in Kolkata. Primary data was collected through a structured Google forms questionnaire.

The survey was administered to a readily available group of Kolkata residents. This questionnaire consists of 19 questions covering demographic characteristics, shopping behaviour of the residents, their satisfaction level, product preferences and various other factors that influence their shopping decisions. A total of 70 valid responses were collected, studied and analysed for this study.

Analysis of the gathered data was carried out using descriptive, comparative and regression analysis techniques. The use of descriptive analysis was for the summarisation of the demographic characteristics of the respondents as well as their shopping behaviour. Comparative analysis was also applied for the determination of differences in the shopping behaviour of various demographics.

Further investigation of the factors determining the consumers' preference to shop online was done using the multiple linear regression analysis technique using R software. Key independent variables considered for this study include convenience, discount, variety of products, security and delivery speed.

This study has provided useful information about the determinants of consumer shopping behaviour in Kolkata.

Data Analysis

The findings from the primary research conducted among 70 residents of Kolkata through a structured questionnaire examines consumer shopping behaviour across multiple dimensions. The analysis is organised into three parts:

1) Descriptive analysis, which provides an overview of the sample characteristics and shopping behaviour
2) Comparative analysis, which examines how shopping preferences vary across age groups and
3) Regression analysis, which identifies the key predictors of online shopping preference..

Descriptive Analysis

The descriptive analysis offers a foundational understanding of the study's sample by examining the demographic profile of respondents and their general shopping behaviour. Understanding the demographic composition of the sample is essential for contextualising the findings that follow.

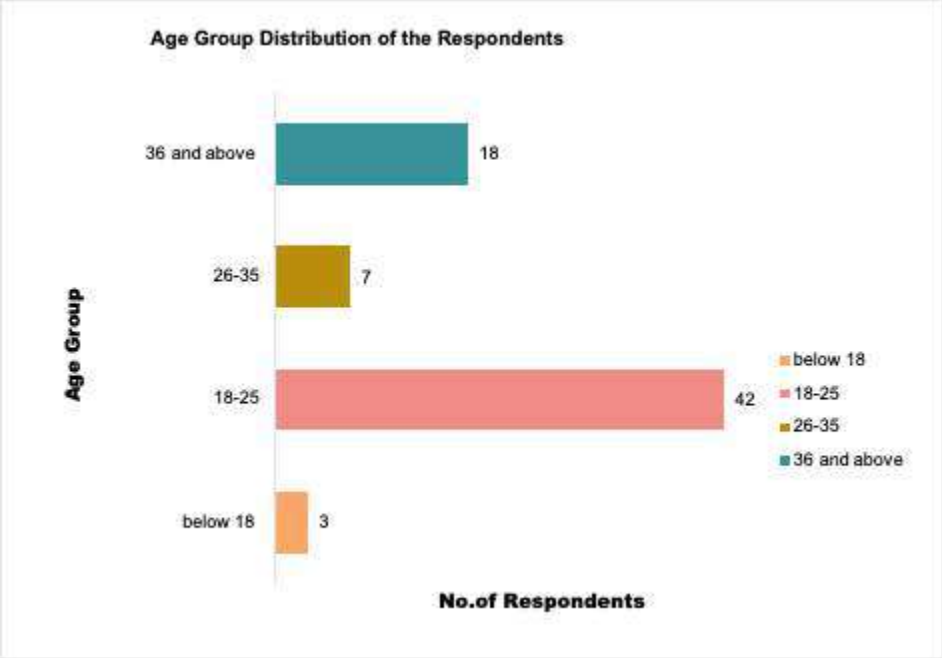

Figure 1: Age Group Distribution of Respondents (n=70)

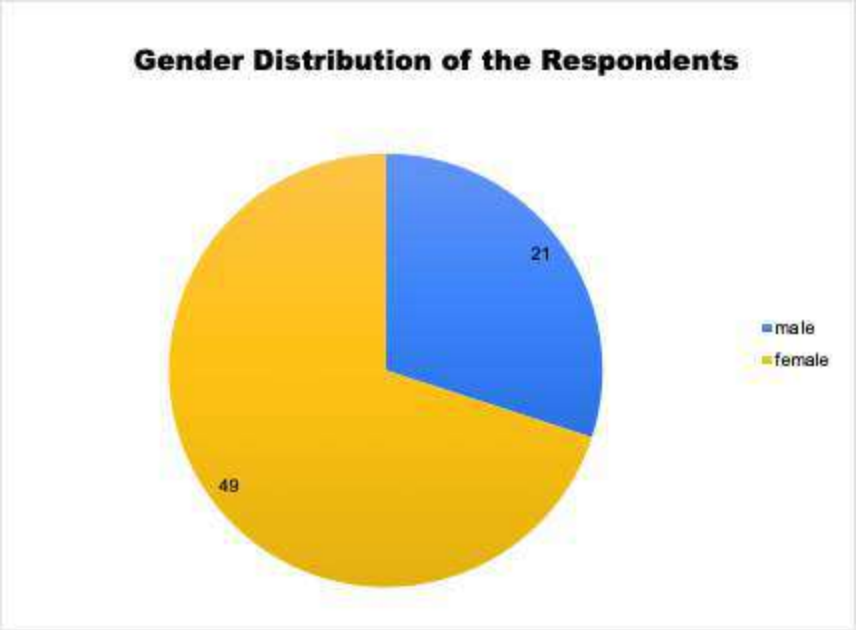

Figure 2: Gender Distribution of Respondents (n=70)

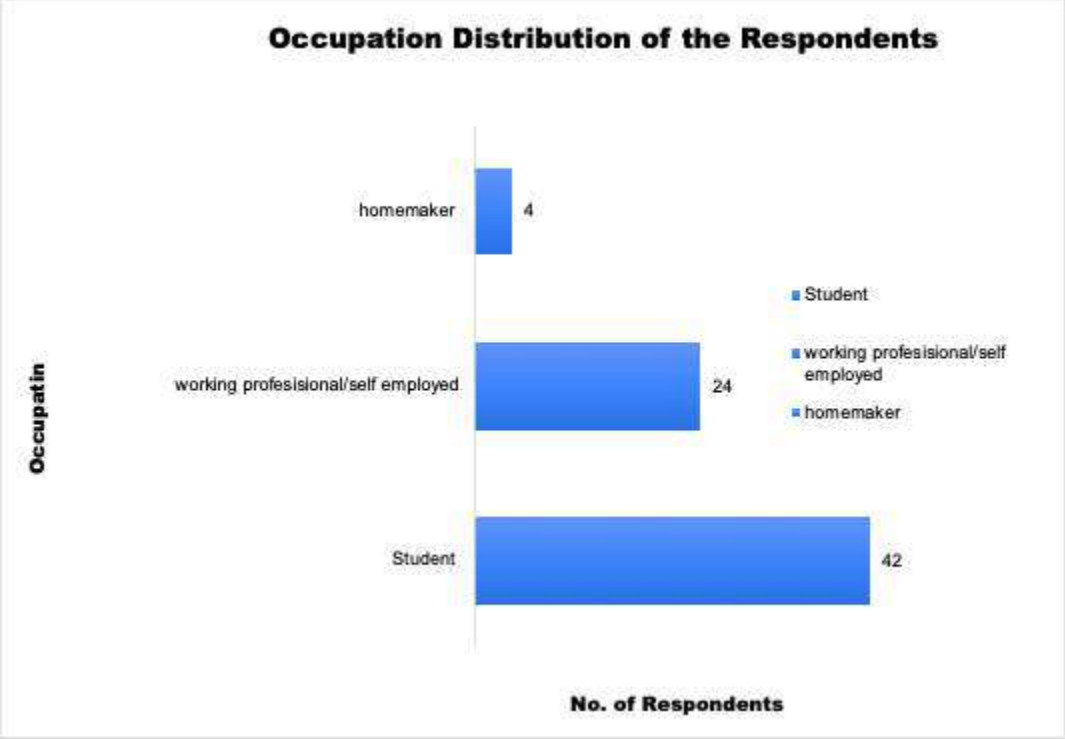

Figure 3: Occupation Distribution of Respondents (n=70)

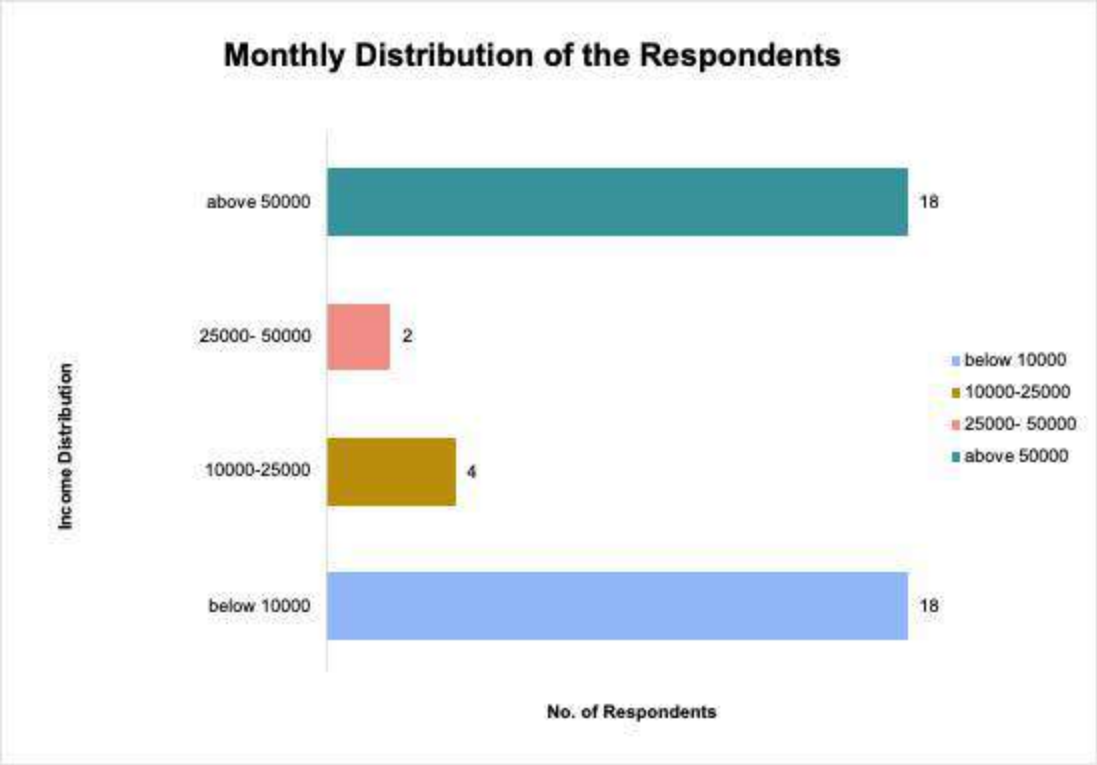

Figure 4: Monthly Income Distribution of Respondents (n=70)

Along with demographics, respondents were asked to indicate which shopping mode they generally prefer. The distribution of responses reveals the overall inclination of the sample towards online, offline, or a combination of both modes.

As seen in the figure below, only 20% prefer to shop offline, and this shows that Kolkata is moving away from its legacy of retail behaviour towards omnichannel behaviour. The predominance of online shopping every month indicates that consumers use e-commerce for intentional purchases, rather than impulsive purchases, and thus e-commerce is used during budgeting and bulk purchases done every month. On the other hand, offline shopping on a weekly or biweekly basis depicts the persisting need for physical embodiment of stores in Kolkata.

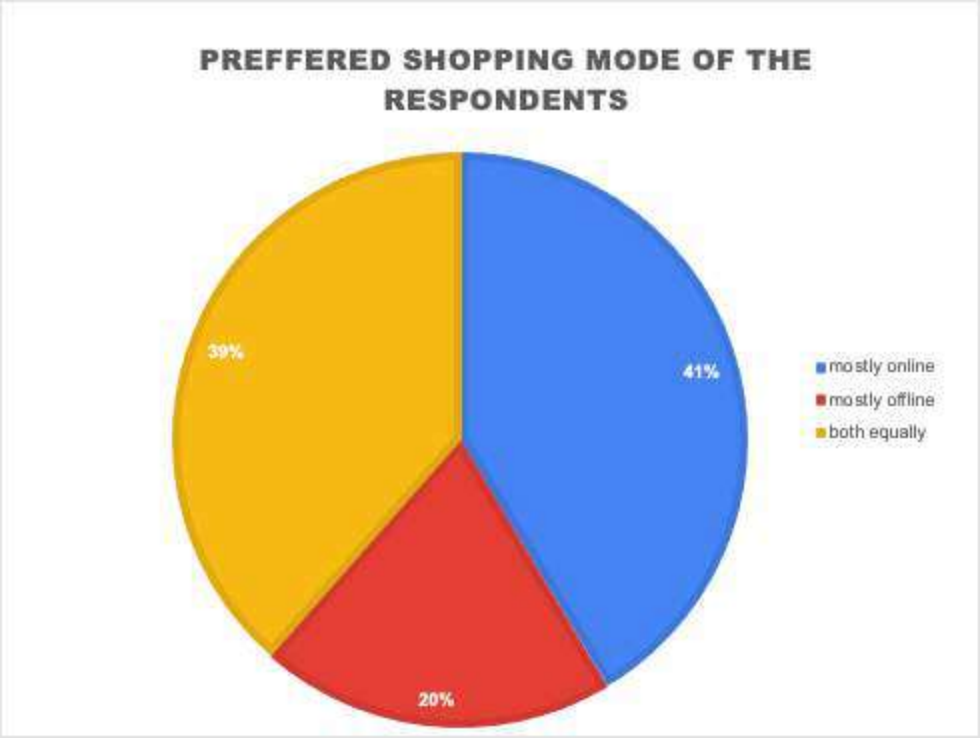

Figure 5: Distribution of Preferred Shopping Mode (n=70)

Respondents were also asked to indicate the frequency with which they shop online or offline, and the results were:

Figure 6: Frequency of Online Shopping Among Respondents (n=70)

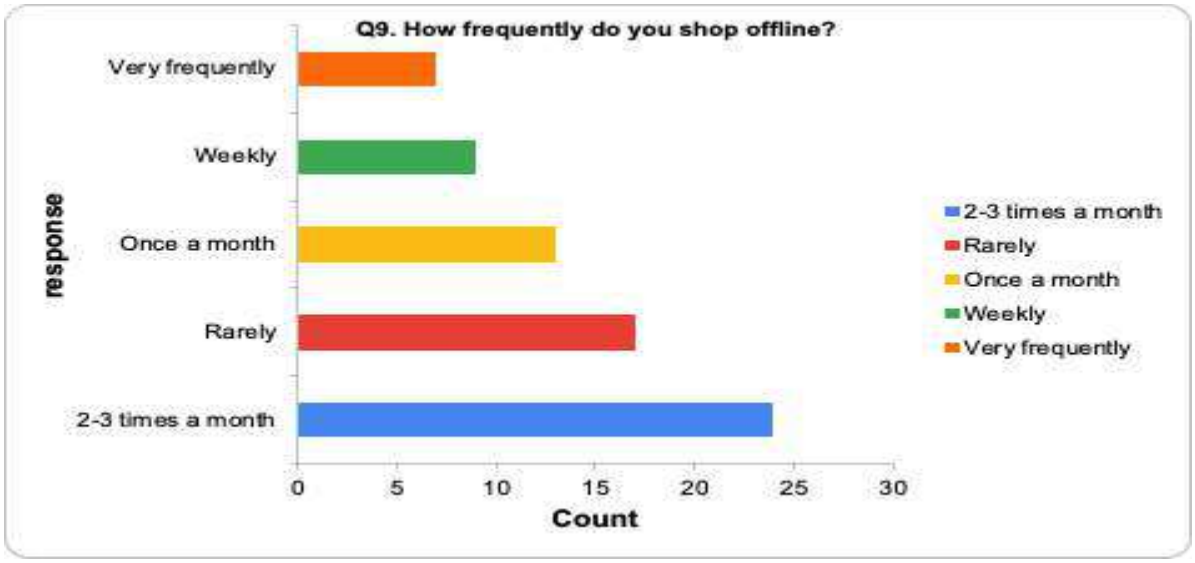

Figure 7: Frequency of Offline Shopping Among Respondents (n=70)

Now, we took direction and asked the follow-up question; the satisfaction received by using their preferred mode and these were the responses:

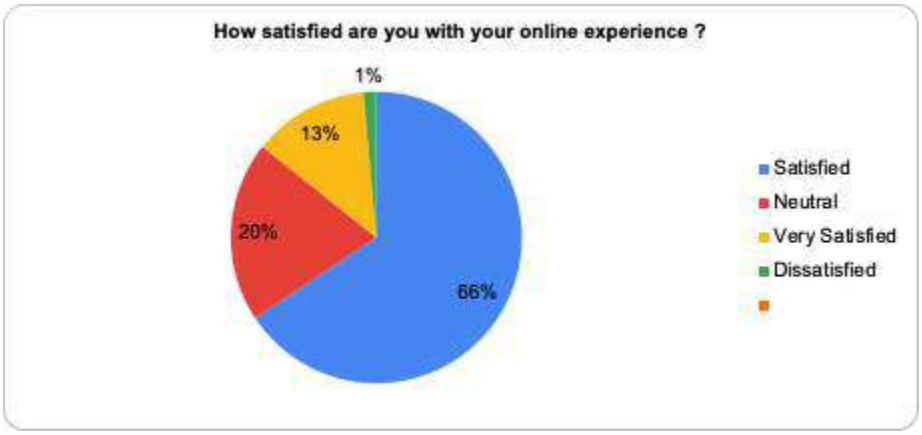

Figure 8: Satisfaction Levels with Online Shopping (n=70)

High satisfaction from online channels implies that concerns about mistrust, which used to be a challenge, are becoming irrelevant to consumers in Kolkata when it comes to buying standardised goods. The significantly high level of dissatisfaction in offline shopping is an indication of the problems faced by traditional retailing, in relation to overcrowded shopping

centers, travel time, and inconsistent services. From the product category perspective, electronics and beauty have become popular online due to their standardisation, review-ability, and price-comparability, while clothing and food products continue to thrive in offline settings due to factors like perishability and fabric inspection, which require physical touch to add value to the purchase.

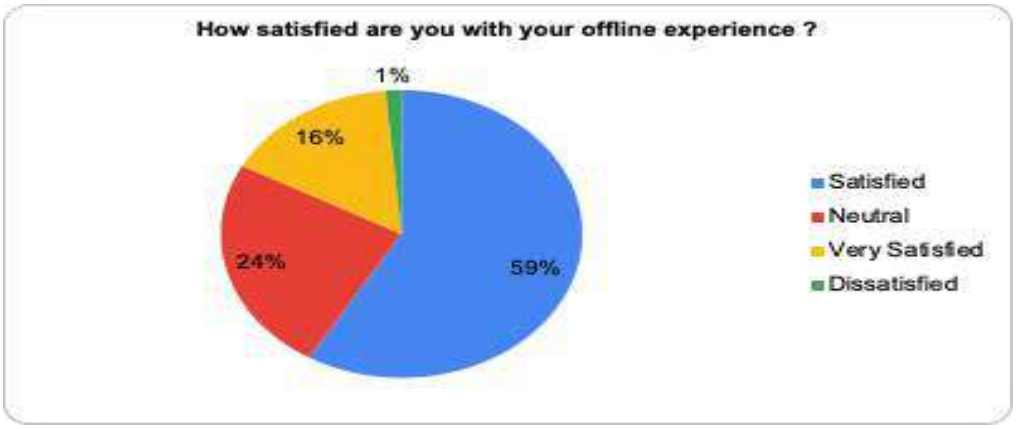

Figure 9: Satisfaction Levels with Offline Shopping (n=70)

From here on, the charts highlight the most popular product categories for both online and offline shopping, providing an understanding of category-specific channel preferences:

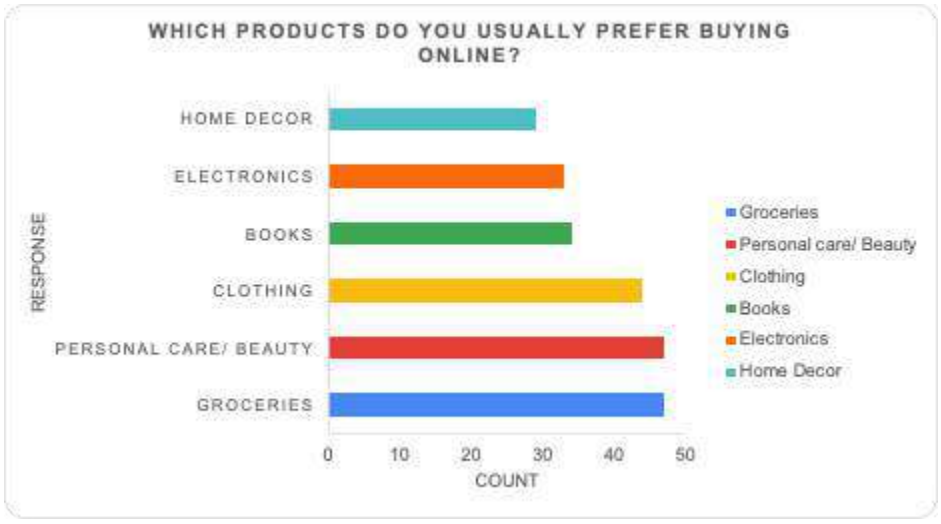

Figure 10: Product Categories Preferred for Online Shopping (n=70)

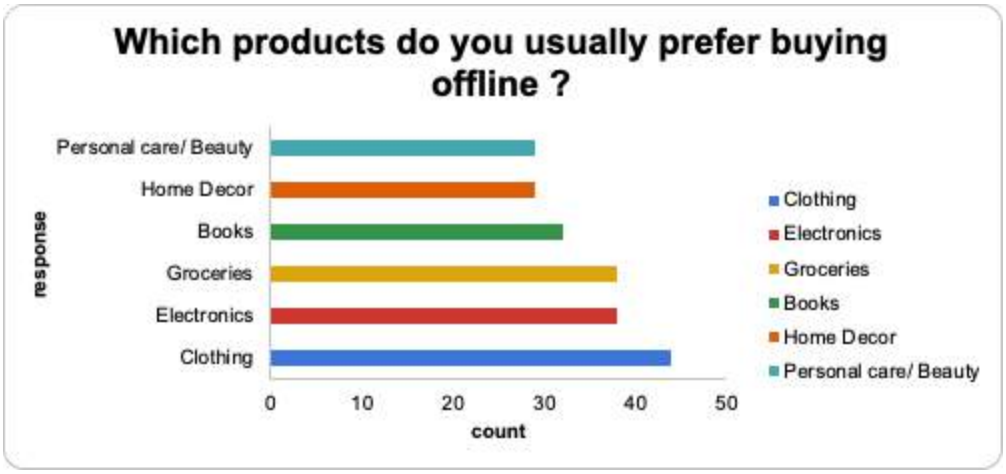

Figure 11: Product Categories Preferred for Offline Shopping (n=70)

The descriptive analysis shows that shopping preferences differ based on age, gender, occupation, income, and product type. Most respondents were young adults, females, and students, which may be because they use the internet more and are familiar with online shopping. Online shopping was the most preferred mode by most of the respondents because it offers convenience, saves time, and provides a wider variety of products. However, many respondents also preferred offline shopping for clothing and electronics because they wanted to check the quality before buying. Most respondents were satisfied with both online and offline shopping, showing that each mode has its own advantages. Consumers choose online or offline shopping depending on the type of product and their needs, showing that both shopping modes continue to play an important role in consumers purchasing decisions.

Comparative Analysis

The comparative analysis examines how shopping preferences differ across key demographic groups. This section shows the relationship between shopping mode preference and two variables, age group and gender, to identify whether distinct patterns exist across different segments of the sample.

1) Age Group vs. Shopping Mode Preference

The cross-tabulation below presents the distribution of shopping mode preference across the four age groups represented in the sample. The data reveals notable differences in preference patterns across age cohorts.

Age Group	Mostly Online	Mostly Offline	Both Equally	Total
Below 18	1 (33%)	1 (33%)	1 (33%)	3
18–25	16 (38%)	11 (26%)	15 (36%)	42
26–35	6 (86%)	0 (0%)	1 (14%)	7
36 and above	6 (33%)	2 (11%)	10 (56%)	18
Total	29	14	27	70

Table 1: Cross-tabulation of Age Group vs. Preferred Shopping Mode (n=70)

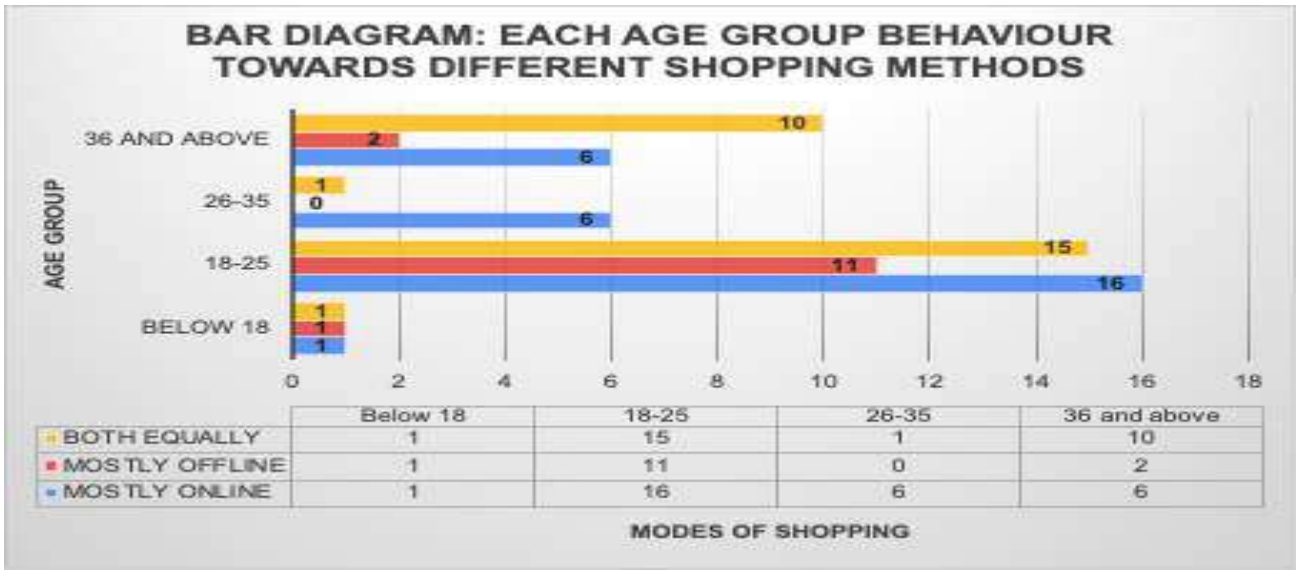

Figure 12: Shopping Mode Preference by Age Group (n=70)

The age group of 25-36 show the strongest preference for online shopping, with 86% choosing it as their primary mode, which is clearly indicative of high digitization amongst young working adults. Whereas the group of 18-25 is rather fairly distributed throughout all three modes, which is reflective of the diverse shopping habits amongst young persons. Respondents aged 36 and above have also shown an inclination towards favouring shopping through both modes equally (56%), which points at the factor of trust, meaning they take reliability of offline retail in high regard alongside online convenience. The below-18 group is rather too small to draw firm conclusions, though it shows an even spread across all three preferences.

2) Gender vs. Shopping Mode Preference

The cross-tabulation below presents the distribution of shopping mode preference across gender. This comparison sheds light on whether male and female respondents in Kolkata exhibit differing inclinations towards online and offline shopping.

Gender	Mostly Online	Mostly Offline	Both Equally	Total
Female	20 (41%)	13 (27%)	16 (33%)	49
Male	9 (43%)	1 (5%)	11 (52%)	21
Total	29	14	27	70

Table 2: Cross-tabulation of Gender vs. Preferred Shopping Mode (n=70)

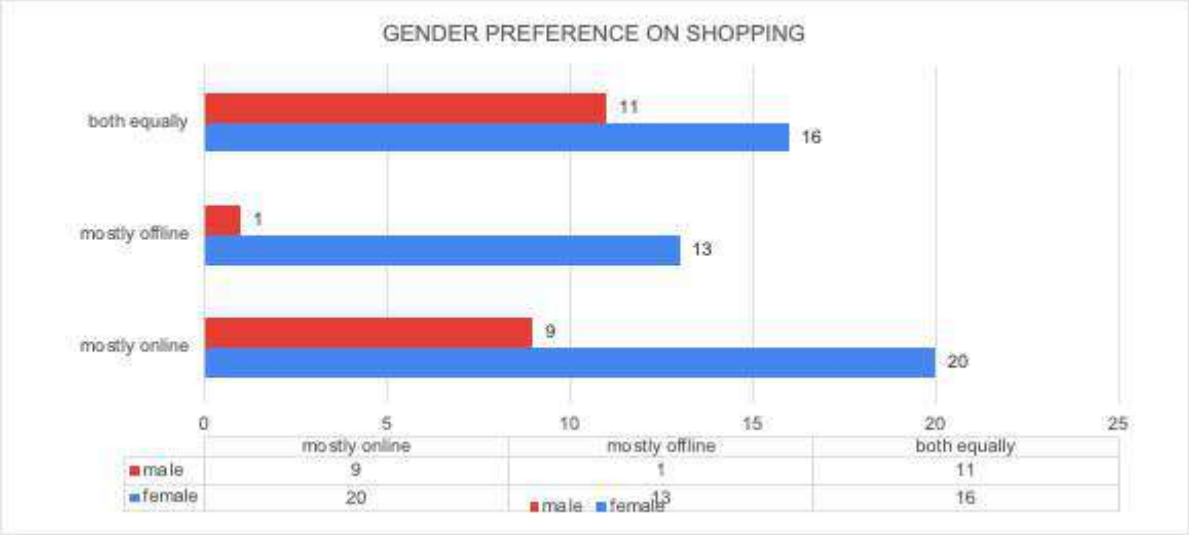

Figure 13: Shopping Mode Preference by Gender (n=70)

Both male and female respondents show alike behaviour towards online shopping, at 43% and 41% respectively, which implies that gender has minimal influence on digital adoption. However, they seem to deviate in the "Both Equally" category, where males (52%) are considerably more likely than women (33%) to use both modes interchangeably. Women on the other hand, show a higher likelihood to opt for offline-only shopping (27%) compared to males (5%), indicating that women in the sample may consider in person shopping a more superior shopping experience. Hence, even though online preference seems pretty similar across genders, men are more flexible in their approach.

While the comparative analysis highlights how shopping preferences differ across demographic groups, the following section examines which specific factors statistically predict a consumer's preference for online shopping.

Regression Analysis

To identify the key predictors of online shopping preference, a multiple linear regression model was estimated using data collected from the 70 valid respondents.

The regression model is:

Preference for online shopping = $\beta_0 + \beta_1$(Convenience) + β_2(Discounts) + β_3(Variety) + β_4(Security) + β_5(Speed) + ε

The regression model was estimated in R using the lm() function. The full output of the model is presented below, including the estimated coefficients, standard errors, t-values, p-values, and model fit statistics.

Regression Analysis

```
library(readxl)
df <- read_excel("regression.xlsx")
model <- lm(preferonline ~ convenient + discounts + choices + security + speed, data = df)
summary(model)
```

```
##
## Call:
## lm(formula = preferonline ~ convenient + discounts + choices +
##     security + speed, data = df)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -2.60575 -0.58623  0.09189  0.52325  2.86274
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)   0.8103     0.6025   0.017 0.986417
## convenient    0.4829     0.1321   3.654 0.000522 ***
## discounts    -0.2304     0.1474  -1.563 0.123056
## choices       0.2824     0.1190   1.701 0.093758 .
## security      0.1756     0.1272   1.381 0.172118
## speed         0.2683     0.1260   2.128 0.037157 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.8658 on 64 degrees of freedom
## Multiple R-squared:  0.457,  Adjusted R-squared:  0.4146
## F-statistic: 10.77 on 5 and 64 DF,  p-value: 1.534e-07
```

Table 3: Multiple Linear Regression Output

Interpretation

The entire model is statistically significant, given the F-statistic value of 10.77 on 5 and 64 degrees of freedom, with a p-value of 1.534e-07, which is much lower than the 0.05 level of significance. Hence, it is clear that the model as a whole is statistically significant as an indicator of preference to engage in online shopping behavior. Also, the predictors used to construct the model account for about 45.7% of the variation in online shopping preference, based on the Multiple R-Squared value of 0.457. This value can again be seen as evidence in favor of the statistical significance of the model. In addition, the residual standard error of the fitted regression line is 0.8658 on 64 degrees of freedom, which means that, on average, the deviations of the observed values from the regression line are 0.87 units.

Intercept value, which is 0.0103, shows the hypothetical or theoretical preference level towards online purchases assuming that the values of all five variables are zero. Since its p-value is 0.986, which makes the intercept value very insignificant, this is something we should not be surprised about at all.

In regard to convenience within the regression analysis, the coefficient is 0.4829; thus, an increase of one unit in the convenience factor will lead to a change of about 0.48 units in favor of online shopping preference, while keeping all other factors constant (ceteris paribus). The relationship is not only practically relevant but also statistically significant, having a value of 0.000522 (below 0.05), which is the strongest significance symbol in the model. This suggests that convenience is the most significant factor driving online shopping preference.

The coefficient for discounts is −0.2304, implying that a unit change in the discount variable is expected to cause a reduction by 0.23 units in the preference for online shopping, all else being equal. Despite the negative impact indicated by the sign of the coefficient, there is a disconnect since discounts can be anticipated to appeal to online customers. The relationship is also not statistically significant with a p value of 0.123. Therefore, findings are not well supported to conclude that discounts have any meaningful influence on online shopping preference among the respondents.

From a technical point of view, the regression fulfills all the basic criteria of an acceptable OLS model. The residuals range between −2.606 to 2.063, with a nearly neutral median value of 0.091, indicating symmetric error distribution with little or no skew. In this regression,

convenience and speed emerge as the only statistically significant predictors of online shopping preference. To conclude, it can thus be stated that the results of this regression model indicate that for individuals living in Kolkata, the choice of online shopping preferences is largely influenced by ease and speed factors; hence, companies that wish to enhance their consumer base in such urban areas need to focus primarily on improving convenience and providing efficient services.

Key Findings

- **41%** of respondents preferred shopping mostly online, **39%** used both online and offline modes equally, while only **20%** preferred mostly offline shopping.
- The **26–35 age group** showed the strongest online preference, with **86%** choosing online shopping as their primary mode.
- Clothing was largely preferred for offline purchase, whereas electronics, groceries, and personal care products were more commonly purchased online.
- The regression model was statistically significant and explained **45.7%** of the variation in online shopping preference. Among all factors, **convenience** and **speed** emerged as the only statistically significant predictors.

Theoretical Integration of Findings

The regression results align with the Technology Acceptance Model (Davis, 1989). TAM holds that technology adoption depends on perceived usefulness and ease of use, mirrored here by convenience and speed respectively. TAM also predicts price incentives matter less than functional ease, since they don't change how effortless a channel feels.

The age-based findings reflect the Theory of Planned Behaviour (Ajzen, 1991). The 26-35 group's strong online preference (86%) signals hisgh perceived behavioural control, driven by income, digital fluency, and few barriers. The 36+ group's even split between channels reflects TPB's attitude component, a genuine trust in offline retail alongside growing digital comfort, not just capability-driven choice.

The product-category split, clothing offline versus electronics and groceries online, fits the Stimulus-Organism-Response framework. Products requiring physical inspection (clothing)

trigger different responses than standardised, easily-compared goods (electronics, groceries), consistent with Dzyabura and Jagabathula (2021) on the continued relevance of physical inspection for certain categories.

Limitations of the study

While this study offers meaningful ground-level insights into consumer shopping preferences in Kolkata, several limitations should be acknowledged when interpreting the findings.

1. **Small and non-representative sample size:** The study relied on 70 responses collected through convenience sampling, which limits the statistical power and generalisability of the findings. The sample is skewed towards the 18–25 age group (60% of respondents) and students (60%), meaning that the results may not accurately reflect the preferences of older adults, higher-income groups, or less digitally engaged populations within Kolkata.

2. **Convenience sampling bias:** The use of convenience sampling via a Google Forms questionnaire means that respondents were self-selected and likely to be more digitally literate and comfortable with technology than the general population. This may have inflated online shopping preferences in the data and underrepresented populations with limited digital access.

3. **Gender imbalance:** Female respondents constituted approximately 70% of the sample (49 out of 70), which limits the comparability of gender-based findings. The relatively small number of male respondents (21) means that cross-gender conclusions should be treated with caution.

4. **Self-reported data:** All data were collected through self-reported responses, which are susceptible to social desirability bias and recall inaccuracy. Respondents may have over- or under-reported their frequency of shopping or satisfaction levels based on perceived expectations rather than actual behaviour.

5. **Limited geographic scope within Kolkata:** The study treats Kolkata as a single homogenous unit. In reality, significant intra-city variation in internet access, income levels, and retail infrastructure may exist between central, suburban, and peripheral areas of the city. Future research could account for

neighbourhood-level differences.

6. **Absence of longitudinal data:** This is a cross-sectional study conducted at a single point in time, meaning it cannot capture how consumer preferences have evolved or are likely to change in the future. Longitudinal research would provide a richer understanding of the trajectory of online and offline retail in Kolkata.

7. **Regression model scope:** The regression model, while statistically significant, explains approximately 45.7% of the variance in online shopping preference, suggesting that other important factors were not captured in the model. Future studies could incorporate a broader set of predictors to improve explanatory power.

Conclusion

What this study makes clear is that Kolkata's shoppers aren't choosing between online and offline. They're using both, smartly, depending on what they need. They'll order groceries on their phone but still walk into a store to pick out a kurta. That's not indecision, that's just how modern shopping works.

The bigger takeaway for retailers is this: convenience and speed are what actually move people online, not discounts. If your app is clunky or your delivery unreliable, no sale is going to fix that.

For physical stores, the challenge is real. Overcrowding, long travel times, and inconsistent service are pushing people away. The stores that survive will be the ones that give people a reason to show up: better experience, faster service, genuine help.

And for the crowd aged 36 and above, who are already comfortable hopping between both channels, there's an untapped opportunity. They're not resistant to technology. They just want it to work alongside the shopping habits they already have, not replace them.

Ultimately, the future of retail in Kolkata isn't online or offline. It's about making both work together well enough that consumers don't have to think about it at all.

References

Tijer (2025). Consumer Behaviour Towards Online and Offline Shopping. TIJER International Research Journal, Volume 12, Issue 3. https://tijer.org/tijer/papers/TIJERD001046.pdf

Schulze, M. (2020). Online and Offline Shopping: Decision Making Factors that Influence Consumer Purchases. ResearchGate. https://www.researchgate.net/publication/365823135_Online_and_Offline_Shopping_Decision-Making_Process_of_Generation_Y_Customers

Dzyabura, D. & Jagabathula, S. (2021). The Effect of Shopping Channel (Online vs Offline) on Consumer Decision Process and Firm's Marketing Strategy. ResearchGate. https://www.researchgate.net/publication/353464448_The_effect_of_shopping_channel_online_vs_offline_on_consumer_decision_process_and_firm's_marketing_strategy

Econsultancy (2021). Consumer Behaviour Between Online and Offline Shopping. IJNRD, Volume 9, Issue 3. https://www.ijnrd.org/papers/IJNRD2403364.pdf

Tandfonline (2024). Understanding the Relationship Between In-Store and Online Shopping Channel Choice Behaviour of Customers: A Systematic Literature Review. Electronic Commerce Research, Published September 2024. https://www.tandfonline.com/doi/full/10.1080/23311975.2024.2402510

Roy, P. & Datta, D. (2020). Consumer Buying Behaviour Towards Online and Offline Shopping: Pre, During and Post Covid-19 Pandemic. Economic Studies Journal, Volume 18, Issue 42, pp. 267–280. https://openaccessojs.com/JBReview/article/view/1843

Rohm, A. J., & Swaminathan, V. (2004). *A typology of online shoppers based on shopping motivations*. Journal of Business Research, 57(7), 748–757. https://www.researchgate.net/publication/4967045_A_Typology_of_Online_Shoppers_Based_on_Shopping_Motivations

Rani, N., Samariya, T., & Goyal, P. (2025). *Digital transformation in retail: A systematic review of consumer motivation for 1-click shopping adoption*. Journal of Retailing and Consumer Services, 85, Article 104150. https://www.researchgate.net/publication/397687833_Digital_Transformation_in_Retail_A_Systematic_Review_of_Consumer_Motivation_for_1-Click_Shopping_Adoption

Li, P., Spence, C., & Wu, C. (2025). *What motivate consumers' purchase intention and the intention to continue watching in livestream shopping*. Humanities and Social Sciences Communications, 12, 1061. https://www.researchgate.net/publication/393538585_What_motivate_consumers'_purchase_intention_and_the_intention_to_continue_watching_in_livestream_shopping

Al Maalouf, N. J., Sayegh, E., Makhoul, W., & Sarkis, N. (2025). *Consumers' attitudes and purchase intentions toward food ordering via online platforms*. Journal of Retailing and Consumer Services, 82, Article 104447 https://www.researchgate.net/publication/385906132_Consumers'_attitudes_and_purchase_intentions_toward_food_ordering_via_online_platforms

Wolfinbarger, M., & Gilly, M. C. (2000). *Consumer motivations for online shopping*. Americas Conference on Information Systems (AMCIS) Proceedings, 112. https://www.academia.edu/24786312/Consumer_motivations_for_online_shopping

Saha et al. (2024). A Study of Consumer Online and Offline Shopping Preference. ResearchGate. https://www.researchgate.net/publication/381295622_A_study_of_consumer_online_and_offline_shopping_preference

Grewal et al. (2023). The Store of the Future. Journal of the Academy of Marketing Science. https://www.researchgate.net/publication/375904905_The_store_of_the_future_Engaging_customers_through_sensory_elements_personalized_atmospherics_and_interpersonal_interaction

SocialTargeter (2025). Tactile Marketing Techniques in Retail Stores. https://www.researchgate.net/publication/343765557_Study_of_Sensory_Marketing_Strategies_in_Retailing_Business

PwC Global Consumer Insights Survey (cited in Dirox, 2025). https://www.pwc.com/gx/en/issues/c-suite-insights/voice-of-the-consumer-survey/2025.html

CRE Daily (2025). Retail Resilience: Five Years After the Pandemic Disruption. https://www.credaily.com/briefs/retail-resilience-five-years-after-the-pandemic-disruption/

IJSCI (2024). Consumer Purchase Trends in Online vs Offline Retail. Huang et al. (2020). https://ijsci.com/index.php/home/article/view/1070

The Business Analysis of Home Bias in E-commerce Consumer Behavior. Jain, Reetika (2022). https://www.researchgate.net/publication/343378116_The_business_analysis_on_the_home-bias_of_E-commerce_consumer_behavior

Demographic Influences on Consumer Buying Preferences Between Traditional and E-Commerce Platforms in Telangana.Advances in Consumer Research,Issue 4,pp.4941–495 .https://acr-journal.com/article/demographic-influences-on-consumer-buying-preferences-between-traditional-and-e-commerce-platforms-in-telangana-1602/

Caon, M., Panetti, E., Meier, E., & Baldegger, R. J. (2024). The dual effect of COVID-19: Diverse digitalization approaches in micro- and small businesses. Journal of the International Council for Small Business, 1–13. https://www.researchgate.net/publication/384798640_The_dual_effect_of_COVID-19_Diverse_digitalization_approaches_in_micro-_and_small_businesses

Diaz-Gutierrez, J. M., Mohammadi-Mavi, H., & Ranjbari, A. (2023). COVID-19 Impacts on Online and In-Store Shopping Behaviors: Why they Happened and Whether they Will Last Post Pandemic. Transportation Research Record: Journal of the Transportation Research Board, 2678, 580–598. https://pmc.ncbi.nlm.nih.gov/articles/PMC10020860/

Jiang, Y., & Stylos, N. (2021). Triggers of consumers' enhanced digital engagement and the role of digital technologies in transforming the retail ecosystem during COVID-19 pandemic. Technological Forecasting and Social Change, 172, 121029. https://research.nottingham.edu.cn/en/publications/triggers-of-consumers-enhanced-digital-engagement-and-the-role-of/

Mardosaitė, V., Jasinskas, E., & Romeika, G. (2024). The Transformation of Digital Innovative Services in Retail Trade Due to the COVID-19 Pandemic: A Systematic Review. Amfiteatru Economic, 26(67), 885–902. https://www.researchgate.net/publication/382659651_The_Transformation_of_Digital_Innovative_Services_in_Retail_Trade_Due_to_the_COVID-19_Pandemic_A_Systematic_Review

Szász, L., Bálint, C., Csíki, O., et al. (2022). The impact of COVID-19 on the evolution of online retail: The pandemic as a window of opportunity. Journal of Retailing and Consumer Services, 69, 103089. https://pmc.ncbi.nlm.nih.gov/articles/PMC9353629/

Rai, M., Thomas, R., & Singh, R.R. (2025). A Comparative Study on Consumer Preferences for Offline and Online Shopping in the FMCG Sector Using Response Surface Methodology. IJCRT, 13(4). https://www.ijcrt.org/papers/IJCRT2504231.pdf

Hulawale, H.S. (2024–25). A Study on People's Perception Towards Online and Offline Shopping. B.Com Project Report, University of Mumbai. https://www.scribd.com/document/831765371/online-and-offline-shopping-final-black-book-harshada

Muntaqheem, M., & Raiker, S.D. (2019). A Study on Consumer Behaviour towards Online and Offline Shopping. IRE Journals, 3(4). https://www.irejournals.com/paper-details/1701666

Das, S. (2023). Online Shopping Consumer Behavior in Kolkata, West Bengal: A Case Study. IJSDR, 8(7). https://ijsdr.org/papers/IJSDR2307196.pdf

Saha, T. (2025). Consumer Preferences Regarding Online Grocery Shopping and Traditional Grocery Shopping in Kolkata. IJRTI, 10(2). https://www.ijrti.org/papers/IJRTI2502079.pdf

Zielke, S., & Komor, M. (2025). Why do customers choose online or offline channels? A framework of motives and its application. https://www.sciencedirect.com/science/article/pii/S0969698924003503