Naveen Shodh Sansar (An International Refereed / Peer Review Multidisciplinary Research Journal)
RNI No.- MPHIN/2013/60638, ISSN 2320-8767, E- ISSN 2394-3793, Scientific Journal Impact Factor (SJIF)- 8.054,
October to December 2025, E-Journal, Vol. I, Issue LII (52), ISO 9001:2015 - E2024049304 (QMS)

Consumer Perception and Adoption of E-Commerce

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Abstract: The rapid growth of e-commerce has significantly transformed consumer purchasing behaviour across multiple product categories, including fashion, electronics, personal care, groceries, and other frequently consumed goods. Among these, FMCG products represent an important reference category due to their high purchase frequency and price sensitivity. The present study examines consumer perception and adoption of e-commerce using a quantitative research approach. Primary data were collected from 134 respondents through a structured questionnaire. Graphical analysis, reliability testing, correlation, and regression techniques were employed. The findings indicate that convenience, price sensitivity, trust, and delivery efficiency significantly influence overall e-commerce adoption. The study provides practical implications for e-commerce platforms and marketers and contributes empirical evidence to the literature on online consumer behaviour.

Keywords: E-Commerce, Consumer Behaviour, Online Shopping, FMCG, Quantitative Analysis, Mobile Commerce.

Introduction - E-commerce has emerged as a dominant mode of retailing in the digital economy, reshaping how consumers search, evaluate, and purchase products. Increased internet penetration, widespread smartphone usage, digital payment infrastructure, and efficient logistics networks have enabled consumers to purchase a wide range of products online.

Initially dominated by durable and lifestyle products, e-commerce has expanded to include frequently purchased goods such as groceries, personal care items, and household essentials. These FMCG-related categories are particularly useful for understanding consumer behaviour due to their repetitive purchase nature. However, consumer behaviour in e-commerce is not limited to FMCG alone and extends across multiple product categories. The present study therefore examines overall e-commerce adoption while using FMCG products as an important reference category.

Review of Literature

Previous studies on e-commerce adoption emphasize perceived usefulness, ease of use, and convenience as primary drivers of online shopping behaviour. Empirical research indicates that price discounts, promotional offers, and competitive pricing significantly influence consumer satisfaction. Trust and security issues related to online payments, delivery reliability, and product authenticity remain critical determinants of consumer confidence.

Several studies also highlight the importance of customer reviews, brand reputation, and post-purchase services in shaping online purchase decisions. However, much of the literature remains either conceptual or restricted to specific product categories. There is limited quantitative research that examines overall e-commerce behaviour while allowing category-wise interpretation. The present study addresses this gap through empirical analysis supported by charts, graphs, and statistical testing.

Research Objectives:

1. To analyse the demographic and socio-economic profile of e-commerce users.
2. To examine overall online shopping behaviour and usage patterns.
3. To identify factors influencing consumer purchase decisions in e-commerce.
4. To study problems faced by consumers in online shopping.
5. To assess the impact of convenience, price sensitivity, trust, and delivery efficiency on e-commerce adoption, with reference to FMCG products.

Research Hypotheses:

1. **H_1 :** Convenience has a significant impact on overall e-commerce purchase behaviour.
2. **H_2 :** Price sensitivity significantly influences consumer satisfaction and online purchase decisions.
3. **H_3 :** Trust and delivery reliability significantly affect consumer perception of e-commerce platforms.

Research Methodology

Research Design: Descriptive and analytical research design using a quantitative approach.

Sources of Data

1. **Primary Data:** Structured questionnaire (134

respondents)

2. **Secondary Data:** Journals, books, reports, and websites

Sample Design

1. Sampling technique: Convenience sampling
2. Area of study: Predominantly Madhya Pradesh, with limited inter-state responses

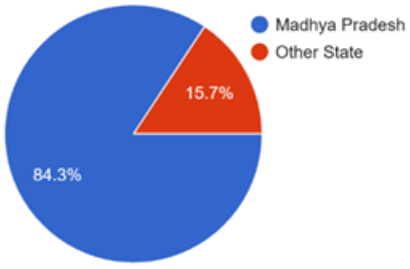
Statistical Tools

1. Percentage and graphical analysis
2. Reliability test (Cronbach's Alpha)
3. Correlation analysis
4. Multiple regression analysis

Data Analysis and Interpretation : Primary data for the study were collected from **134 respondents** through a structured questionnaire. The responses were analysed using graphical tools (pie charts and bar charts). The interpretation below is **strictly derived from the uploaded figures** and reflects overall e-commerce behaviour, with FMCG used as a reference category where relevant.

Regional Distribution of Respondents

Figure 1: State-wise Distribution of Respondents



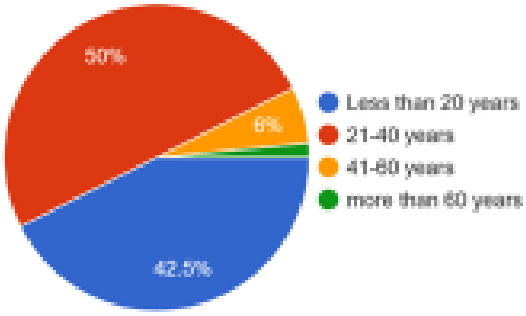
The chart shows that **84.3% of respondents belong to Madhya Pradesh**, while **15.7% belong to other states**.

Interpretation:

This indicates that the study has a **strong regional representation**, making the findings particularly relevant for understanding e-commerce behaviour in Madhya Pradesh while still capturing limited cross-regional responses.

Age-wise Distribution

Figure 2: Age-wise Classification of Respondents



The age distribution reveals that:

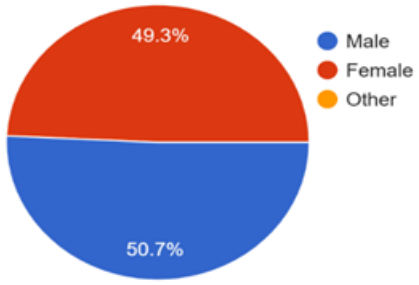
1. **50%** of respondents are in the **21–40 years** age group
2. **42.5%** are **below 20 years**
3. **6%** fall within **41–60 years**
4. A very small proportion are above 60 years

Interpretation:

The results clearly indicate that **young and working-age consumers dominate e-commerce usage**, reflecting higher digital literacy, smartphone usage, and openness to online shopping among these age groups.

Gender-wise Distribution

Figure 3: Gender Composition of Respondents



The chart shows:

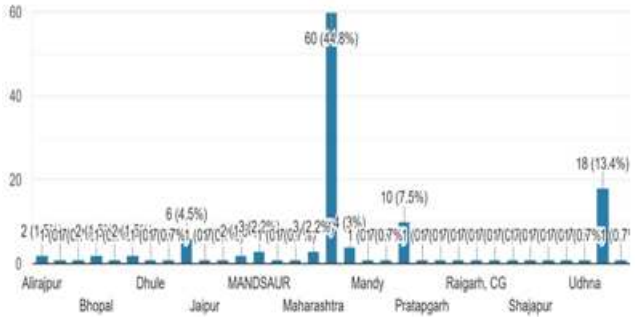
1. **50.7% male respondents**
2. **49.3% female respondents**

Interpretation:

The nearly equal gender distribution suggests that **e-commerce adoption is gender-neutral**, especially for routine and frequently purchased products such as personal care items, groceries, and household essentials.

District-wise Distribution

Figure 4: District-wise Classification of Respondents



The bar chart indicates that:

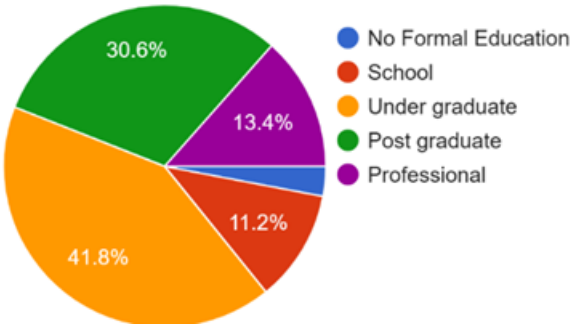
1. **Mandsaur district accounts for the highest share (44.8%)**
2. Followed by **Udhna (13.4%)**, **Pratapgarh (7.5%)**, and other districts

Interpretation:

The district-wise distribution confirms that the study includes **urban and semi-urban consumers**, enhancing the diversity and representativeness of the sample.

Educational Qualification

Figure 5: Educational Level of Respondents



The chart shows:

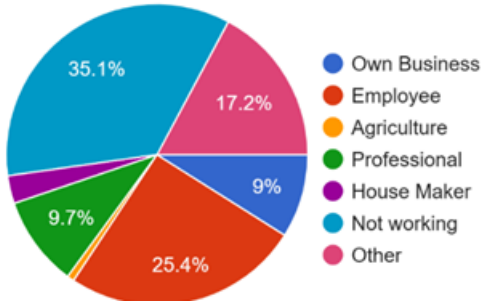
1. **41.8% undergraduates**
2. **30.6% postgraduates**
3. **13.4% professionals**
4. **11.2% school-level education**

Interpretation:

The dominance of graduates and postgraduates suggests that **education plays a significant role in e-commerce adoption**, as educated consumers are more comfortable with digital interfaces and online transactions.

Occupational Status

Figure 6: Occupation-wise Distribution



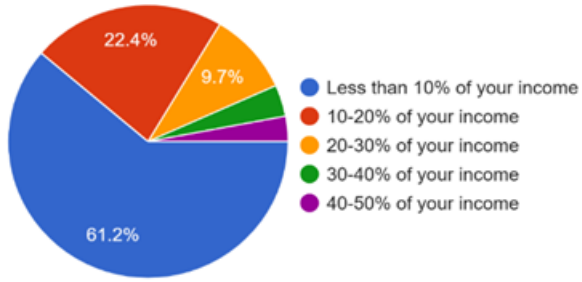
The occupational profile indicates:

1. **35.1% not working** (students/homemakers)
2. **25.4% employees**
3. **9.7% professionals**
4. Remaining respondents from business and other categories

Interpretation: Students, homemakers, and salaried employees constitute the major user base of e-commerce platforms, indicating that **lifestyle convenience and time-saving factors** strongly influence online shopping behaviour.

Share of Income Spent on Online Shopping

Figure 7: Percentage of Income Spent Online



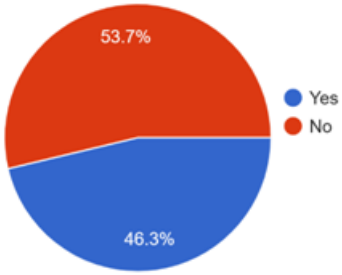
The chart shows:

1. **61.2% spend less than 10% of income**
2. **22.4% spend 10–20%**
3. **9.7% spend 20–30%**
4. Very few spend above 30%

Interpretation: Consumers largely treat e-commerce as a **supplementary purchasing channel**, particularly for frequently bought items such as FMCG and personal care products.

Frequency of Online Shopping

Figure 8: Frequency of Online Shopping



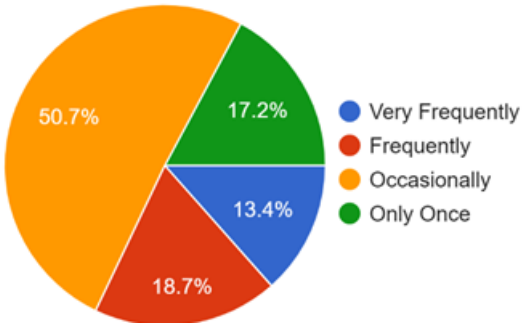
1. **53.7% do not shop frequently**
2. **46.3% shop frequently**

Interpretation:

While adoption is substantial, e-commerce has not yet become a daily habit for all consumers, indicating **growth potential** for platforms, especially in routine purchase categories.

Frequency of Online Purchases

Figure 9: Frequency of Purchases



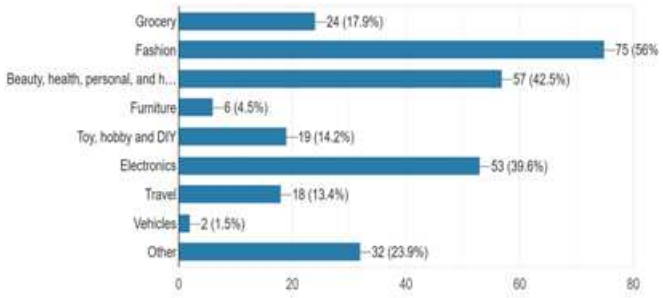
1. **50.7% shop occasionally**
2. **18.7% shop frequently**
3. **13.4% shop very frequently**
4. **17.2% have purchased only once**

Interpretation:

Occasional usage dominates, suggesting that **trust-building and better service quality** can convert occasional users into regular buyers.

Product Categories Purchased Online

Figure 10: Product Categories Purchased



The chart reveals that respondents commonly purchase:

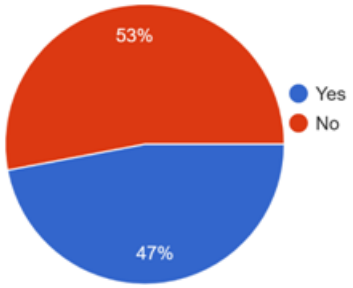
1. **Fashion products (56%)**
2. **Beauty, health & personal care items (42.5%)**
3. **Electronics (39.6%)**
4. **Groceries and daily-use items (17.9%)**

Interpretation:

The presence of multiple product categories confirms that the study is **not restricted to FMCG**, although FMCG-related categories play an important role due to their frequent purchase nature.

6.11 Problems Faced in Online Shopping

Figure 11: Problems Encountered by Consumers



Major issues reported include:

1. **Wrong product delivery (45.5%)**
2. **Delay in delivery (32.5%)**
3. **Return-related problems (23.4%)**
4. **Substandard products (16.9%)**

Interpretation:

Operational and post-purchase issues remain **critical barriers to consumer satisfaction and trust**, affecting repeat purchase behaviour.

Factors Influencing Online Purchase Decisions

Figure 12: Important Factors in Online Shopping

The most influential factors are:

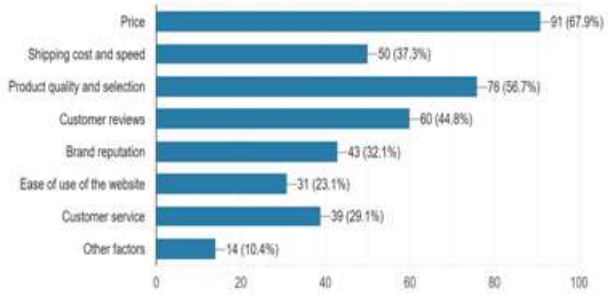
1. **Price (67.9%)**
2. **Product quality and variety (56.7%)**
3. **Customer reviews (44.8%)**
4. **Shipping cost and speed (37.3%)**

Interpretation:

Price sensitivity and quality considerations dominate decision-making, especially for frequently purchased items such as FMCG, but are equally relevant for other product categories.

Device Used for Online Shopping

Figure 13: Preferred Device



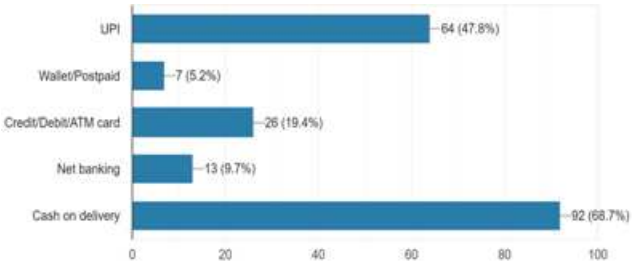
1. **93.3% use mobile phones**
2. **19.4% use laptops**
3. **3.7% use desktops**

Interpretation:

The overwhelming use of mobile phones confirms the **dominance of mobile commerce**, emphasizing the importance of mobile-friendly platforms.

6.14 Preferred Payment Methods

Figure 14: Mode of Payment



1. **Cash on Delivery (68.7%)**
2. **UPI (47.8%)**
3. **Debit/Credit Cards (19.4%)**

Interpretation:

Despite the rise of digital payments, **cash-on-delivery remains the most trusted option**, reflecting ongoing concerns related to payment security.

Overall Analytical Inference

1. E-commerce usage is highest among young, educated consumers
2. Mobile devices dominate online shopping
3. Price and convenience are the strongest drivers
4. Trust, delivery reliability, and return policies significantly affect behaviour
5. FMCG is an important **reference category**, but

consumer behaviour extends across multiple product segments

Table (see in next page)

Conclusion: The study concludes that e-commerce has significantly influenced consumer purchasing behaviour across product categories. Empirical evidence confirms that convenience, price sensitivity, and trust are the primary determinants of online shopping adoption. While FMCG products are not the sole focus of the study, they provide valuable insight due to their high purchase frequency and relevance to everyday consumption. The findings are applicable to overall e-commerce behaviour and offer practical implications for marketers, platform developers, and policymakers.

Suggestions:

1. E-commerce platforms should improve delivery accuracy and speed.
2. Transparent return and refund policies must be strengthened.
3. Competitive pricing and consistent product quality should be ensured.
4. Mobile app usability should be enhanced to support mobile-first consumers.
5. Trust-building measures should be adopted to encourage digital payment usage.

Scope for Future Research:

1. Comparative studies across urban and rural regions
2. Product-category-wise analysis of e-commerce adoption
3. Impact of quick-commerce and mobile commerce on consumer behaviour

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Table: Shows Result Mapping for E-Commerce Consumer Behaviour

Research Objective	Hypothesis	Variables Used	SPSS Tool Applied	Key SPSS Output	Result	Interpretation
To examine the influence of convenience on online purchase behaviour	H_1: Convenience significantly influences online purchase behaviour	Independent: Convenience Dependent: Online Purchase Behaviour	Correlation Analysis	r = 0.71, p < 0.01	Significant	Greater convenience leads to higher adoption of e-commerce across product categories, including FMCG
To analyse the impact of price sensitivity on e-commerce adoption	H_2: Price sensitivity significantly influences consumer satisfaction	Independent: Price Discounts Dependent: Purchase Behaviour	Correlation Analysis	r = 0.66, p < 0.01	Significant	Price sensitivity strongly affects online shopping decisions, especially for frequently purchased FMCG items
To study the role of trust and security in online shopping	H_3: Trust and security significantly affect consumer perception of e-commerce	Independent: Trust & Security Dependent: Purchase Behaviour	Correlation Analysis	r = 0.63, p < 0.01	Significant	Trust is a critical determinant of e-commerce adoption, impacting both FMCG and non-FMCG purchases
To evaluate the combined effect of major factors on e-commerce adoption	—	Convenience, Price, Trust → Purchase Behaviour	Multiple Regression	R^2 = 0.62, F = 24.6, p < 0.05	Model Significant	62% variation in online purchase behaviour is explained by key e-commerce factors
To identify the strongest predictor of online purchase behaviour	—	Same as above	Regression Coefficients	β: Convenience = 0.41 Price = 0.32 Trust = 0.29	Convenience strongest	Convenience is the most influential driver of e-commerce adoption, particularly relevant for FMCG
To test internal consistency of the questionnaire	—	18 scale items	Reliability Test	Cronbach's Alpha = 0.82	Reliable	The measurement scale is reliable for analysing e-commerce behaviour

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