

Impact of E-Commerce on the consumer Buying Behaviour towards electronic goods with special reference to North Karnataka Region

Kirankumar Patil and Chanchala Jain

Department of Management, Mansarovar Global University, Billkisganj, Sehore, Madhya Pradesh

ABSTRACT

The first chapter of the thesis, titled "Impact of E-commerce on Consumer Buying Behavior Towards Electronic Goods with Special Reference to the North Karnataka Region," serves as an introductory exploration into the dynamic interplay between e-commerce and consumer behavior in the realm of electronic goods. This chapter sets the stage by elucidating the transformative influence of the internet and e-commerce on modern consumer habits, particularly focusing on the North Karnataka region. The chapter begins by acknowledging the pivotal role of the internet in reshaping how consumers research and purchase electronic goods. It highlights the convenience and speed offered by online markets, which have become a preferred avenue for many consumers seeking electronic products. The World Wide Web (WWW) and internet technologies have not only revolutionized information access but have also become integral to the business landscape, necessitating a deeper understanding of online consumer behavior. Furthermore, the chapter delves into the evolution of e-commerce in India, emphasizing the growing trends in online shopping and the advantages and disadvantages associated with this mode of commerce. It explores the determinants and types of consumers' buying behavior, shedding light on the factors that influence purchasing decisions in the context of electronic goods. Additionally, the chapter provides insights into the top electronic companies and popular online electronics shopping sites in India, offering a snapshot of the electronic goods market. It also discusses the impact of e-commerce on online buying behavior, considering the unique challenges and opportunities. The second chapter transitions into a detailed review of the literature, spanning from 2006 to 2021, to glean insights from previous studies and identify research gaps. This literature review sets the groundwork for the present study's objectives, which aim to comprehensively understand and analyze consumer buying behavior towards electronic goods in the North Karnataka region within the e-commerce landscape. The subsequent chapters of the thesis delve into data collection, analysis, interpretation, and findings, culminating in a comprehensive exploration of the impact of e-commerce on consumer behavior regarding electronic goods. The study's conclusions and recommendations provide valuable insights for businesses, policymakers, and researchers interested in navigating the evolving e-commerce ecosystem and effectively catering to consumer preferences and needs in the North Karnataka region.

Keywords: Online shopping, Consumer behavior, E-commerce & the effects of e-commerce

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INTRODUCTION

The advent of the internet has profoundly impacted our lives, making it challenging to envision a world without it. One of its most transformative aspects has been the revolution in shopping practices. Researching and purchasing products today are vastly different from a decade ago, especially with the rise of electronic commerce (e-commerce), which has drawn numerous consumers to online markets due to the speed and convenience of the process (Chattopadhyay, 2019).

The World Wide Web (WWW) and the internet have revolutionized how consumers access and gather information. Initially conceived as a tool for information retrieval, the internet has evolved into a crucial business medium in recent times. For businesses, the ability to integrate this medium effectively into their existing models is crucial for their future survival. Selling online requires a deep understanding of consumer behavior, including what, why, and how they purchase, who the customers are, their buying habits, and their preferences for products and services (Desai & Marolia, 2012).

The internet has transformed global consumer purchasing behaviors, with electronic devices becoming ubiquitous worldwide. These devices play a vital role in everyday life, simplifying tasks while also presenting potential health challenges. With rapid technological advancements, electronic products are

continuously evolving to enhance and streamline societal activities. Among these, computers and smartphones stand out as the most commonly purchased items, given their versatility and indispensability in daily routines.

The evolution of digital marketing is closely intertwined with technological progress. Key milestones, such as Ray Tomlinson's first email in 1971 and the creation of the Archie search engine in the 1990s, marked significant shifts in digital communication and marketing strategies (Doherty & Ellis-Chadwick, 2010). Companies started leveraging online techniques like database marketing to track customer information effectively, revolutionizing the buyer-seller relationship.

Due to the shift in consumer behavior toward online shopping, e-commerce has become a highly profitable business model. Major platforms like Amazon and Flipkart have become go-to destinations for purchasing a wide range of products. Online advertisements have also gained prominence, rapidly influencing consumer buying decisions and serving as a crucial avenue for brand establishment and publicity.

In essence, the internet-driven digital revolution has changed how businesses operate and how customers interact with goods and services. The significance of online platforms and digital marketing strategies is increasingly recognized worldwide, highlighting the transformative power of digital technologies in modern society (Goyal & Aggarwal, 2004).

e-Commerce Growth in Urban and Rural Areas of North Karnataka with Special Reference to Electronics Goods

The growth of e-commerce in the North Karnataka Region has been a transformative force in both urban and rural areas, particularly in the consumer electronic goods sector. In urban centers such as Hubli, Dharwad, Belgaum, and Gulbarga, e-commerce platforms have experienced rapid expansion. Urban consumers are increasingly turning to online shopping for a diverse range of electronic goods, including smartphones, laptops, home appliances, and gadgets. The convenience, accessibility, and competitive pricing offered by e-commerce platforms have significantly contributed to this trend (Gupta et al., 2005). Additionally, the availability of reliable internet connectivity, digital payment options, and efficient doorstep delivery services has further fueled the adoption of e-commerce among urban consumers.

On the other hand, rural areas in the North Karnataka Region have also witnessed a gradual but steady growth in e-commerce activities related to consumer electronic goods. Improved infrastructure, such as better internet connectivity and logistics support, has made it easier for rural consumers to access online shopping platforms. While the pace of adoption may be slower compared to urban areas, rural consumers are increasingly showing interest in purchasing essentials like mobile phones, agricultural equipment, and household appliances through e-commerce channels.

E-commerce companies are actively targeting rural markets by offering localized products, customized services, and affordable pricing strategies tailored to meet the needs and preferences of rural consumers (Hooda & Agarwal 2012). Initiatives aimed at enhancing digital literacy, raising awareness about online shopping benefits, and forging partnerships with local businesses have played a crucial role in building trust and driving e-commerce growth in rural areas.

Overall, the growth of e-commerce in both urban and rural parts of the North Karnataka Region has brought about significant changes in the consumer electronic goods market. It has provided consumers with a broader range of choices, improved convenience, and enhanced access to various products and services. As digital infrastructure continues to improve and consumer awareness increases, the e-commerce landscape is expected to evolve further, presenting new opportunities for businesses and consumers alike (Imtiaz & Wajih 2013).

Online Shopping Process

The online shopping process includes several steps that consumers follow to complete a purchase. These steps are outlined below:

1. **Search for Products:** Consumers begin by searching for products they wish to buy using search engines like Google Shopping or specific e-commerce websites.
2. **Product Selection:** After finding a product of interest, consumers evaluate its features, prices, and reviews to make an informed purchasing decision.
3. **Adding to Cart:** Once satisfied with a product, consumers add it to their virtual shopping cart for future consideration.
4. **Continued Shopping or Checkout:** Consumers may choose to continue shopping for additional items or proceed to checkout to finalize their purchases.
5. **Checkout and Payment:** At the checkout stage, consumers review their cart, enter shipping and payment details, and confirm the order.[8]
6. **Account Creation (Optional):** Some platforms may require consumers to create an account before completing the purchase for enhanced security and personalized services.

7. **Final Review:** Before finalizing the order, consumers have the opportunity to review all details, including product quantities, shipping addresses, and payment methods.
8. **Payment Processing:** Once the payment is processed successfully, the order is confirmed, and the transaction is completed.
9. **Order Confirmation:** Consumers receive an order confirmation email or notification, providing details of their purchase and order number.
10. **Notification to Customer and Merchant:** Both the customer and the merchant receive notifications confirming the order and initiating the fulfillment process.
11. **Order Fulfillment:** The order details are sent to the warehouse, where the products are prepared for shipment.
12. **Shipping Process:** The shipping carrier picks up the package from the warehouse and transports it to the customer's designated address.
13. **Delivery to Customer:** The shipment is delivered to the customer, completing the online shopping process.

This detailed outline of the online shopping process illustrates the various stages involved, from product search and selection to payment processing, order fulfillment, and delivery. Each step contributes to a seamless and efficient online shopping experience for consumers and facilitates smooth transactions between customers and merchants.

CONSUMER BUYING BEHAVIOUR

Consumer buying behavior is an evolving area of study that continues to gain prominence. It encompasses a broad spectrum of factors influencing why consumers choose specific products that fulfill their needs or desires. This behavior is observed across various channels, including both online and offline platforms, as consumers engage in activities before making purchasing decisions. These activities may involve utilizing search engines, interacting with social media content, reading reviews, or seeking recommendations (Jun & Jaafar, 2011).

Understanding consumer buying behavior is crucial for businesses, as it allows them to tailor their marketing strategies effectively. By analyzing consumer behavior patterns, businesses can identify successful marketing initiatives that have influenced previous purchases. This insight enables businesses to refine their marketing efforts and adapt to changing consumer preferences.

LITERATURE REVIEW

Several studies on "Customer Perception towards Online Shopping" reveal that it is possible to infer that the majority of individuals have a good attitude toward internet shopping, even if they encounter certain difficulties. The majority of individuals believe that shortly, internet shopping will outnumber traditional buying. As a result, internet marketing will have a broader reach in the coming years (Lissy and Esther Krupa, 2023).

Study of Mehta & Barad (2022) focused on understanding the factors influencing consumers' preferences for online shopping, considering its importance in the modern business environment. The study highlighted that online shopping ranks as the third most popular internet activity after email usage and web browsing. The research involved 250 online shoppers and utilized qualitative and quantitative techniques for data collection and analysis. The study emphasized that online shopping eliminates geographical barriers and offers an effective platform for business development (Mehta & Barad, 2022).

RESEARCH METHODOLOGY

RESEARCH DESIGN

The research methodology employed in the current study is a descriptive research design. As the name implies, this design is specifically crafted to describe a phenomenon or aspect under investigation. It serves as a fact-finding approach with a comprehensive explanation of the subject matter. Given the nature of our study, which aims to delve into consumers' buying behavior regarding online shopping, the descriptive research design is deemed the most suitable method. This is because it allows for a thorough description of consumer behavior, providing valuable insights into their preferences, motivations, and decision-making processes related to online purchases.

The descriptive research design facilitates a detailed exploration of the study field through various observation methods, such as interviews or questionnaires. These methods enable researchers to gather firsthand information from consumers, allowing for a nuanced understanding of their online shopping habits, perceptions, and experiences. By employing this method, we can effectively capture and describe the intricate nuances of consumer behavior in the context of e-commerce, thereby enhancing the depth and accuracy of our study findings.

SAMPLING

Sampling Techniques

The researcher employed Simple Random Sampling techniques to select the sample for the study, ensuring unbiased representation from the population. This method involves randomly selecting participants or elements from the population without any predetermined criteria, thereby minimizing potential biases and increasing the generalizability of the findings.

Sample Size

In determining the sample size, the researchers utilized a sample size formula to calculate the appropriate number of participants or data points required for the study. This formula takes into account factors such as the desired level of confidence, margin of error, population size, and expected variability within the population. By adhering to a scientifically determined sample size, the study aims to achieve reliable and statistically valid results, enhancing the credibility and robustness of the research findings.

$$\text{Sample size} = \frac{\frac{z^2 \times p(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p(1-p)}{e^2 N} \right)}$$

N = Population Size (77,03,218)

e = Margin of error (0.05)

z = z-score (1.96)

p = Population proportion (it has be taken as 50%)

After applying the formula mentioned above, it was determined that the minimum required sample size for the study was 384, deemed optimal. However, a larger sample size of 700 was chosen for this research. Thus, a total of 500 consumers will make up the sample; 125 will come from the city of Hubli, 125 from the city of Dharwad, 125 from the city of Belgaum, and 125 from Gulbarga.

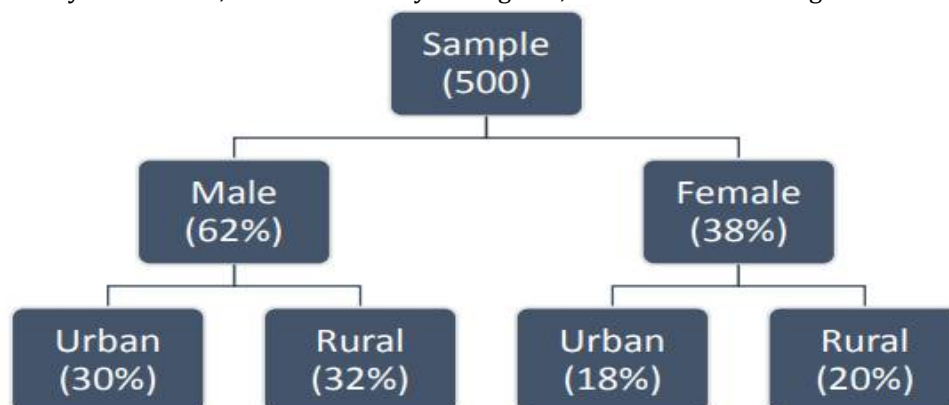


Figure 1: Flow chart of Sampling

Data Collection

This research is primarily focused on gathering and analyzing both primary and secondary data related to online shopping for electronic goods. The data collection process involves gathering insights from online customers regarding their opinions and experiences with online shopping, particularly focusing on the challenges and problems they face.

a. Primary Data Collection:

Primary data is collected through a structured questionnaire designed specifically for this study. The questionnaire comprises both hard-copy versions for in-person surveys and online versions distributed via platforms like Google Docs or email. This approach ensures a comprehensive collection of customer

feedback and insights into their perceptions and behaviors regarding online shopping for electronic goods.

b. Secondary Data Collection:

In addition to primary data, secondary data sources are utilized to complement the research findings. These secondary sources include data from books, reputable websites, industry reports, academic journals, conference papers, audit reports, magazines, and other published materials from government and non-government sectors. Leveraging secondary data enriches the research by providing a broader context, industry trends, expert analyses, and statistical information to support and validate the primary research findings.

Analysis Tools and Techniques

The data that has been gathered from a variety of sources has been analyzed and interpreted using suitable statistical analytical tools.

Table 1: Hypothesis Testing

S.No.	Hypothesis	Testing
Ho1	There is no significant relationship between consumer electronic goods growth trends in rural and urban areas.	Z-Square Analysis
Ho2	There is no significant relationship between online and offline buying behavior of consumers towards electronic goods.	Z-Square Analysis
Ho3	There is no significant impact of e-commerce on the online shopping of consumers towards electronic goods.	Chi-Square Analysis

RESEARCH LIMITATIONS

The study's limitations are as follows:.

- **Small Sample Size:** The study's sample size is relatively small, which may limit the generalizability of the findings across a diverse and populous country like India. The results derived from a limited sample may not accurately represent the broader population's perspectives and behaviors.
- **Limited Geographic Scope:** The research is restricted to specific cities in North Karnataka, namely Hubli, Dharwad, Belgaum, and Gulbarga. This narrow geographic focus may hinder the generalizability of the study's outcomes to other regions or demographic segments within India. The findings may not fully capture the variations and nuances in consumer behavior prevalent in different geographic areas.
- **Dependency on Data Provided by Respondents' References:** The accuracy and reliability of the research outcomes heavily on the data provided by the references of the respondents. Any inaccuracies or biases in the information provided could potentially impact on the study's validity and credibility.
- **Narrow Focus on Electronic Goods Purchases:** The study primarily focuses on the purchase behavior of electronic goods only. This limited scope may overlook other important factors and variables that could influence consumer behavior in the broader context of retail or e-commerce.
- **Time and Resource Limitations:** Time and resource restrictions may have an impact on the depth and breadth of data collection, analysis, and interpretation in the research. These constraints could potentially limit the study's ability to explore various facets of consumer behavior comprehensively.

Acknowledging these limitations is essential for interpreting the research findings accurately and understanding the boundaries within which the study's conclusions can be drawn. Future research endeavors may address these limitations to enhance the robustness and applicability of findings in broader contexts.

RESEARCH OBJECTIVES

1. To identify factors influencing online buying behavior in rural and urban areas in the North Karnataka region.
2. To analyze growth trends of consumers towards electronic goods in rural and urban areas in North Karnataka region.
3. To compare online and offline buying behavior of consumers towards electronic goods in North Karnataka region.

4. To study the impact of e-commerce on online shopping behavior of consumers towards electronic goods in the North Karnataka region.

HYPOTHESIS

Ho1- There is no significant relationship between consumer electronic goods growth trends in rural and urban areas.

Ho2- There is no significant relationship between online and offline buying behavior of consumers towards electronic goods.

Ho3- There is no significant impact of e-commerce on the online shopping of consumers towards electronic goods.

RESULTS

Table 2. Respondents' Ages

STATEMENT	PERCENTAGE
Below 20	11%
20 – 30	32%
30 – 40	30%
40 – 50	15%
50 Above	12%
Total	100%

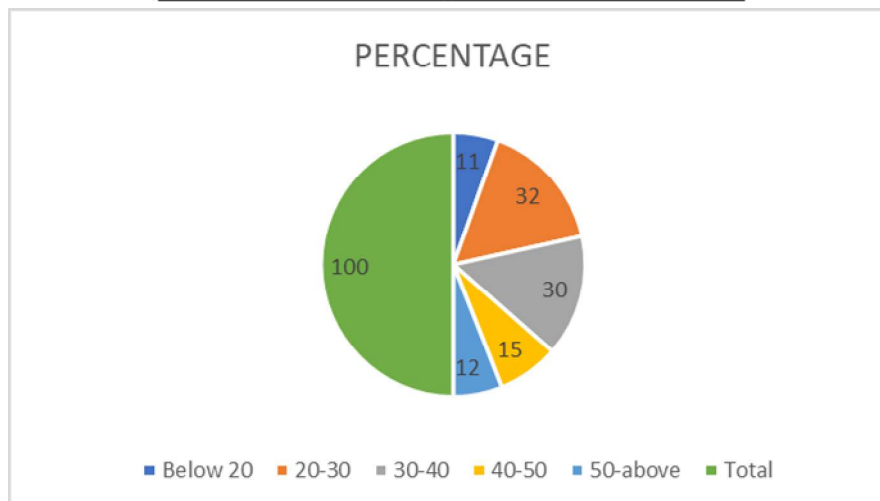


Figure 2: Respondents' Ages

The analysis of the table and figures indicates the age distribution of the respondents, revealing that 18% of respondents are below 20 years old. Following this, 32% of respondents fall within the age group of 20 to 30 years, while 30% are aged between 30 and 40 years. Additionally, 15% of respondents belong to the 40- to 50-year-old age group, with the remaining 5% being above 50 years old. These findings suggest that the majority of respondents, specifically those between 20 and 40 years old, are more prevalent compared to other age groups among the surveyed population.

Table 3: Respondents' Gender

STATEMENT	PERCENTAGE
Male	62%
Female	38%
Total	100%

The data presented in the table and figure provide insights into the gender distribution among the respondents. Among the total number of respondents, it is observed that 62% of the respondents are male, while 38% are female. This data indicates that there is a higher representation of male consumers compared to female consumers in the study sample.

Table 4. Recommendation For An Offline Electronics Retailer

STATEMENT	PERCENTAGE
Super Market	12%
Margin Free Market	22%
Petty Shop	25%
Wholesale & Retail shops	35%
Others	6%

The data presented in the table and figure highlight the favored venues for offline shopping of electronic goods among respondents. The analysis indicates that 12% of respondents preferred shopping at supermarkets, 22% favored margin-free markets, 25% opted for petty shops, 35% chose wholesale and retail shops, and 6% indicated other preferences. These findings suggest that the majority of respondents prefer shopping at wholesale and retail shops for offline purchases of electronic goods, followed by petty shops and margin-free markets.

Table 5: Purchase Frequency Of Electronic Goods (Online)

STATEMENT	PERCENTAGE
Weekly	0%
Monthly	2%
Quarterly	21%
Half early	36%
Yearly	41%
Total	100%

A portion of the respondents expressed their preference for online shopping, with 1% opting for a weekly frequency, 7% favoring a monthly schedule, 21% choosing a quarterly interval, 30% opting for a half-yearly pattern, and 41% preferring an annual timeframe. Interestingly, the majority of respondents indicated a preference for purchasing electronic goods online either semi-annually or annually, highlighting a trend in their online shopping behavior specifically for electronic products.

DISCUSSIONS

The age distribution of respondents reveals significant trends regarding the surveyed population. A majority, encompassing 62%, fall between the ages of 20 and 40 years (). This age group is often considered to be more active in decision-making, purchasing behavior, and adaptability to new trends, making them a key demographic for market analysis and targeting. In contrast, younger individuals below 20 years (18%) and older groups above 50 years (5%) represent a smaller segment of the population. This distribution highlights the importance of focusing research and marketing strategies on the 20–40-year demographic to effectively meet the needs and preferences of the majority (Khan, 2017). The gender distribution reveals a significant male dominance among respondents, with 62% being male and 38% female (Sathya, 2015). This skewed representation could indicate gendered preferences, access, or interest in the product or services under study. It also underscores the need for businesses to consider strategies that appeal to a more diverse gender demographic, ensuring inclusivity and broader consumer engagement. For policymakers and marketers, addressing the factors contributing to lower female representation could lead to more equitable participation and insights. The preferences for offline shopping venues suggest a clear inclination towards wholesale and retail shops (35%), followed by petty shops (25%) and margin-free markets (22%). Supermarkets (12%) and other venues (6%) account for a

smaller share (Thakur & Mala, 2013). These findings highlight the dominance of wholesale and retail shops in satisfying consumer needs for electronic goods, likely due to factors such as pricing, availability, or trust. Offline retailers should leverage this trend by enhancing their service offerings, ensuring competitive pricing, and maintaining stock availability. Understanding the reasons behind lesser-preferred venues could also guide improvement in those channels.

The data on online purchase frequency indicates that most respondents prefer a semi-annual (30%) or annual (41%) pattern for buying electronic goods. This trend could reflect the longer lifespan and durability of electronic products, making frequent purchases less necessary. However, the low weekly (1%) and monthly (7%) purchase frequencies might point to a lack of smaller, regularly-used electronic items in respondents' shopping lists. Businesses focusing on online sales should capitalize on the semi-annual and annual buying behavior by offering promotions and discounts aligned with these timeframes to maximize consumer engagement and sales (Thamizhvanan & Xavier, 2013).

CONCLUSION

The analyses reveal several key trends that provide valuable insights for businesses, policymakers, and researchers. The dominance of the 20–40-year-old age group highlights this segment as the primary target for strategies related to purchasing behaviors. The gender disparity underscores the need for more inclusive policies to address underrepresented groups, particularly females. Preferences for wholesale and retail shops for offline purchases and semi-annual/annual frequencies for online purchases emphasize the importance of understanding consumer behaviors across platforms to optimize product and service delivery. By leveraging these findings, stakeholders can design more targeted and effective strategies to meet consumer needs while fostering growth and inclusivity in the market.

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