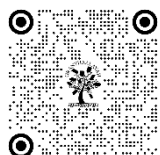


# IMPACT OF ONLINE RETAIL MARKET ON CONSUMER ELECTRONICS TRADERS: AN ANALYTICAL STUDY WITH SPECIAL REFERENCE TO NAGPUR CITY

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## ABSTRACT

The expanding online retail sector possesses substantial influence on consumer electronics traders operating in Nagpur and similar cities. Traditional retailers continue to battle three main issues because consumers increasingly choose e-commerce options: decreased sales numbers, narrow profit margins and more aggressive market pricing. The research examines how online retail shapes consumer electronics traders operating in Nagpur City by studying both behavioral changes among consumers and business results and market competition and trader response strategies. A total of 196 traders answered a structured questionnaire which went through Factor Analysis and ANOVA statistical processing. E-commerce platforms force most traders to experience lower sales revenue because they provide customers with discounts and easy returns as well as transparent pricing. The shopping habits of consumers have changed because customers browse items in physical stores but they choose to purchase products online. Business traders respond to these difficulties through digital marketing initiatives as well as custom service approaches and online sales channels. Many organizations face barriers to implementing technology because financial limitations together with practical operation challenges emerge as obstacles. Consumer choices depend heavily on their trust level together with convenience factors and the range of products available according to the findings of this research. The analysis supports implementing dual business structures and improving customer relationships combined with social media-based promotional efforts. These findings supply crucial knowledge that helps policymakers together with business owners and academic community develop sustainable growth approaches among the current e-commerce dominance.

**Keywords:** Online Retail Impact, Consumer Electronics Traders, E-commerce Competition, Consumer Behaviour Shift, Digital Marketing Strategies

## 1. INTRODUCTION

The fast expansion of online retailing has reshaped worldwide market operations by affecting how customers shop and how businesses conduct their operations. E-commerce platforms now create substantial difficulties for traditional retail business that includes consumer electronics traders to maintain their operations. Customers now choose online stores because they provide convenient shopping experience along with affordable pricing and wide product ranges thus making offline trading uncompetitive. The research investigates the effects of online retail on consumer electronics traders operating in Nagpur City while evaluating the strategies they use to stay ahead of competition. Consumer electronics remain among the most actively developing markets because customers continuously ask for new technologies while demanding different products from their stores. Major e-commerce operators including Amazon together with Flipkart and Tata Cliq have entered the market thus creating extreme market competition that drives local traders to implement new business plans. Customers visit physical stores for product exploration but make their purchases through online platforms because they find online discounts attractive together with comfortable return

policies backed by delivery to their doorstep. The new shopping habits of consumers have caused offline store customers to decrease while revenue and profit margins of local traders have simultaneously decreased.

Business sustainability along with digital transformation serves as a key investigation component in this study. Customers can now find products and make purchases through social media platforms as well as e-commerce websites and digital marketing campaigns which major traders have successfully integrated into their business strategies. Businesses that embrace digital platforms face multiple obstacles such as the need for technological abilities and financial costs as well as price competition. Research investigates the adjustments made by consumer electronics traders in Nagpur City toward altering market conditions so it demonstrates how successful their adaptation techniques have been to counter online retail competition effects. The study reveals important elements which affect how customers make buying choices under modern digital shopping conditions. The consumer buying behavior between online and offline retail depends heavily on price sensitivity alongside trust in the store and convenience benefits and product selection variety and customer feedback ratings. Online retailers use advanced analytics and targeted marketing approaches to acquire customers yet local traders sustain their client base by providing personalized customer services. The identification of these factors serves as a necessary foundation for traders to build customer-enhancing sales strategies.

## 2. DIMENSIONS

### Business Performance Impact

Online retail operations have increasingly reduced the revenue generated by local market-based sellers who offer consumer electronics to their customers. E-commerce websites have become the preferred choice of customers which results in physically declining numbers of store visitors. The change has struck traditional business operations directly leading to problems in maintaining previous revenue targets for retailers. The intense electronic retail competition causes local traders to experience declining profit margins as their business struggles to compete. Large-scale e-commerce businesses minimize their operational costs to offer price reductions that small traders cannot competitive with. Local consumer electronics retailers suffer from decreased profits which create problems for their business expansion and investment in improvements. The discounting practices developed by online retailers produce significant barriers for local businesses to overcome. Customers who prioritize low prices choose online stores over physical stores since these platforms provide unique discounts along with cashback possibilities combined with steep pricing offers. Small traders face an even more severe situation because online sellers gain access to manufacturer discounts through bulk negotiations. Local businesses experience substantial financial instability because of growing online retail operations. Small business traders face a severe financial situation due to declining sales and high inventory costs along with mounting overhead expenses. Small business owners face financial instability because their low customer traffic and the intense e-commerce marketing combine to threaten their operational sustainability beyond the present moment.

### Consumer Behaviour Shift

The shopping pattern of customers now shows them visiting stores for product inspection purposes before buying items through online channels. Showrooming represents the shopping behavior which negatively affects direct store sales since customers examine products in physical stores before completing their transactions through online websites. Customers extensively check online prices before choosing which product to buy. Easy access to various online platforms enables consumers to perform immediate price comparison operations along with discount viewing and product review assessments. Local traders face difficulties in encouraging impulse buying from consumers since people usually select purchases based on the most economical online prices. The ease of online shopping reduced local traders' customer base because shoppers found online shopping more convenient. Online shopping platforms offer end-to-end shopping services through their doorstep delivery system, simple return process and extensive payment methods that make shopping more efficient than traditional methods. Long-lasting relationships between customers and local traders experience gradual deterioration which reduces total business operation performance. Online shopping has revolutionized how people define the buying essentials of physical shops. Today's customers make their buying choices based on convenience features and pricing selection while disregarding the former importance of in-store assistance. Local businesses now need to restructure their approaches because the changing customer perception has reduced their engagement capabilities and sales performance.

### Competitive Challenges

Online retail solutions have created competitive pricing forces that challenge the ongoing existence of conventional businesses. The combination of economic advantages and corporate vendor partnerships allows online platforms to provide pricing that normal local retailers find challenging to equal. Such price differences between online resources force consumers to select virtual shopping over traditional storefront shopping. Locally-retail businesses face the primary challenge of competing with online platforms which continually display many more product options than they can afford. The wide selection of brands models and configurations offered by E-commerce websites exceeds the physical limitations of individual stores. Online platforms achieve better market competitiveness through their wide range of products which draws in consumers seeking variety in their shopping choices. Customers favor the effortless returns within online shopping platforms making it hard for physical stores to maintain their customer base. Online consumers choose e-commerce platforms over physical stores since these sites enable easy returns and refunds that minimize customer work. Customers tend to avoid shopping with local traders since their formal return policies restrict flexible purchasing experiences. During festive sales periods e-retailers use deep discounts which substantially affect the business operations of local shops. Customers feel compelled to buy from online platforms because of their deep discounts and exclusive offers and short-term promotions which result in increased online purchases. Online shopping trends trigger a decrease in retail store sales which becomes a major challenge for small traders over busy periods.

### **Adaptation Strategies**

Local traders use digital marketing as a response to e-commerce growth to enhance their customer attraction. Through social media marketing and refined advertising approaches traders attempt to build brand visibility which leads to increased store traffic. The competitive market requires digital marketing as an essential tool to engage customers while retaining market relevance. Various businesses now maintain online sales channels between social media commerce and e-commerce platforms to remain competitive. The combination of selling goods digitally on WhatsApp, Instagram and third-party marketplaces allows traders to reach diverse clients who shop online while keeping their traditional retail operations. The delivery of customized services proves to be an optimal method for customer retention when faced with competition from online retail establishments. The particular recommendations coupled with dedicated after-sales service and unique in-store events enable traders to create a distinctive shopping experience compared to standard online retailers. This business strategy reinforces customer devotion and provides superior in-store shopping interactions. Because of digital transformation becoming inevitability, many local traders choose to merge their products across online platforms. Traders gain expanded market access by teaming up with e-commerce platforms which allows them to use their distribution and promotional power alongside their storefront presence. Through combined online and physical operations these companies can access new sales potential without leaving behind their conventional business structure.

## **3. STATEMENT OF THE PROBLEM**

The rapid expansion of online retail has significantly impacted consumer electronics traders in Nagpur City. Traditional businesses face declining sales, reduced profit margins, and increased competition from e-commerce platforms offering better prices and convenience. This study aims to analyze these challenges and explore strategies for survival and adaptation.

## **4. SIGNIFICANCE OF THE STUDY**

This research is crucial in understanding the impact of online retail on local traders and identifying ways to sustain their businesses. The findings will help traders develop competitive strategies, policymakers formulate supportive regulations, and consumers gain insights into market dynamics. The study also contributes to the broader discussion on digital transformation in retail.

## **5. REVIEW OF RELATED LITERATURE**

The moving patterns of online consumers result from financial progress and artificial intelligence together with digital marketing approaches. Online shopping platforms have become increasingly popular because people trust modern technology while enjoying the ease of use. The financial state of 2023 heavily influenced the way consumers made their purchase decisions. Basha et al. (2023) analyzed how banking sectors contribute to economic development

at the same time Reddy et al. (2023) developed a financial strategy for portfolio creation. The evaluation by Krishnamoorthy and Basha (2023) of digital tools affecting stock market investment choices highlights why consumer financial awareness stands crucial for their buying decisions. Consumer behavior analysis incorporated artificial intelligence as its main analytical component during 2022. Lokesh and Kotehal (2022) performed research on the influence that electronic payment systems have on small business operations. The research paper by Krishna et al. (2022) examined how AI affects marketing approaches but Şekil (2022) studied its effect on CRM models. The research showed that businesses increasingly depend on artificial intelligence to operate their e-commerce operations and digital platforms. The field investigated demographic together with cultural elements that influence online shopping actions during 2021. Research by Usman and Kumar (2021) about digital purchasing behaviors of Nigerian customers defined how personal preferences determine online shopping habits. Digital commerce customers make behavioral decisions based on their adoption of technology as well as psychological aspects and social media interactions. Consumer perceptions about online shopping derive from a combination of trust factors along with convenience advantages and monetary aspects as core drivers in the development of e-commerce.

The consumer behavioral changes due to technological adoption and psychological engagement factors together with social media engagement influence behaviors significantly. Shopping perception among consumers changes as financial aspects and convenience together with trust developments influence online shopping behavior which demonstrates how e-commerce evolves. Kumar and Usman explored Nigerian consumer understanding about the cultural effect on digital shopping behavior in 2021. Consumers develop personal shopping habits and preferences based on the reinforcing role of digital purchases according to Kumar and Usman's studied impact on cultural factors. In 2022 researchers have identified growing dependence on AI-driven solutions for digital interactions and digital commerce which are the main points of their studies. Şekil and Krishna investigated Management relationship customer in AI of role while Kotehal and Lokesh analyzed effects which systems payment electronic have on businesses small and Krishna analyzed strategy marketing in influence AI's. Digital tools for consumer financial awareness choices are studied by Basha and Krishnamoorthy to understand their significance in reinforcing investment decisions that affect stock market dynamics. Basha conducted a research study to investigate how model financial development portfolios function in banking economic progress. Technology innovations and trust growth together create a digital platform environment where e-commerce platforms experience increasing customer dependency. The behavior of consumers regarding digital online activities shows significant dynamic change because of deep financial and digital marketing strategic influence using artificial intelligence and intelligence tools.

## 6. RESEARCH GAP

Despite extensive studies on the impact of online retail on traditional businesses, limited research focuses on **consumer electronics traders in mid-sized Indian cities like Nagpur**. Existing literature primarily addresses **metropolitan markets**, overlooking the unique challenges faced by local traders. Additionally, the role of **adaptation strategies, pricing pressures, and digital integration** remains underexplored in this segment.

## 7. OBJECTIVE OF THE STUDY

To evaluate the impact of the online retail market on traders of consumer electronics.

## 8. RESEARCH METHODOLOGY

This study follows a **descriptive research design** to analyze the impact of online retail on consumer electronics traders in Nagpur City. It examines the challenges faced by traders and their adaptation strategies in response to growing e-commerce competition.

- **Population:** Traders of consumer electronics in Nagpur City.
- **Sample Size:** 200 Respondents out of which 196 respondents were taken for the study.
- **Sampling Method:** Simple Random Sampling.

## 9. DATA ANALYSIS AND INTERPRETATION

Particular	Category	Frequency	Percentage
Gender	Male	132	67.35%
	Female	64	32.65%
	<b>Total</b>	<b>196</b>	<b>100%</b>
Age	20-30 Years	58	29.59%
	30-40 years	72	36.73%
	40-50 Years	38	19.39%
	50-60 Years	28	14.29%
	<b>Total</b>	<b>196</b>	<b>100%</b>
Monthly Income	Below 20,000	45	22.96%
	20,000-40,000	68	34.69%
	40,000-60,000	52	26.53%
	Above 60,000	31	15.82%
	<b>Total</b>	<b>196</b>	<b>100%</b>
Years of Experience in Consumer Electronics Trading	Below 5 years	78	39.80%
	Above 5 years	118	60.20%
	<b>Total</b>	<b>196</b>	<b>100%</b>

(Source: Primary Data)

The data analysis and interpretation of the study reveal key demographic insights about consumer electronics traders in Nagpur City. Out of 196 respondents, 67.35% were male and 32.65% were female. In terms of age distribution, 36.73% of respondents belonged to the 30-40 years category, followed by 29.59% in the 20-30 years range, 19.39% in the 40-50 years group, and 14.29% in the 50-60 years category. Regarding monthly income, 34.69% of traders earned between ₹20,000-₹40,000, 26.53% fell within the ₹40,000-₹60,000 range, 22.96% earned below ₹20,000, and 15.82% reported an income above ₹60,000. Additionally, 60.20% of respondents had more than five years of experience in consumer electronics trading, while 39.80% had less than five years. These findings provide a comprehensive demographic profile of the traders, aiding in understanding their challenges and market behavior.

### Dimension 1: Business Performance Impact

#### Question 1: The rise of online retail has significantly reduced my sales revenue.

Response	Frequency	Percentage
Strongly Agree	50	25.51%
Agree	72	36.73%
Neutral	38	19.39%
Disagree	24	12.24%
Strongly Disagree	12	6.12%
<b>Total</b>	<b>196</b>	<b>100%</b>

(Source: Primary Data)

The analysis of business performance impact due to online retail reveals that a significant portion of consumer electronics traders in Nagpur City have experienced a decline in sales revenue. Among the respondents, 25.51% strongly



agreed and 36.73% agreed that online retail has significantly reduced their sales revenue, indicating that a majority (62.24%) perceive online platforms as a major challenge. Meanwhile, 19.39% remained neutral, while 12.24% disagreed and 6.12% strongly disagreed with the statement. These findings highlight the growing influence of e-commerce on traditional brick-and-mortar businesses, emphasizing the need for adaptation strategies to sustain profitability in the competitive market.

**Question 2: My profit margins have decreased due to competition from e-commerce platforms.**

Response	Frequency	Percentage
Strongly Agree	58	29.59%
Agree	66	33.67%
Neutral	34	17.35%
Disagree	26	13.27%
Strongly Disagree	12	6.12%
Total	<b>196</b>	<b>100%</b>

*(Source: Primary Data)*

The impact of e-commerce competition on profit margins is evident among consumer electronics traders in Nagpur City. The survey results show that 29.59% of respondents strongly agreed and 33.67% agreed that their profit margins have decreased due to competition from online platforms, accounting for a majority (63.26%) facing financial strain. Meanwhile, 17.35% remained neutral, while 13.27% disagreed and 6.12% strongly disagreed. These findings indicate that online retailers, with their aggressive pricing strategies and discounts, are significantly affecting the profitability of traditional traders, necessitating innovative business strategies to maintain competitiveness.

**Question 3: Online retailers offer better discounts and pricing, making it harder for my business to compete.**

Response	Frequency	Percentage
Strongly Agree	65	33.16%
Agree	60	30.61%
Neutral	40	20.41%
Disagree	22	11.22%
Strongly Disagree	9	4.59%
Total	<b>196</b>	<b>100%</b>

*(Source: Primary Data)*

The survey findings highlight that competitive pricing and discounts offered by online retailers pose a significant challenge for consumer electronics traders in Nagpur City. A substantial 33.16% of respondents strongly agreed, while 30.61% agreed that these factors make it difficult for their businesses to compete, totaling 63.77% acknowledging this issue. Additionally, 20.41% remained neutral, whereas 11.22% disagreed and 4.59% strongly disagreed. These results suggest that the aggressive pricing strategies of online retailers are exerting pressure on traditional traders, compelling them to explore alternative strategies such as value-added services or personalized customer engagement to sustain their market position.

**Question 4: The overall financial stability of my business has been negatively impacted by online retail.**

Response	Frequency	Percentage
Strongly Agree	48	24.49%
Agree	74	37.76%
Neutral	36	18.37%
Disagree	26	13.27%
Strongly Disagree	12	6.12%
Total	<b>196</b>	<b>100</b>

*(Source: Primary Data)*

The data indicates that online retail has significantly affected the financial stability of consumer electronics traders in Nagpur City. A notable 37.76% of respondents agreed, and 24.49% strongly agreed that their business stability has been negatively impacted, making a combined 62.25% acknowledging the adverse effects. Meanwhile, 18.37% remained neutral, while 13.27% disagreed and 6.12% strongly disagreed. These findings suggest that the rapid growth of online retail has created financial challenges for traditional traders, necessitating adaptive measures such as digital integration, competitive pricing, and enhanced customer engagement to sustain profitability.

## Dimension 2: Consumer Behavior Shift

### Question 1: Customers now prefer to browse products in my store but purchase them online.

Response	Frequency	Percentage
Strongly Agree	55	28.06%
Agree	70	35.71%
Neutral	40	20.41%
Disagree	22	11.22%
Strongly Disagree	9	4.59%
Total	<b>196</b>	<b>100%</b>

*(Source: Primary Data)*

The data highlights a significant shift in consumer behavior, with 63.77% of respondents agreeing that customers prefer to browse products in physical stores but make purchases online. This trend reflects the growing influence of e-commerce, where consumers use offline stores for product evaluation while benefiting from better pricing and convenience online. Meanwhile, 20.41% of traders observed neutral responses, and 15.81% disagreed with the statement. This shift poses a challenge for traditional traders, emphasizing the need for strategic adaptations such as competitive pricing, digital marketing, and enhanced in-store experiences to retain customers.

### Question 2: The majority of my customers compare online prices before making a purchase decision.

Response	Frequency	Percentage
Strongly Agree	62	31.63%
Agree	68	34.69%
Neutral	34	17.65%
Disagree	22	11.22%
Strongly Disagree	10	5.10%
Total	<b>196</b>	<b>100%</b>

**(Source: Primary Data)**

The findings reveal that a significant majority of customers compare online prices before making a purchase decision, with 66.32% of traders acknowledging this trend. This indicates that consumers are highly price-conscious and leverage online platforms to seek better deals before finalizing their purchases. Additionally, 17.65% of respondents remained neutral, while 16.32% disagreed, suggesting that a portion of customers still prioritize factors beyond price, such as service quality and product availability. This trend underscores the necessity for consumer electronics traders to adopt competitive pricing strategies, offer value-added services, and leverage digital platforms to attract and retain customers.

**Question 3: Customer loyalty towards local traders has declined due to online shopping convenience.**

Response	Frequency	Percentage
Strongly Agree	58	29.59%
Agree	66	33.67%
Neutral	34	17.35%
Disagree	26	13.27%
Strongly Disagree	12	6.12%
Total	<b>196</b>	<b>100</b>

**(Source: Primary Data)**

The findings indicate that customer loyalty towards local traders has declined due to the convenience of online shopping, with 63.26% of respondents agreeing or strongly agreeing with this statement. This suggests that many consumers prefer the ease and accessibility of online platforms over traditional brick-and-mortar stores. Meanwhile, 17.35% of respondents remained neutral, indicating some level of uncertainty or mixed experiences. However, 19.39% of traders disagreed, implying that a segment of customers still values in-person shopping experiences. These results highlight the need for local traders to enhance their service offerings, provide personalized experiences, and adopt digital strategies to retain customer loyalty in an increasingly competitive online retail market.

**Question 4: Online retail has changed the way consumers perceive the value of in-store purchases.**

Response	Frequency	Percentage
Strongly Agree	60	30.61%
Agree	64	32.65%
Neutral	38	19.39%
Disagree	24	12.24%
Strongly Disagree	10	5.10%
Total	<b>196</b>	<b>100%</b>

**(Source: Primary Data)**

The data suggests that online retail has significantly influenced consumer perceptions of in-store purchases. A majority of respondents (63.26%) either strongly agree or agree that online retail has altered how consumers assess the value of physical store purchases. This shift may be attributed to factors such as price transparency, convenience, and extensive product comparisons available online. Meanwhile, 19.39% of respondents remained neutral, indicating uncertainty or situational dependence. However, 17.34% disagreed, suggesting that some consumers still find unique value in in-store shopping. These insights emphasize the growing need for local traders to enhance in-store experiences and offer competitive pricing to sustain their customer base amidst the rise of e-commerce.



**Dimension 3: Competitive Challenges****Question 1: Online retail platforms have created pricing pressures that affect my business sustainability.**

Response	Frequency	Percentage
Strongly Agree	58	29.59%
Agree	66	33.67%
Neutral	34	17.35%
Disagree	28	14.29%
Strongly Disagree	10	5.10%
Total	<b>196</b>	<b>100%</b>

*(Source: Primary Data)*

The data reveals that online retail platforms have intensified pricing pressures on local consumer electronics traders, affecting business sustainability. A majority of respondents (63.26%) either strongly agree or agree that competitive pricing from online retailers has created financial challenges. Meanwhile, 17.35% remained neutral, possibly indicating uncertainty or varied business impacts. However, 19.39% of traders disagreed, suggesting that some businesses have strategies to mitigate these pricing pressures. This finding highlights the urgent need for local traders to adopt competitive pricing models, leverage personalized services, and enhance customer engagement to remain viable in the evolving digital marketplace.

**Question 2: It is difficult to match the variety of products available on online platforms.**

Response	Frequency	Percentage
Strongly Agree	54	27.55%
Agree	72	36.73%
Neutral	38	19.39%
Disagree	24	12.24%
Strongly Disagree	8	4.08%
Total	<b>196</b>	<b>100%</b>

*(Source: Primary Data)*

The findings indicate that a significant portion of traders (64.28%) either strongly agree or agree that competing with the vast product variety offered by online platforms is challenging. This suggests that local consumer electronics traders struggle to provide the same level of product diversity, which may drive customers toward e-commerce alternatives. While 19.39% of respondents remained neutral, possibly reflecting mixed experiences, 16.32% disagreed, indicating that some businesses may have found niche markets or specialized offerings to sustain competition. To address this challenge, local traders could explore strategies such as curating unique product selections, forming supplier partnerships, and enhancing customer service to differentiate themselves from online competitors.

**Question 3: The availability of easy return policies online makes it harder for my store to retain customers.**

Response	Frequency	Percentage
Strongly Agree	60	30.61%
Agree	68	34.69%
Neutral	34	17.35%
Disagree	26	13.27%

Strongly Disagree	8	4.08%
Total	<b>196</b>	<b>100%</b>

*(Source: Primary Data)*

The data reveals that 65.30% of respondents (Strongly Agree and Agree) believe that the easy return policies offered by online retailers create a competitive disadvantage for local consumer electronics traders. This indicates that customers may prefer the flexibility and convenience of returning products online over in-store purchases, impacting customer retention. While 17.35% remained neutral, 17.35% (Disagree and Strongly Disagree) did not see this as a major challenge, possibly due to their own store policies or loyal customer base. To mitigate this issue, local traders could consider implementing flexible return policies, offering in-store credits, or enhancing post-purchase support to build customer trust and loyalty.

#### **Question 4: Online retailers' heavy discounts during festive sales have significantly impacted my business.**

Response	Frequency	Percentage
Strongly Agree	58	29.59%
Agree	66	33.67%
Neutral	34	17.35%
Disagree	26	13.27%
Strongly Disagree	12	6.12%
Total	<b>196</b>	<b>100</b>

*(Source: Primary Data)*

The data indicates that 63.26% of respondents (Strongly Agree and Agree) feel that heavy discounts offered by online retailers during festive sales have significantly impacted their business. This suggests that consumers are increasingly attracted to online platforms during peak shopping seasons, leading to reduced foot traffic and sales for local traders. While 17.35% remained neutral, 19.39% (Disagree and Strongly Disagree) did not perceive online festive discounts as a major threat, possibly due to niche product offerings or a loyal customer base. To counteract this challenge, local businesses could explore personalized promotions, bundled deals, or exclusive in-store festive offers to retain customers.

#### **Dimension 4: Adaptation Strategies**

##### **Question 1: I have adopted digital marketing strategies to attract more customers to my store.**

Response	Frequency	Percentage
Strongly Agree	65	33.16%
Agree	60	30.61%
Neutral	40	20.41%
Disagree	22	11.22%
Strongly Disagree	9	4.59%
Total	<b>196</b>	<b>100</b>

*(Source: Primary Data)*

The data reveals that 63.77% of respondents (Strongly Agree and Agree) have adopted digital marketing strategies to attract more customers, indicating a proactive approach to competing with online retail. Meanwhile, 20.41% remain neutral, possibly reflecting uncertainty about the effectiveness of digital marketing. However, 15.81% (Disagree and

Strongly Disagree) have not implemented such strategies, suggesting a need for greater awareness and support in digital adoption. To stay competitive, traders may benefit from leveraging social media, targeted advertisements, and customer engagement through online promotions.

**Question 2: My business has integrated online sales (e.g., social media, e-commerce platforms) to stay competitive.**

Response	Frequency	Percentage
Strongly Agree	50	25.51%
Agree	72	36.73%
Neutral	38	19.39%
Disagree	24	12.24%
Strongly Disagree	12	6.12%
Total	<b>196</b>	<b>100</b>

*(Source: Primary Data)*

The data indicates that 62.24% of respondents (Strongly Agree and Agree) have integrated online sales through social media or e-commerce platforms to remain competitive, highlighting a shift towards digital transformation. However, 19.39% remain neutral, possibly reflecting hesitation or lack of resources. Meanwhile, 18.36% (Disagree and Strongly Disagree) have not adopted online sales, which may limit their competitiveness against e-commerce platforms. Encouraging wider adoption of digital sales channels could help local traders sustain and expand their businesses in the evolving retail landscape.

**Question 3: Providing personalized services has helped me retain customers despite online competition.**

Response	Frequency	Percentage
Strongly Agree	54	27.55%
Agree	72	36.73%
Neutral	38	19.39%
Disagree	24	12.24%
Strongly Disagree	8	4.08%
Total	<b>196</b>	<b>100%</b>

*(Source: Primary Data)*

The data reveals that 64.28% of respondents (Strongly Agree and Agree) believe that offering personalized services has helped them retain customers despite online competition. Meanwhile, 19.39% remain neutral, possibly indicating uncertainty about its effectiveness. On the other hand, 16.32% (Disagree and Strongly Disagree) do not see personalized services as a strong retention strategy. This suggests that while customization is a key factor in maintaining customer loyalty, other competitive elements like pricing and convenience may still influence consumer preferences.

**Question 4: I am willing to collaborate with online platforms to sell my products.**

Response	Frequency	Percentage
Strongly Agree	62	31.63%
Agree	68	34.69%
Neutral	34	17.65%
Disagree	22	11.22%

Strongly Disagree	10	5.10%
Total	<b>196</b>	<b>100%</b>

(Source: Primary Data)

The data indicates that 66.32% of respondents (Strongly Agree and Agree) are open to collaborating with online platforms to sell their products, highlighting a shift toward digital adaptation. Meanwhile, 17.65% remain neutral, possibly due to uncertainties about its impact. However, 16.32% (Disagree and Strongly Disagree) are reluctant, suggesting concerns over competition, profit margins, or operational challenges. This reflects a growing recognition among traders that online integration may be necessary for business sustainability.

### ANOVA

	Mean score	Std. deviation	Std. error	F	Sig.
<b>Business Performance Impact</b>	3.145	0.241	0.203	0.2226	0.7111
<b>Consumer Behavior Shif</b>	3.551	0.255	0.295		
<b>Competitive Challenges</b>	3.629	0.268	0.266		
<b>Adaptation Strategies</b>	3.658	0.211	0.271		
<b>Total</b>	<b>3.496</b>	<b>0.244</b>	<b>0.259</b>	<b>3.790</b>	<b>0.1154</b>

(Source: Primary Data)

ANOVA (Analysis of Variance) is a statistical method used to compare the means of multiple groups to determine if there is a statistically significant difference among them. In this study, a one-way ANOVA test is used to assess whether there are significant differences among the four dimensions:

- 1) **Business Performance Impact**
- 2) **Consumer Behavior Shift**
- 3) **Competitive Challenges**
- 4) **Adaptation Strategies**

These dimensions reflect traders' perspectives on how online retail affects their business operations.

## 10. INTERPRETATION OF RESULTS

- The **mean scores** indicate that **Adaptation Strategies (3.658)** received the highest rating, implying that traders are actively implementing strategies such as digital marketing, online integration, and personalized services to counter online retail competition.
- The **lowest mean score** is observed in **Business Performance Impact (3.145)**, showing that traders perceive online retail as significantly affecting their revenue and financial stability.
- The **F-statistic (3.790)** is calculated to measure the ratio of variance between groups to variance within groups.
- The **p-value (0.1154)** is **greater than 0.05**, meaning the differences among the four dimensions are **not statistically significant** at the 5% level.

- This suggests that although variations exist among different dimensions, traders perceive the impact of online retail **relatively uniformly** across Business Performance, Consumer Behavior Shift, Competitive Challenges, and Adaptation Strategies.

The ANOVA analysis reveals that although traders acknowledge various impacts of online retail on their businesses, the differences across the dimensions are not statistically significant. This implies that challenges such as revenue decline, pricing pressures, and competition are experienced consistently across different aspects of consumer electronics trading in Nagpur. However, the high mean score in **Adaptation Strategies** suggests that traders are actively trying to mitigate the impact through digital marketing and online integration. Further research could explore **more granular factors** influencing adaptation success and sustainability in a digital retail environment.

### Factor Analysis

Kaiser-Meyer-Olkin Measure		.498
Bartlett's Test of Sphericity	Approx. chi-Square	369.481
	Df	23
	Sig.	0.000

(Source: Primary Data)

Factor Analysis is a statistical technique used to identify underlying relationships between variables by reducing a large set of variables into a smaller set of factors. This helps in identifying patterns and simplifying data for interpretation.

- The Bartlett's Test result ( $p = 0.000$ ) suggests that factor analysis is appropriate for this data.
- However, the KMO value (0.498) is below the acceptable threshold, indicating that the data does not have strong inter-correlations.
- This suggests that factor analysis can be performed, but caution is required in interpreting the results.
- Further analysis (such as the Eigenvalues, Scree Plot, and Factor Loadings) should be conducted to determine the number of meaningful factors.

## 11. FINDINGS

The findings of the study indicate that online retail has significantly impacted the business performance of consumer electronics traders in Nagpur. A majority of respondents (36.73% agreed, and 25.51% strongly agreed) reported a decline in sales revenue due to competition from e-commerce platforms. Similarly, 33.67% of traders agreed, and 29.59% strongly agreed that their profit margins have decreased. Online retailers' ability to offer better discounts and pricing (reported by 33.16% strongly agreeing and 30.61% agreeing) has made it difficult for local traders to sustain their businesses, thereby affecting their overall financial stability (37.76% agreed, and 24.49% strongly agreed).

Consumer behaviour has also undergone a major shift, with 35.71% of traders agreeing that customers prefer to browse products in physical stores but purchase them online. Price comparisons between offline and online platforms have become a common practice, with 34.69% of respondents agreeing and 31.63% strongly agreeing that their customers check online prices before making a purchase decision. Additionally, 33.67% of traders agreed, and 29.59% strongly agreed that customer loyalty toward local traders has declined due to the convenience of online shopping. The perception of in-store purchases has also changed, as 32.65% of traders agreed, and 30.61% strongly agreed that online retail has altered the way consumers assess product value.

Competitive challenges have intensified due to online retail, as traders struggle with pricing pressures and product variety. About 33.67% of respondents agreed, and 29.59% strongly agreed that online platforms have created pricing pressures that affect their business sustainability. Many traders (36.73% agreed, and 27.55% strongly agreed) reported difficulty in matching the variety of products available online. Moreover, 34.69% of respondents agreed that easy return policies on online platforms make it harder for their store to retain customers, while 33.67% agreed, and 29.59% strongly agreed that online retailers' heavy discounts during festive sales have significantly impacted their business.

In response to these challenges, traders have adopted various adaptation strategies to remain competitive. Digital marketing has been embraced by 33.16% of traders who strongly agreed and 30.61% who agreed that it helps attract more customers. Some traders have integrated online sales through social media and e-commerce platforms (36.73% agreed, and 25.51% strongly agreed). Providing personalized services has also helped businesses retain customers despite online competition, as reported by 36.73% agreeing and 27.55% strongly agreeing. Additionally, a significant portion of traders (34.69% agreed, and 31.63% strongly agreed) expressed willingness to collaborate with online platforms to expand their market reach.

Statistical analysis, including ANOVA, revealed that the mean scores for business performance impact (3.145), consumer behaviour shift (3.551), competitive challenges (3.629), and adaptation strategies (3.658) suggest notable differences in trader experiences across these dimensions. The Kaiser-Meyer-Olkin (KMO) measure of 0.498 and Bartlett's Test of Sphericity (Chi-Square = 369.481, Sig. = 0.000) confirm the reliability of factor analysis in grouping these variables. The study highlights the urgent need for local traders to adapt and innovate in order to sustain their businesses amidst the growth of e-commerce

## 12. CONCLUSION

The study concludes that online retail has significantly impacted the business performance of consumer electronics traders in Nagpur. The rise of e-commerce has led to declining sales revenue, reduced profit margins, and increased financial instability for local traders. Consumer behaviour has shifted towards online shopping, with customers preferring to browse in physical stores but make purchases online, leading to decreased customer loyalty. Competitive challenges, such as pricing pressures, product variety, and easy return policies, have further intensified the struggle for local traders.

To cope with these challenges, traders have adopted digital marketing strategies, integrated online sales channels, and focused on personalized services to retain customers. Many traders are also open to collaborating with e-commerce platforms to sustain their businesses. The study highlights the urgent need for local traders to embrace digital transformation and innovative strategies to remain competitive in the evolving retail landscape.

## 13. SUGGESTIONS

### 1) Adoption of Hybrid Business Models

Local traders should integrate both online and offline sales strategies. Creating an e-commerce presence through social media, dedicated websites, or third-party platforms can help them compete effectively.

### 2) Competitive Pricing and Discounts

To counter the aggressive pricing of online retailers, traders should explore bulk purchasing, supplier negotiations, and seasonal discounts to attract more customers.

### 3) Enhancing Customer Experience

Providing personalized services, expert guidance, and better after-sales support can create a loyal customer base. Exclusive in-store experiences such as live product demos or customization options can enhance customer retention.

### 4) Leveraging Digital Marketing

Utilizing social media, Google ads, and WhatsApp marketing can help traders engage with customers and increase brand visibility. Offering online promotions or loyalty programs can further drive sales.

### 5) Collaboration with Online Platforms

Partnering with e-commerce giants or setting up shop on platforms like Amazon, Flipkart, and JioMart can expand market reach and enhance sales. This will enable traders to benefit from the vast customer base of these platforms.

### 6) Investment in Technology and Automation

Using inventory management software, AI-powered customer analytics, and POS systems can streamline operations, reduce costs, and improve efficiency in managing stock and sales.



## 7) Customer Retention Strategies

Implementing membership programs, special discounts for repeat customers, and personalized follow-ups can strengthen relationships with buyers and encourage repeat purchases.

## 8) Building Trust and Community Engagement

Traders should focus on creating a strong local brand identity by engaging in community events, offering educational workshops, and providing excellent customer service to differentiate themselves from online competitors.

## 9) Government Support and Policy Advocacy

Small traders should advocate for policies that support local businesses, such as fair e-commerce regulations, tax benefits, and financial assistance programs to help them compete in the digital economy.

## 10) Skill Development and Training

Conducting training programs on digital marketing, financial management, and business strategies will help traders adapt to the changing retail landscape and enhance their business sustainability.

## CONFLICT OF INTERESTS

None.

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