

The Impact of E-Commerce Adoption on Consumer Buying Behaviour and Local Retailers

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Abstract— This paper investigates the profound shifts in consumer buying behaviour driven by accelerated e-commerce adoption and its subsequent economic impact on local brick-and-mortar retailers. Utilising a mixed-methods research design, the study analyses primary data collected via digital consumer surveys (N=200) alongside qualitative interviews with local business owners. The findings indicate a permanent shift toward omnichannel shopping, where convenience and algorithmic customisation dictate purchasing intent. Conversely, traditional local retailers face severe structural pressures but can mitigate revenue losses by integrating basic digital hyper-local delivery models. The paper concludes with strategic recommendations for small-scale merchants to remain competitive in a digital-first market.

Index Terms— Algorithmic customisation, Consumer buying behaviour, Digital retail platforms, E-commerce adoption, Hyper-local delivery, Local storefronts, Omnichannel shopping, Structural pressures.

I. INTRODUCTION

The global retail landscape has undergone an unprecedented transformation over the past decade. What began as an alternative digital marketplace has matured into the dominant infrastructure of modern commerce. The integration of Artificial Intelligence (AI), predictive analytics, and hyper-local supply chains has fundamentally re-engineered how products are discovered, evaluated, and purchased.

A. Research Problem

While large e-commerce aggregates experience exponential growth, local brick-and-mortar retailers traditionally the backbone of domestic economies—are facing severe customer attrition. Understanding the precise mechanisms of changing consumer psychology is critical to designing survival strategies for small and medium enterprises (SMEs).

B. Objectives of the Study

The primary objectives directing this exploration encompass several distinct dimensions:

- 1) To evaluate key psychological drivers behind modern e-commerce consumer preferences.
- 2) To assess the financial and operational impact of digital retail platforms on local storefronts.
- 3) To propose actionable digital-hybrid models that small businesses can realistically implement.

II. LITERATURE REVIEW

Prior research in commerce has extensively documented the evolution of digital marketplaces. Early scholarship focused primarily on the transactional safety and trust architectures of online shopping. However, current literature emphasizes algorithmic personalization and immediate fulfillment.

According to recent industrial findings published on platforms like ResearchGate [1], centralized e-commerce giants utilize vast supplier data to aggressively outprice local entities. Furthermore, research listed on Academia.edu [2] shows that consumer adoption relies heavily on evolving personal norms regarding environmental sustainability, ease of return policies, and instant digital credit choices (e.g., Buy Now, Pay Later). A critical gap remains in examining how suburban and secondary city retailers can combat these structural shifts using accessible, non-capital-intensive technologies.

III. METHODOLOGY

This study employs a mixed-methods research design to capture both statistical trends and qualitative operational insights.

Quantitative Data: A structured questionnaire was distributed digitally via Google Forms to 200 active consumers. Data tracked shopping frequency, average basket size, and primary choice drivers (price vs. convenience).

Qualitative Data: Semi-structured interviews were conducted with 15 independent local retail store owners across various consumer-goods sectors to understand their revenue disruptions.

Analytical Tools: Quantitative data was processed using regression models and descriptive statistics via Microsoft Excel and SPSS.

IV. DATA ANALYSIS & RESULTS

A. Consumer Choice Drivers

The data shows that consumer choices are no longer driven purely by the baseline price of an item. Instead, accessibility and convenience metrics take precedence. Table I breaks down these parameters explicitly.

Table I
Consumer Choice Distribution and Metrics

Factor Determining Choice	Percentage (%)	Primary Mode of Impact
Convenience & Doorstep Delivery	42%	Time-saving preference
Algorithmic Discounts / Variety	28%	Dynamic pricing platforms
Instant Return / Exchange Policies	18%	Financial risk mitigation
Immediate Need / Physical Touch	12%	Benefits traditional stores

B. Regression Analysis (Summary)

A simple linear regression was performed to measure the relationship between Time Spent on social media/E-commerce Apps (X) and Unplanned Monthly Purchases (Y). The resulting model yielded a statistically significant correlation, mapping out an explicit baseline value as shown in equation (1):

$$R^2 = 0.64, p < 0.01 \quad (1)$$

This mathematical architecture establishes that prolonged algorithmic exposure directly triggers automated impulsive buying mechanics among modern consumers.

V. DISCUSSION

The results clearly demonstrate that physical storefronts are losing market share not because their products are inherently inferior, but because their convenience ecosystem cannot compete with digital automation.

However, an emerging counter-trend shows that consumer fatigue with delayed shipping and complex returns is creating an opening for a "Phygital" retail experience. As seen in recent regulatory frameworks, regional market models that integrate immediate hyper-local routing—allowing consumers to order online but receive fulfillment via a local showroom within hours—show a high potential for sustainable retail recovery.

VI. CONCLUSION & RECOMMENDATIONS

The traditional binary divide between purely digital and purely physical commerce is obsolete. For local brick-and-mortar merchants to survive, they must adopt lean digital extensions.

- 1) **Hyper-Local Digital Integration:** Local shops should leverage zero-inventory digital catalogues via WhatsApp Business or localized delivery aggregates to capture regional digital demand.
- 2) **Experiential Value Generation:** Physical locations must pivot toward customer service elements that e-commerce cannot replicate, such as live product consultations, instant personalization, and immediate, zero-friction returns.
- 3) **Policy Interventions:** Governments should actively enforce anti-monopoly digital vendor guidelines to protect small MSMEs from predatory pricing by multi-national platforms.

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