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Analysis of E-commerce growth and its influence on traditional retail businesses in India

¹Sakshi Mishra and ²Dr. Chandra Bhushan Dubey

¹Research Scholar, Mahakaushal University, Jabalpur, Madhya Pradesh, India

²Professor, Department of Commerce, Mahakaushal University, Jabalpur, Madhya Pradesh, India

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Corresponding Author: Sakshi Mishra

Abstract

E-Commerce refers to the practice of doing business via the use of electronic means of communication such as the Internet, fax machines, electronic data interchange, electronic payment systems, interconnection, and system telephones. There are still significant obstacles to overcome before e-commerce can be a benefit to regular people in India, but many businesses, groups, and communities are starting to seize the opportunities presented by the IT Act 2000 and the legal system. how online shopping has affected mom-and-pop stores in India. An exhaustive analysis of current tendencies in online shopping. Additionally, it looks at how 15 distinct small retail sellers in retail sector fared financially as a result of retail e-commerce and online buying. To find out if there was a significant difference in these small vendors' sales revenues between 2015 and 2023, we employed the paired samples t-test. As a result of consumers' overwhelming preference for online purchasing, the test reveals that sales income for the chosen 15 small retail merchants have dropped significantly.

Keywords: E-Commerce, Traditional, Retail, Businesses, and India

Introduction

Traditional retail landscapes throughout the world have been transformed by the emergence of e-commerce and the Internet, which have altered company operations. Academic research and policy debates have centered on the significant effects that internet shopping has on conventional brick-and-mortar stores, as more and more people choose to do their shopping online. By looking at the economic, social, and regulatory aspects of e-commerce, this study aims to provide a thorough evaluation of the many ways it has affected conventional retail.

By changing the dynamics of conventional retail and providing new channels for companies to communicate with customers, e-commerce has shaken up the retail sector throughout the world. The intersection of fast expanding internet access, broad use of mobile technologies, and rising customer demand for price and convenience has made this shift especially significant in emerging nations. E-commerce has several benefits, such as reaching underserved areas, offering competitive prices, and offering a wider assortment

of products. Online marketplaces have the ability to fill holes in more conventional markets, as shown by platforms like as Amazon and Flipkart in India, Alibaba in China, and Jumia in Africa. The adoption of e-commerce in emerging economies surged, outpacing that in wealthy countries on an annual basis.

As an example, the Indian e-commerce sector was worth \$38.5 billion in 2017, expanding at a CAGR of 34% from 2009 to 2017. In a similar vein, e-commerce in China, propelled by behemoths like Alibaba, comprised approximately 23% of overall retail sales during that time. For many emerging nations, conventional retailing is the backbone of business, yet this fast expansion has presented challenges to it. The need to adjust to shifting customer expectations, more pricing competition, and falling foot traffic have all been challenges for traditional brick-and-mortar stores. The conventional retail scene in these areas is dominated by small and medium-sized businesses (SMEs), but they frequently don't have what it takes to compete with the big boys when it comes to online marketplaces.

Online shopping's double-edged sword on brick-and-mortar stores in emerging markets. It takes a look at the factors that have contributed to the expansion of online shopping, the difficulties faced by brick-and-mortar stores, and the potential for both sectors to thrive in tandem. This study uses data analysis and case studies to show how emerging markets may benefit from e-commerce while keeping the best parts of brick-and-mortar stores. Online shopping has rapidly grown in importance in modern Indian culture. Being prepared to use e-commerce platforms is more of a need than a luxury for the majority of individuals, especially those living in cities. Nearly three billion people use the internet nowadays; 259.14 million of those people live in India and have access to both the internet and broadband. This perforation of internet paired with the expanding trust of the internet users to acquire on line.

With more and more people signing up for e-commerce websites and making purchases via mobile phones, this causes the e-commerce sector to boom. The growth and development of the e-commerce industry are very likely to take place in India. In the next years, the analysis predicts that the established e-commerce economies of Japan, South Korea, and Australia would see compound yearly growth rates ranging from 11% to 12%. The corresponding growth rates in the fast-expanding markets of India and China will be 57% and 25%, respectively. Additionally, the research emphasizes the booming e-commerce industries in China and its nearby regions, where the industry is expected to reach over \$350 billion by 2023, thanks to compound annual growth rates above 20%. The Internet and Mobile Association of India (IMAI) predicted that by 2015, the e-commerce industry in India would have grown by 37 percent, reaching \$20 billion.

Literature Review

Goel, et al. (2023) ^[1]. The purpose of this study is to examine, from an economic, social, and policy perspective, the many ways in which the expansion of online shopping has affected conventional retail establishments. By examining elements including market dynamics, pricing tactics, and customer behavior, the research will seek to understand the monetary ramifications for traditional and online businesses alike. It will also look at the societal effects, such as how retail and job trends have changed. In addition, the study will assess how taxes, regulatory frameworks, and competition laws have influenced both online and brick-and-mortar retail. Taking a holistic view, this research aims to shed light on the changing dynamics of e-commerce and conventional commerce, with the hope of informing policymakers and entrepreneurs with actionable advice.

Yadav, et al. (2024) ^[2]. The meteoric ascent of e-commerce has changed the global retail landscape, presenting opportunities and challenges for traditional brick-and-mortar shops. This essay takes a look at the impact of e-commerce on traditional retail via a comparative analysis, highlighting the pros and cons of each model. In contrast to traditional retail, which places an emphasis on personalized service and quick product availability, online shopping offers unparalleled convenience, accessibility, and affordability. The study investigates the effects of online shopping on consumer habits and how traditional companies are adapting

by using an omnichannel strategy that blends the online and offline worlds. Employment, supply chain management, and real estate utilization are some of the broader economic implications discussed in the research. This research provides a comprehensive understanding of the future of both traditional retail and e-commerce by analyzing case studies of merchants who have successfully navigated the shifting industry.

SONU, et al. (2023) ^[3]. Traditional retailers' reactions to the rise of internet purchasing. Due to the proliferation of online shopping and the success of e-commerce platforms, traditional brick-and-mortar stores are facing significant challenges. The study's overarching goal is to identify the factors that have contributed to the success or failure of traditional retailers in the face of the rise of internet shopping. By studying pertinent case studies, evaluating pertinent industry data, and researching pertinent literature, one may get a comprehensive understanding of how e-commerce has affected brick-and-mortar retail sales, consumer habits, operational efficiency, and market competitiveness. It goes further into how traditional shops are adjusting to the growth of internet shopping as well.

Ranjan, Shashank. (2024) ^[4]. The retail landscape in India has undeniably transformed due to the country's astronomical e-commerce expansion. With e-commerce platforms, consumers can shop from the comfort of their own homes and take advantage of a plethora of options-all at reasonable prices-and with unparalleled simplicity. This has caused a dramatic shift in customer behavior, leading to the decline of the brick-and-mortar store. This abstract takes a look at how the rise of online shopping has affected the conventional retail sector in India. It takes a look at the challenges faced by brick-and-mortar retailers when trying to compete with internet giants, such as their limited reach, higher operational costs, and other issues. The article also delves into the benefits that conventional businesses may get from e-commerce, like expanding their customer base, reducing expenses, and streamlining operations. The abstract elaborates more on the strategies that traditional merchants may use to thrive in this novel setting. Achieving success requires the use of technology, a distinct in-store experience, a robust online presence, and the adoption of omnichannel methods. Exciting opportunities for innovation and customer-centric strategies exist in the Indian retail industry when e-commerce and traditional models are combined.

K K, Ramachandran et al. (2018) ^[5]. The Indian e-commerce market is growing at a dizzying pace. It is anticipated to surpass the US e-commerce sector and has seen a significant surge in popularity. One possible explanation for the meteoric rise of India's e-commerce sector is the country's rapidly expanding internet infrastructure, which is anticipated to add 829 million internet users by 2021, up from 445.96 million in 2017. As far as online shopping marketplaces go, India is now considered to be among the most promising. This study aims to compare traditional brick-and-mortar stores with online marketplaces based on various factors that influence consumers' decision-making process when making purchases, including product availability, product selection, privacy and confidentiality, data security, network reliability, and product authenticity.

Research Methodology

We gathered original data on the sales revenues of fifteen small offline sellers over two years, 2015 and 2023, to find out this influence. We chose 2015 as our comparative year since that's when internet buying in India really took off. Six of the fifteen brick-and-mortar stores sold groceries, three sold ready-made clothing, three sold shoes, and three sold electronics, mostly mobile phones.

Researchers have used the paired samples t-test, which is also called the repeated measures t-test, to find out whether there is a statistically significant difference in the income that merchants made before and after the rise of online shopping. For the purpose of verifying the structure and kind of graphs used in data analysis, secondary data of a similar nature has been consulted.

Data for additional interpretation and analysis is also culled from a number of other accredited banks and sources, as well as from a number of scholars. Both descriptive and exploratory methods are used in the investigation. Specifically, it describes the country's literacy rate in respect to the specified metric.

Data Analysis

Table 1: India's share in total world retail e-commerce

Rank (2023)	Country	Share in Total World Retail e-commerce
1	China	52%
2	Usa	19%
3	Uk	4.8%
4	Japan	3%
5	South Korea	2.5%
6	Germany	2.1%
7	France	1.6%
8	India	1.4%
9	Canada	1.3%
10	Spain	0.72%
11	Others	12%
12	Total	100%

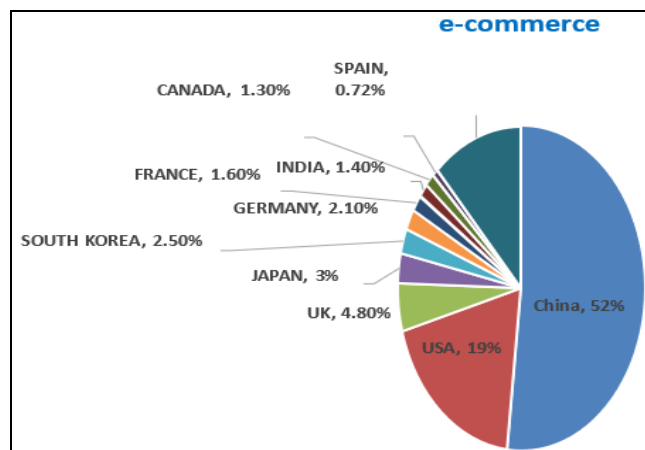


Fig 1: Share of Countries in Total World Retail

With 52% of the global retail e-commerce market in 2023, China was clearly the leader. At 19% and 4.8%, respectively, the United States and the United Kingdom followed. Just 1.4% of all retail e-commerce transactions occurred in India.

Table 2: India's retail e-commerce market

1.	Size of Total Retail Market in India	\$ 850 billion
2.	Size of Online (e-commerce) Retail Market in India	\$ 58 billion
3.	The proportion of online shopping (e-commerce) in total retail shopping in India)	6.8%

As a whole, India's retail market was valued \$850 billion in 2023. There, the e-commerce retail market was only about \$58 billion. As a result, only 6.8% of all retail sales in India occurred via internet channels. Traditional channels, such as small and medium vendors, accounted for 81.5% of all retail sales in 2022. Organized Bricks and Mortar (B&M) stores, such as brand showrooms, received 12% of the retail market. The percentage of retail sales accounted for by online media is a meager 6.5%.

Table 3: Category-Wise Share Across Channels

	Overall Size of Retail Market (USD Billion)	Share Of Channels (%)		
		Traditional Shops	Organized Bricks and Mortar	Online
Food & Grocery	528.7	93.7%	4.9%	1.49%
Apparel And Accessories	65.6	56.3%	23.7%	20%
Footwear	11.3	51.9%	26.1%	22%
Mobile	31.3	26.6%	18.4%	55%
Consumer Durables and Appliances	27.6	58.7%	23.6%	17.6%
Jewelry And Watches	71.9	59.8%	39.6%	0.6%
Beauty & Personal Care	16.7	72.3%	18.3%	9.4%
Furniture	30.1	79.1%	13.6%	7.3%
Pharmacy	29.3	81.5%	13.2%	5.3%
Others	24.2	79.9%	16.9%	3.2%
Total	835.9	81.5%	12%	6.5%

Mobile phones, shoes, clothing, and accessories, as well as cosmetics and personal care goods, were the most popular product categories for online shopping in 2022. Online purchases accounted for 55% of all mobile phone sales that

year. Footwear came in second, accounting for 22% of total sales. Similarly, 20% of the clothing and accessories that were swapped were purchased online.



Fig 2: Total Online Shoppers in India

The overall amount of people who buy things online has been rising steadily over the last few years. In 2019, 105 million people shopped online; in 2020, 140 million; and in 2021, 185 million. There was a dramatic increase to 270 million in 2022. The projection for 2027 indicates that it will probably hit 425 million.

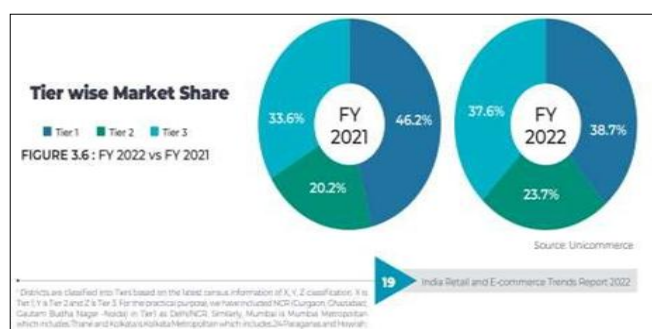


Fig 3: Tier-Wise Market Share

Tier-2 and tier-3 cities had a rise in their market share for online purchasing in FY 2022 compared to FY 2021. In 2021, tier-1 cities accounted for 46.2% of the country's total internet buying, tier-2 cities for 20.2%, and tier-3 cities for 33.6%. But in 2022, tier-2 and tier-3 cities' proportion of total internet shopping rose to 37.6% and 23.7%, respectively, while tier-1 cities' proportion fell to 38.7%.

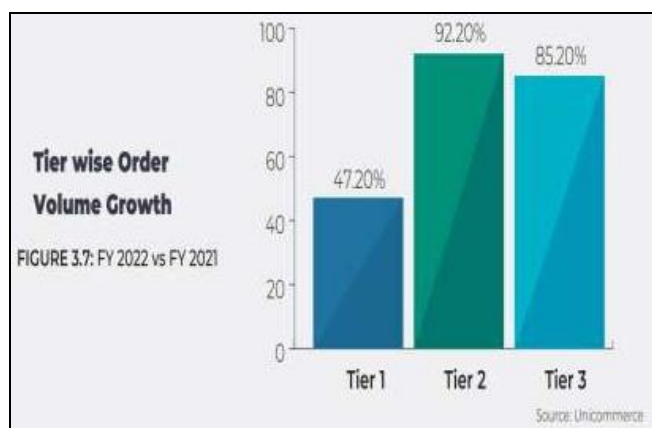


Fig 4: Tier Wise Order Volume Growth

Online orders increased at a faster rate in tier-2 and tier-3 cities between 2021 and 2022, as seen in the data above. In tier-2 cities, order volumes increased by 92.20%, while in tier-3 cities, they increased by 85.20%. Tier-1 cities have also had a growth rate of 47.20 percent over this period.

Table 4: Total Revenues and Annual Growth in Leading E-commerce Companies in India

Name of the retail e-commerce company	Total Sales Revenues (2022)	Annual Growth (FY 2021 to 2022)
Flipkart	₹ 56,013 crore	9%
Amazon India	₹ 21,633 crore	32%
Ajio.com	₹ 17,907 crore	6.2%
Snapdeal	₹ 540 crore	14%

Some of the most prominent Indian e-commerce platforms are Flipkart, Amazon, Ajio, and Snapdeal. In 2022, the total sales income for Flipkart, Amazon, Ajio, and Snapdeal was 56,013 crores, 21,633 crores, and 540 crores, respectively. Flipkart grew by 9% per year, Amazon by 32%, Ajio by 6.2%, and Snapdeal by 14%.

Table 5: Profitability of retail e-commerce companies in India

Name of the retail e-commerce company	Net Losses (2022)
Flipkart	₹ 4,834 crore
Amazon India	₹ 3,649 crore
Ajio.com	₹ 2,400 (Profit)
Snapdeal	₹ 510.3 crore

From the statistics shown above, it is clear that the majority of retail e-commerce enterprises are losing a lot of money. Every business in 2022 lost money, with the exception of Ajio.com. In 2022, Ajio.com earned 2400 rupees. In contrast, Snapdeal lost 510.3 crore rupees in 2022, Amazon India lost 3649 crore rupees, and Flipkart lost 4,834 crore rupees. These retail e-commerce enterprises have seen tremendous income and sales growth, which is the major reason they have been able to stay in business despite massive losses. "Short-term pain for long-term gain" is a common way to characterize this business approach. Sales and revenues for these businesses are growing at a rapid pace, which bodes well for their eventual profitability.

Impact of Retail E-commerce on Small Retail Vendors

This study's overarching goal is to ascertain how retail e-commerce giants have affected the bottom lines of mom-and-pop stores. Between 2015 and 2022, we gathered the main data on the sales income of fifteen small vendors in the western area. Among these fifteen merchants, six catered to groceries, three to ready-made garments, three to footwear, and three to electronics, with a focus on mobile phones. Online buying has been more popular, particularly in India, since 2015. To get a sense of how retail e-commerce has affected small vendors' sales and income, it is helpful to compare their earnings between 2015 and 2023. Researchers have used the paired samples t-test, which is also called the repeated measures t-test, to find out whether there is a statistically significant difference in the income that merchants made before and after the rise of online shopping.

Table 6: t-Test: Paired Two Sample for Means

	Sales Revenues	Sales Revenue
	RS. LAKHS (2015)	RS. LAKHS (2023)
Mean	14.13333333	12.7
Variance	41.83809524	47.70714286
Observations	15	15
Pearson Correlation	0.945850448	
Hypothesized Mean Difference	0	
df	14	
t Stat	2.474957394	
P(T<=t) one-tail	0.013363868	
t Critical one-tail	1.761310136	
P(T<=t) two-tail	0.026727735	
t Critical two-tail	2.144786688	

There are a number of reasons why more and more people are choosing to purchase online rather than at a physical store. Key factors are as follows

Convenience: The ease of internet buying is a major draw for many consumers. Online shopping eliminates the need for customers to leave the comfort of their own homes to peruse product offerings and make purchases.

24/7 Availability: Customers have the freedom to buy at their convenience, since online retailers are open around the clock. Those with odd work schedules or hectic schedules will appreciate this flexibility even more.

Diverse Product Range: In comparison to traditional brick-and-mortar shops, online marketplaces often have a much broader selection of items. There is a plethora of brands, styles, and alternatives accessible to customers, often surpassing what is found in nearby shops.

Price Comparison: Customers may quickly compare costs across multiple platforms when they purchase online. Shoppers are able to save money in the long run because to this openness, which allows them to discover the greatest bargains and discounts.

Product Information and Reviews: Reviews and ratings, as well as extensive product information, are readily available to online buyers. They are able to learn from the mistakes of previous buyers and make better judgments using this data.

Conclusion

Traditional retail firms in emerging nations are facing new difficulties and possibilities brought about by the advent of e-commerce. Problems with the digital divide, logistical inefficiencies, and the need for access to technology and digital abilities are some of the issues that traditional merchants encounter. But chances abound for them to flourish in this digitally transformed world. Traditional stores may expand their customer base via omnichannel tactics, collaborations with e-commerce platforms, and targeting certain niche markets. Businesses are being motivated to innovate and provide a diverse selection of goods and services online by the rising number of high-speed internet customers. Consumers in India are slowly but surely moving their spending habits online, dispelling the

myth that buying goods over the internet is inherently risky, thanks to the many advancements in the security of online payment systems in recent years. Some of the most promising market categories right now include consumer electronics, internet travel, and fashion and accessories. Grocery retailers are also expanding their online presence in the nation, offering same-day delivery as an additional service. The e-services area of India's e-commerce business is thriving, thanks to the country's rapidly expanding online travel market. This is the go-to place for booking hotels, plane tickets, and train and bus itineraries.

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