

## THE ROLE OF TECHNOLOGY IN TRANSFORMING THE RETAIL INDUSTRY

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### ABSTRACT

Digitalization, widespread smartphone use, and improved internet access in rural areas have all contributed to the retail sector's fast digital transformation in India. In addition, the government of India has created a flagship initiative called Digital India to make the nation more technologically advanced. The Indian retail industry has seen rapid expansion in recent years, with several new entrants. Customers like it when their questions can be answered whenever they send them in. The advent of AI-based solutions has paved the way for round-the-clock availability of helpful customer assistance.

**KEYWORDS** Retail ,Industry, Technology, customer

### INTRODUCTION

Businesses that sell products and services directly to end users for noncommercial purposes are classified as retailers. It's a huge and varied industry that has a major impact on economies all around the globe. There is a wide spectrum of retailers, from mom-and-pop stores to conglomerates with thousands of stores worldwide. The retail sector is in a perpetual state of flux due to factors such as technology development, changing customer preferences, and competitive market pressures. This historical perspective paves the way for further investigation into the impact of technology on the evolution of the retail sector. It would be impossible to exaggerate the value of technology in the retail sector. Marketplaces and bazaars were early examples of retail, dating back hundreds of years. Urbanization, industrialisation, and technical developments are only a few of the variables that have shaped the sector throughout time. Consumption, together with retail's contributions to employment and GDP growth, makes it an essential economic sector. It connects manufacturers with buyers, increasing the accessibility of products and services.

Depending on their wares, customer base, and business model, stores fall into one of many broad categories. Department stores, supermarkets, specialty shops, corner stores, 24-hour convenience stores, and internet merchants are all examples of popular formats. In today's saturated retail industry, merchants may gain an advantage with the use of technology. By embracing new technology, stores may stand out from the competition, boost productivity, save costs, and adapt quickly to changing consumer tastes. In today's highly competitive retail environment, shoppers are more inclined to shop at forward-thinking stores that are also technologically advanced.

### DIGITAL TECHNOLOGY TRENDS IN THE FOOD RETAIL SECTOR

Customers in most high-income countries now have more options for how they can order and acquire food and meals based on their preferences, income, and time constraints thanks to digital technologies, which are reshaping the in-store, restaurant, and online food and beverage retail environments (FMI and Kurt Salmon, 2017). People can shop for groceries at conventional supermarkets, dine in at chain or independent restaurants, buy food from micro food halls with communal dining spaces, learn about healthy cooking in test kitchens, and pick up takeout orders at drive-through windows. Online food delivery (OFD) services and autonomous cars allow customers to have groceries, meal kits, take-out, and takeout food sent straight to their door or workplace.

Australia, Canada, China, Germany, Hong Kong, India, the United Kingdom, and the United States are just some of the places where you may find a global chain restaurant or food store that has digitized its ordering and payment processes to provide a seamless in-store and online shopping experience. Customers may place more efficient food and grocery orders using self-service kiosks and digital touchscreens, efficient, and cashless manner enabled by digital technology (Barrett, 2019; Episerver, 2019). These systems verify a customer's identity with facial- or voice-recognition software, save their payment preferences and order history, and charge their credit card on file in the cloud whenever they make a purchase.

Online food delivery (OFD) and e-commerce are practices used by international fast food chains like McDonald's, Subway, and KFC, as well as major international retailers like Amazon, Costco, and Walmart. Computers, digital and mobile applications (apps), 4G and 5G wireless networks, and online security systems are just some of the digital technologies that restaurants are employing to become more efficient and better engage with their consumers (DiPietro, 2017). Restaurants are automating, predicting, and personalizing consumer decisions using PDAs like Apple's Siri and Amazon's Alexa based on demographics like age, gender, mood, order history, time of day, weather, and most-purchased goods.

## **TOOLS FOR DIGITAL TRANSFORMATION IN THE RETAIL INDUSTRY**

### **Artificial Intelligence**

Customers like it when questions submitted at odd hours are answered promptly. With the help of AI, businesses can provide around-the-clock support to their customers. The finest examples of this are chatbots powered by artificial intelligence, which can respond instantly to consumer communications and answer their questions. In order to pay for conversions and drive new sales, chatbots are a low-cost, rapid response service solution. Moreover, chatbots provide pre-programmed responses to users' inquiries that are in keeping with the brand's tone of voice. Chatbots, in contrast to human agents, will never grow annoyed by a customer's inquiries and will continue to politely answer them until the interaction ends.

### **Machine Learning and Predictive Analysis**

By assisting stores in understanding and anticipating their customers' needs, machine learning helps to fortify the connection between the two parties. Collecting data from a variety of sources and feeding it into machine learning models to predict future events is the field of study known as machine learning.

### **Unified Commerce**

Customers want shops to be available to them regardless of the channel they choose to buy on, including desktop computers, mobile phones, tablets, social media platforms, etc. This is why many stores are adopting unified trading strategies, which allow for centralized management of all of a company's operational procedures. Different techniques have been employed to handle their commercial needs prior to the introduction of the idea of unified commerce. Reconciling data from several sources is time-consuming and taxing on available resources. Data storage should be made public and data from many sources should be merged into a single commerce system to ensure the continued security and completeness of all stored information.

## **LITERATURE REVIEW**

**Fernando Diogo Gouveia et.al (2022)** The task of digital transformation is difficult for many SMEs to embrace. The issue is not a lack of resources, but rather an inefficiency in approach. Many digital transformation initiatives, it is widely believed, either fail or fall short of their goals because of the approach they used. A company's whole business model may need to be rethought as a result of the digital transformation process, therefore it must not be seen as just a development of technology. This paper proposes a conceptual model for the digital transformation of retail SMEs and details the steps necessary to develop a prototype script that may help these businesses decide on the most suitable digital approach. The prototype has been tested by applying it to a real-world scenario of a business process in a retail SME.

**Rana Mostaghel et.al (2022)** Scholars in the field of marketing have taken notice of the rapidly growing retail sector, particularly in light of the innovations and real-world applications made possible by the widespread use of digital technologies. The Covid-19 crisis has significantly accelerated the pace of development. Through a comprehensive literature review, this study aims to: (1) learn about the unique characteristics of digitalization-enabled retail business model innovation; (2) learn about how digitalization influences changes to the dimensions of retail business model innovation; and (3) identify the areas for future research concerning retail business model innovation. A total of 170 articles were selected using criteria from four different sources. The leading scholars, papers, and subjects were meticulously identified using bibliometric and network analysis and visualization. In the end, the findings exposed the gaps in this line of inquiry. Implications for theory and management are discussed in the last section.

**Jong Woo Kang (2021)**As a result of technical advancements, the B2C (business-to-consumer) online shopping scene is developing at a lightning pace. Its widespread adoption, however, remains

confined to industrialized and major countries, leading to the emergence of a digital gap that leaves SMEs and the economically marginalized out in the cold. The pandemic of coronavirus illness (COVID-19) brought to light the critical need to bridge gaps in communication and cooperation within and across nations. Examining the significance of technology adoption in B2C sales online, this research examines the discrepancies in B2C online commerce revenues across selected Asian nations. The research examines, experimentally, the potential drivers of B2C online commerce growth using proprietary panel data to assure comparability of B2C e-commerce across nations and years. This study sheds light on the importance of internet access and speed, online security, and financial inclusion in supporting e-commerce, and hence should be read by policymakers and company owners alike. Adapting business-to-consumer (B2C) e-commerce to the post-COVID-19 world and guaranteeing that innovations offer opportunities for everybody need governments to take these factors into account when constructing an enabling environment.

**Dr. Prodhuturi Venkata Vijay kumar et.al (2016)** The retail industry is under increasing pressure to innovate in order to keep existing customers and attract new ones, thanks to the proliferation of new technologies and the growing need for engaging and immersive shopping experiences. Tools for enabling the creation of novel systems with the potential to improve this procedure may be found, in particular, via the use of virtual approaches. The focus of this article is on how retailers may better incorporate customer feedback into their innovation and technological development strategies. Our research shows that technological advancements may be a powerful instrument for fostering originality in the retail sector.

**Achit Agarwal et.al (2015)** In recent years, life as an Indian customer has become more enriched, from instantaneous access to product information with a link to a detailed process map to a last-minute courier/postal warning. Consumers' increased confidence in online transactions is a significant achievement for India's retail sector. This is the result of a thoughtfully crafted delivery logistics system that makes use of cutting-edge technology to provide customers an unprecedented degree of service. Because of this, e-retailing reform in India has attracted greater investment in technology-driven R&D, which will allow Indian customers to have a super-rich experience. The effect of technology is shown in the turnaround performance of some industries. In this research, we will try to disentangle these recent advancements in E-commerce's product distribution system. Goals also include drawing attention to problematic aspects of e-commerce prior to the rise of the Internet and outlining potential solutions for the future.

### **RESEARCH METHODOLOGY**

A research technique is a planned strategy for resolving a research issue. To identify the reasoning behind anything, researchers may use a variety of methods. The plan, sample instruments, process of data collecting, and statistical approach utilized for data analysis are all laid out as well. Descriptive research technique was employed for this article since it best elucidates the nature of the population's data and the phenomena to be studied. An online survey was conducted amongst customers who are keen consumers and often shop, and responses were obtained using a straightforward sample approach. This study covers the whole of India. Using bar graphs and pie charts, we were able to analyze and comprehend the data.

### **DATA ANALYSIS**

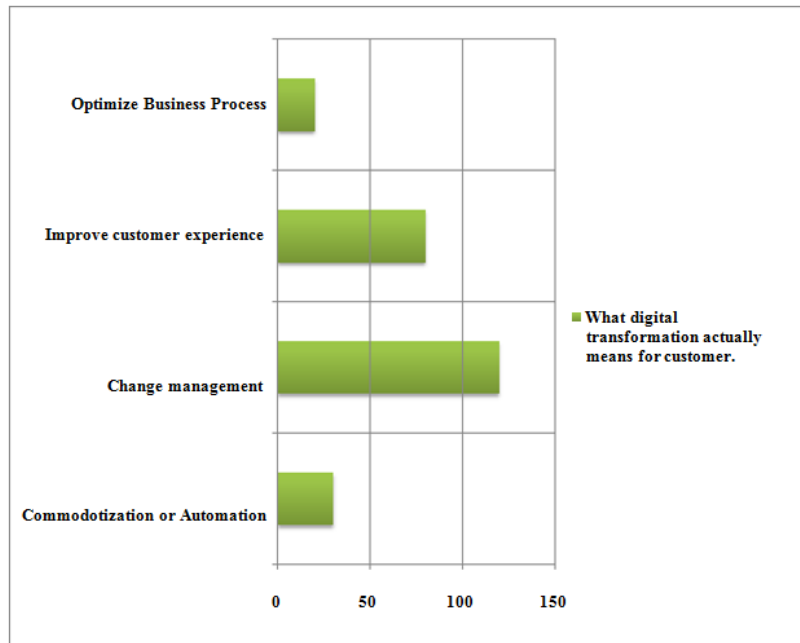
Useful for analyzing and understanding data Customers were surveyed online to acquire primary data. The researcher has also read the relevant journals and reports for secondary data. Here are some of the inquiries we have with our clients.

### **Demographic Profile of Respondent**

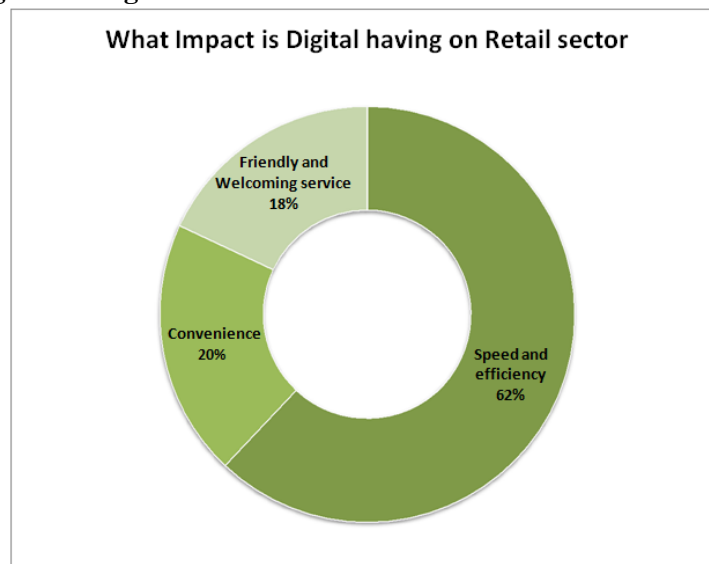
**Table 1 Demographic Profile of Respondent.**

Characteristics	Distribution	Frequency	Percentage
Gender	Male	140	56%
	Female	110	44%
Age	18-25	110	44%
	25-35	70	28%
	35-45	50	20%
	45 and above	20	8%
Occupation	Less than 5 lacs	70	28%
	5-10 lacs	105	42%
	10-15 lacs	55	22%
	15 lacs and above	20	8%
Annual Income	Student	60	24%
	Business	110	44%
	Unemployed	40	16%
	Service	40	16%

**What digital transformation actually means for customer**



**Fig.1 Showing Digital transformation actually means for customer**  
**What Impact is digital having on retailsector?**



**Fig.2 showing that the Impact is digital having on retail sector**

As can be seen in fig.2, the top three ways in which consumers perceive digital technology to have affected the retail industry are speed and efficiency (62%), convenience (20%), and friendliness and hospitality (18%). Customers want faster and more convenient shopping experiences, which may be realized with the aid of digitalization.

#### **Impact of Digital Transformation on Retail Sector**

Retailers' ability to adopt new business models thanks to digital transformation will improve the shopping experience for consumers in the years to come. Because of this, e-commerce has boomed, and the advent of digital transformation has aided stores in standing out from the competition and offering superior customer service. Companies may now more easily package and sell services in addition to their goods thanks to data insights. When it comes to retaining customers, digital transformation in retail is the key to success. The use of big data analytics, LBS, and mobile applications has brought about a revolutionary change in the retail industry. It takes time to transition an organization into a digital one, with one effort laying the groundwork for the next and having a ripple effect on other parts of the business. To put it simply, digital transformation in retail entails using digital tools and creating new procedures to learn about and satisfy consumers' needs

and wants as efficiently as feasible. Cross-channel advertising, social media participation, in-store shipping, a dedicated mobile app, and loyalty programs are just a few examples of the changes that have taken place throughout the years.

## CONCLUSION

Complexity and fragmentation stifle innovation and agility in any sector. One of the most obvious outcomes of digitization is the replacement of traditional retail with online marketplaces. Consumers are more reliant than ever on their smartphones, PCs, and other digital entertainment options. Not only that, but the Indian economy has also seen a shift in consumer preferences. The consumer market is booming, and businesses in the food, fashion, and beverage sectors are benefiting as their customers want more high-end products. Through streamlined business processes, automation, and increased efficiency, digitalization is streamlining the backbone of today's enterprises. As a result, stores are making smart investments in areas like cloud-based AI, digital marketing, internet-connected "smart" devices, and chatbots.

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