

# **A Study on Trends and Transformations in the Retail Industry Across the Globe**

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**Abstract-** In recent years, there is a sea change in the Retail Sector all over the globe in terms of several trends and transformations. Digital Transformation (DX) is a global phenomenon across many industry sectors. It is very important to Retail, where operators are constantly looking to optimize business processes and service delivery. Retail digital transformation is the infusion of technology in the retail industry to enhance operational efficiency, improve customer experience and drive growth. Retail digital transformation includes POS systems, personalized shopping experiences, self-checkout systems, cost optimization, VR showrooms, branded mobile apps, geofencing, and AI-powered product recommendations (<https://whatfix.com>). This research paper aims to explore the technological advancements that have the most significant impact on digital transformation; to describe how they interact with businesses; to understand the Trends and Transformations in The Retail Industry, specifically taking an Indian and global perspectives. Besides, investigate how these Trends and Transformations can be considered as the key to developing retail penetration across the Globe, further, we seek to understand the impact of digital transformations on organizational performance, customer satisfaction, and overall business success and also revealed that to remain competitive in today's economy, retailers must transform their operations based on modern Trends and Transformations, like AI, IoT, and data analytics and the likes to optimize everything from personalized marketing to supply chain management, including developing communication relationships with consumers, digital marketing technologies.

**Keywords:** Digital Transformation (DX), Artificial Intelligence (AI), Internet of Things (IoT), Self-Checkout Systems, Personalized Marketing, Augmented Reality (AR)

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## 1. INTRODUCTION

The retail industry is one of the biggest employers in the world. In India, it is the second largest employment provider after agriculture. The retail sector has been growing very fast with several national and international associations. Even large-scale business enterprises have also been entering into retailing activity. It has employed millions of the unemployed and is expected to generate more jobs in the future. Globally, retail e-commerce sales are projected to surpass USD 8 trillion by 2027, driven by omnichannel and AI adoption. In India, the retail sector is expected to reach USD 1.8 trillion by 2030, with rapid growth in e-retail and Direct-to-Consumer (D2C) models. Indian retailers are investing heavily in digital logistics platforms and hyperlocal delivery services to meet consumer expectations. By the end of 2023, total retail sales reached 7.24 trillion U.S. dollars, around one and half a billion U.S. dollar increase from the year before. Retail Industry Market size was valued at USD 21237.64 Billion in 2022 and is projected to reach USD 41368.44 Billion by 2030. India's retail industry is projected to grow at a slower pace of 9% over 2019-2030, from US\$ 779 billion in 2019 to US\$ 1,407 billion by 2026 and more than US\$ 1.8 trillion by 2030. In recent years, there is a sea change in the Retail Sector all over the globe in term of several trends and transformations. Digital Transformation (DX) is a global phenomenon across many industry sectors. It is very important to Retail. Large enterprises are introducing modern digital tools that, in one way or another, influence consumers' willingness to make purchases. The construction of such infrastructure provides links and covers all types and forms of connections between production, distribution, exchange and consumption. An important element is the creation of retail formats: conventional store-based trade, trade in open markets, i.e., offline retail, and e-commerce-online and mixed; the proliferation of such forms affects both the speed of digital development and the way individual businesses respond to certain environmental events (Shtal, T et al 2023). Hence, an attempt is made to study the Trends and Transformations in The Retail Industry Across the Globe with the main objectives are to explore the technological advancements that have the most significant impact on digital transformation, and describe how they interact with businesses; to understand the Trends and Transformations in The Retail Industry, specifically taking an Indian and global perspectives; to investigate how these Trends and Transformations can be considered as the key to developing retail penetration across the Globe, further, we seek to understand the impact of digital transformations on organizational performance, customer satisfaction, and overall business success

## 2. THE CONCEPT:

*Any organization selling to final consumers whether it is a manufacturer, wholesaler or retailer is doing retailing. It does not matter how the goods or services are sold (by person, mail, telephone, vending machine or internet or where there are sold, in a store, on the street or in the consumers home)'. The North American Industry Classification System, 'Retail may be understood as the final step in the distribution of merchandise for consumption by the end consumers and first point of customer contract'. Retailing encompasses various aspects such as Customer Relationship, followed by Business Intelligence; Work Flow; Enterprise Resource Planning. The functions of the retailing can be categorized as Sorting: Breaking Bulk: Holding Stock: Additional Services: Changing Nature of Retailing; Channel of Communication and Transport and Advertising.*

Microsoft defines digital transformation as "The realignment of or investment in new technology, business models, and processes to drive value for customers and employees and more effectively compete in an ever-changing digital economy". Digital transformation isn't based on just one industry; it applies to every industry that is marginally touched by the evolution of technology(<https://www.krishaweb.com>). Artificial intelligence is a field of science concerned with building computers and machines that can reason, learn, and act in a way that would normally require human intelligence or involve data whose scale exceeds what humans can analyse. AI is a broad field that encompasses many different disciplines, including computer science, data analytics and statistics, hardware and software engineering, linguistics, neuroscience, and even philosophy and psychology. On an operational level for business use, AI is a set of technologies that are based primarily on machine learning and deep learning, used for data analytics, predictions and forecasting, object categorization, natural language processing, recommendations, intelligent data retrieval, and more(<https://cloud.google.com>). Artificial intelligence (AI) enables computers and machines to simulate human learning, comprehension, problem-solving, decision-making, creativity, and autonomy (<https://www.ibm.com>).

The global Internet of Things in retail market size was estimated at USD 52.42 billion in 2023 and is projected to grow at a CAGR of 29.3% from 2024 to 2030. The surge of omnichannel retailing, propelled by IoT technologies that seamlessly blend online and offline shopping channels, is driving the market growth. self-checkout systems, personalized marketing, Augmented reality (AR) (<https://www.grandviewresearch.com>). The Internet of Things (IoT) is a network of interrelated devices that are embedded with sensors, software, and network connectivity. IoT helps retailers in accessing large volumes of data without requiring human-to-computer or human-to-human interactions. Retail organizations are increasingly using Internet of Things (IoT) for customer experience optimization, asset management, operations management, and advertising & marketing. The retail sector is one of the largest sectors that have direct engagement with potential customers. Hence, a robust retail customer engagement strategy is important for continued success. Presently, retail stores are increasingly deploying advanced technologies such as cloud, RFID, beacons, smart shelves, and other connected technologies to improve shopping experiences for customers (<https://www.fortunebusinessinsights.com>).

### 3. REVIEW OF LITERATURE:

The retail industry has undergone significant transformations in recent years, driven by digital technologies such as Artificial Intelligence (AI), Internet of Things (IoT), blockchain, and data analytics. Recent literature highlights how these technologies are reshaping retail strategies, customer experiences, and supply chain management. Digital Transformation (DX) is a global phenomenon across many industry sectors. It is very important for retail, where operators are constantly looking to optimize business processes and service delivery (<https://www.fujitsu.com>). In the retail industry, Gen AI enables optimal sales, targeted marketing campaigns, and tailored product recommendations to the customers. While traditional technologies only facilitated cross-selling by recommending products, Gen AI has pushed the boundaries by harnessing customer data and helping customers discover relevant products. It empowers retailers to become well-suited to develop and deploy personalization. Gen AI takes data analytics to the next level. It can synthesize data across customer search patterns, stream unstructured data from purchasing systems in real time, and create best-in-class personalization (<https://www.wns.com>). Digital transformation in the retail sector integrates tech solutions like AI, IoT, and data analytics to optimize everything from personalized marketing to supply chain management. As consumer expectations shift toward convenience and personalization, a digital-first approach is essential for retailers to meet these demands and stay relevant (<https://multishoring.com>). food and beverages represent the largest segment in domestic retail trade. This statistic displays the value of the retail sector in Latin America in 2017 and forecasts thereof until 2022. In 2017, retail sales in the Latin American region amounted to almost 1.9 trillion U.S. dollars, and they were expected to reach 2.35 trillion by 2022. In 2022, the retail market in India was 836 billion U.S. dollars, down from 950 billion dollars recorded in 2018. By 2032, this value is expected to reach about two trillion U.S. dollars (<https://www.statista.com>). A Study on systematic review of omnichannel retailing has been conducted, emphasizing how AI and big data analytics enable seamless integration across online and offline channels. Their findings show that omnichannel strategies improve customer satisfaction and loyalty by offering consistent experiences across platforms (Kim & Cha (2025). Berisha Qehaja (2025) highlights the role of data analytics in achieving competitive advantage. Retailers leverage predictive analytics to forecast demand, optimize inventory, and personalize marketing campaigns. A review by Samuels (2025) outlines how digital supply chains are evolving with IoT, blockchain, and AI. These tools enhance transparency, traceability, and efficiency in retail logistics.

### 4. RETAIL INDUSTRY ABROAD: AN OVERVIEW

Global retail sales were projected to amount to around 32.8 trillion U.S. dollars by 2026, up from approximately 26.4 trillion U.S. dollars in 2021. The retail industry encompasses the journey of a good or service. This typically starts with the manufacturing of a product and ends with said product being purchased by a consumer from a retailer. Retail establishments come in many forms such as grocery stores, restaurants, and bookstores. In 2020, global retail sales fell by 2.9 percent as a result of the COVID-19 pandemic, bouncing back in 2021 with a growth of 9.7 percent Global retail sales were projected to amount to around 27.3 trillion U.S. dollars by 2022, up from approximately 23.7 trillion U.S. dollars in 2020 (<https://www.statista.com/>). By the end of 2023, total retail sales reached approximately 7.24 trillion U.S. dollars, around one and half a billion U.S. dollar increase from the year before. Retail Industry Market size was valued at USD 21237.64 Billion in 2022 and is projected to reach USD 41368.44 Billion by 2030, growing at a CAGR of 7.69%

from 2023 to 2030(<https://www.verifiedmarketresearch.com/>). Retail sales have steadily increased since 2009, as the economy recovered from the downward trend due to the recession following the 2007-2008 financial crisis, and most recently from the impact of the coronavirus (COVID-19) crisis. This statistic displays the percentage change in sales volume of the retail trade in European countries in 2023. At about seven and four percent, respectively, Luxembourg and Ireland had some of the highest rise in sales volume in 2023 compared to the previous year. That said, Turkey took the lead that year with a nearly 24 percent increase in retail trade sales volume. In 2023, the total retail trade sales volume index in the European Union stood at around 114. 2022 represents a peak in the total retail trade sales volume index in the European Union with about 116.5. The Japanese retail industry recorded around 163 trillion Japanese yen in sales in 2023, the highest value in the past 15 years. While non-food products constitute a significant share of the industry(<https://www.statista.com>). The retail market size has grown strongly in recent years. It will grow from \$28846.57 billion in 2023 to \$31310.6 billion in 2024 at a compound annual growth rate (CAGR) of 8.5% (<https://www.researchandmarkets.com>). In 2023, global retail e-commerce sales reached an estimated 5.8 trillion U.S. dollars. Projections indicate a 39 percent growth in this figure over the coming years, with expectations to surpass eight trillion dollars by 2027. In 2022, the global in-store or brick-and-mortar retail channel generated an estimated 20 trillion U.S. dollars in sales. Total retail sales (online and offline retail) worldwide amounted to around 25.8 trillion U.S. dollars that year. By 2026, it is estimated that the value of e-commerce retail sales will reach 9.4 trillion U.S. dollars on a global scale (<https://www.statista.com>). According to estimates, between 2021 and 2026, the fashion and apparel sector within the global retail industry is expected to grow at a CAGR of 8.7 per cent, making this the world's fastest-growing retail product category. Following fashion and apparel, electricals are forecast to be the second-fastest-growing product category based on CAGR. By 2027, the e-commerce retailer Amazon is forecast to be the leading retailer worldwide, just barely outdoing the Alibaba Group in terms of sales. Specifically, projections for 2027 show that the total chain retail sales of Amazon are going to reach a value of more than 1.18 trillion U.S. dollars. Walmart would rank fifth, generating an estimated 686 billion U.S. dollars in chain retail sales that year. Seven & I Holdings, the parent company of the 7-Eleven retail chain, had a total of over 40,000 retail stores in operation throughout the world in 2022. 7-Eleven are a chain of convenience stores that operates in many countries globally. That year, Seven & I had more retail stores than any of the world's other leading retail companies, such as Walmart, which had nearly 10,500 retail outlets or the Schwarz Group with some 13,750 stores (<https://www.statista.com>).

The world's top 10 Retailers in the world are 1. **Walmart. Bentonville, Arkansas, USA**, Annual revenue: \$534.7 billion. It began more than 50 years ago as a single discount store in Rogers, Arkansas. Today, there are more than 10,000 stores in 24 countries, and they have a significant eCommerce presence as well. The company has coined the phrase Everyday Low Prices (EDLP), and it is their mission to put pricing strategy first. They have also expanded to offer one-stop shopping in many of their stores with grocery, sporting goods, crafts, clothing, household goods, and more. This type of store offering is often called a hypermarket. Walmart also owns Sam's Club retail warehouses. 2. **Amazon. Seattle, Washington USA**, Annual revenue: \$321.8 billion, it was the brainchild of Jeff Bezos in 1994, and it was an online marketplace dedicated to selling books originally. Eventually, the company expanded and began selling just about anything and everything. Jeff Bezos has announced that he will be stepping down as CEO of the company he founded in 2021, but it's doubtful that this move will cause any financial harm to the retail giant. 3. **Costco Wholesale. Issaquah, Washington USA**, Annual revenue: \$160.9 billion. Costco is currently headquartered in Issaquah, Washington, but it got its start back in 1976 in San Diego, California. At the time, the company went by the name Price Club. The first actual Costco was opened in Seattle in 1983, and it was the first company to go from zero to \$3 billion in sales in less than six years. Today, you can buy just about anything at Costco. They are the world's largest retailers of choice and prime beef, organic foods, rotisserie chicken, and wine. 4. **Walgreens Co. Deerfield, Illinois, USA**, Annual revenue: \$138.7 billion. Walgreens began in Chicago, Illinois in 1901, and is still headquartered nearby in Deerfield. It's the second-largest pharmacy chain in the United States, and they sell much more than just prescription and over-the-counter medications. 5. **Kroger. Cincinnati, Ohio USA**, Annual revenue: \$126.6 billion, Bernard Kroger founded Kroger way back in 1883 in the same city where it is headquartered today. They are the largest supermarket by revenue in the United States and the fourth-largest private employer in this country. 6. **The Home Depot. Atlanta, Georgia USA**, Annual revenue: \$112.1 billion. It is the largest home improvement retailer in the United States. They offer everything from lumber to potted plants. It's one of the noted "big box" stores with a physical store footprint that's

quite impressive. Today, they operate in the United States, Guam, Puerto Rico, Canada, and Mexico. The company began in 1978 to build the biggest home improvement store around, which they did. 7. **JD & Co. , Beijing, China**, Annual revenue: \$86.4 billion. It is an electronic retailer. Today It has branched out from electronics and is now active in logistics, technology, overseas businesses, and insurance. 8. **Tesco, Welwyn Garden City, Hertfordshire, England**, Annual revenue: \$82.6 billion. 9. **Carrefour, Boulogne-Billancourt, France**, Annual revenue: \$81.1 billion. The first Carrefour shop opened in 1960 and was a partnership between Marcel Fournier, a novelties shop owner, and the Badin-Defforey family, who specialised in food wholesaling. By 1963, they opened the first hypermarket in France and offered a wide variety of products at low prices. By 1993, they were ready to expand internationally and opened their first stores in Italy and soon after in China. In 1999, after a merger, they became the second-largest retailer in the world, which made them quite ready to jump on the e-commerce bandwagon in 2000. By 2016, their e-commerce was taking off, and they announced several new international e-commerce ventures. The company is still, obviously, doing quite well. 10. **Target, Minneapolis, Minnesota , USA**, Annual revenue: \$80.1 billion. Target started as a discount division of the Dayton-Hudson Corporation in the 1960s. It wasn't until the 80s that the company began expanding, and in the 1990s, the Target brand got its foothold. Since then, the company has taken an interesting approach with a concept built on being trendy and an elevated option to discount. They had so much success that the parent company renamed itself the Target Corporation in 2000 and focused on this company branch. An early adopter of the e-commerce concept, they continued to see growth and success while other similar stores struggled ( <https://www.zippia.com/advice/largest-retailers/>)

### 5. RETAILING IN INDIA:

Indian retail industry has emerged as one of the most dynamic and fast-paced industries due to the entry of several new players. It accounts for over 10% of the country's gross domestic product (GDP) and around eight% of the employment. India is the world's fifth-largest global destination in the retail space. India ranked 73 in the United Nations Conference on Trade and Development's Business-to-Consumer (B2C) E-commerce Index 2019. India is the world's fifth-largest global destination in the retail space and ranked 63 in World Bank's Doing Business 2020. India is the world's fifth-largest global destination in the retail space. In FDI Confidence Index, India ranked 16 (after US, Canada, Germany, United Kingdom, China, Japan, France, Australia, Switzerland, and Italy). As per Kearney Research, India's retail industry is projected to grow at a slower pace of 9% over 2019-2030, from US\$ 779 billion in 2019 to US\$ 1,407 billion by 2026 and more than US\$ 1.8 trillion by 2030. Revenue of India's offline retailers, also known as brick-and-mortar (B&M) retailers, is expected to increase by Rs. 10,000-12,000 crore (US\$ 1.39-2.77 billion) in FY20. India's direct selling industry will be valued at US\$ 2.14 billion by the end of 2021.

According to the Retailers Association of India (RAI), the retail industry achieved 93% of pre-COVID sales in February 2021; consumer durables and quick service restaurants (QSR) increased by 15% and 18% respectively. After an unprecedented decline of 19% in the January-March 2020 quarter, the FMCG industry displayed signs of recovery in the July-September 2020 quarter with a y-o-y growth of 1.6%. The growth witnessed in the fast-moving consumer goods (FMCG) sector was also a reflection of positivity recorded in the overall macroeconomic scenario amid the opening of the economy and easing of lockdown restrictions. E-retail has been a boon during the pandemic and according to a report by Bain & Company in association with Flipkart 'How India Shops Online 2021' the e-retail market is expected to grow to US\$ 120-140 billion by FY26, increasing at approximately 25-30% p.a. over the next 5 years. India has the third-highest number of e-retail shoppers (only behind China, the US). The new-age logistics players are expected to deliver 2.5 billion Direct-to-Consumer (D2C) shipments by 2030. The Ayurveda Company (TAC), a direct-to-consumer (D2C) beauty and wellness brand, has raised US\$ 3 million from Wipro Consumer Care Ventures, to expand its production capabilities and enter the retail sector. Online used car transaction penetration is expected to grow by 9x in the next 10 years. During the festival period in 2020, Amazon, Flipkart and various vertical players sold goods worth US\$ 9 billion despite the pandemic onslaught.

Retail tech companies supporting the retail sector with services such as digital ledgers, inventory management, payments solutions, and tools for logistics and fulfilment are taking off in India. In the first nine months of 2021, investors pumped in US\$ 843 million into 200 small and mid-sized retail technology companies, which is an additional 260% of capital compared to the entire 2020. In March 2022, Reliance Brands has bought the India franchisee rights and the current Sunglass Hut retail network from DLF Brands. DLF would invest about Rs. 2,000 crore (US\$ 262.2 million) in Gurugram

and Goa to build two new retail complexes. In November 2021, Department for Promotion of Industry and Internal Trade announced that it is working on a regulatory compliance portal to minimise burdensome compliance processes between industries and the government. In October 2021, retailers in India increased by 14% compared with last year. In September 2021, New Delhi-based e-commerce enablement startup GoKwik raised US\$ 5.5 million through Matrix Partners India. Dukaan, another startup that helps businesses digitise operations, received a US\$ 11 million investment led by 640 Oxford Ventures. The Indian retail trading has received Foreign Direct Investment (FDI) equity inflow totalling US\$ 3.61 billion during April 2000- June 2021, according to Department for Promotion of Industry and Internal Trade (DPIIT). With the rising need for consumer goods in different sectors including consumer electronics and home appliances, many companies have invested in the Indian retail space in the past few months. India's retail sector attracted US\$ 6.2 billion from various private equity and venture capital funds in 2020.

According to a report by PGA Labs and Knowledge Capital, investors had put in US\$ 1.4 billion into D2C companies between 2014 and 2020. The sector recorded an investment of ~US\$ 417 million in 2020. In October 2021, Reliance announced plan to launch 7-Eleven Inc.'s convenience stores in India. In October 2021, Realme launched 100 new exclusive stores across India to expand and strengthen its footprint in the country. In October 2021, Reliance Retail introduced Freshpik, a new experiential gourmet food store in India, to expand its grocery segment in the ultra-premium category. In October 2021, Plum, the direct-to-consumer beauty & personal care brand, announced plan to launch >50 offline stores across India (by 2023) to expand its customer base. In July 2021, Dyson announced to increase its retail presence to 12 stores. Tanishq, Shoppers Stop and Bestseller India (sells fashion brands Vero Moda, ONLY and Jack & Jones) plan to add 10-35 stores in FY22. In 2021, Lenskart received US\$ 315 million funding from Falcon Edge Capital, Temasek Holdings, KKR. The company plans to use the proceeds to expand its retail footprint in Southern India. Flipkart hired 23,000 individuals in India between March and May 2021 in various capacities across its supply chain, including delivery executives, to strengthen the supply chain. In May 2021, Big Bazaar rolled out its two-hour delivery service in small cities, such as Bhopal, Mangalore, Raipur, Ranchi, Guwahati, Kanpur, Lucknow, and Varanasi, and recorded a boost in orders over the past weeks. In April 2021, Flipkart expanded its hyperlocal delivery service Quick to six new cities including Delhi, Gurugram, Ghaziabad, Noida, Hyderabad, and Pune as the demand for essential goods on e-commerce platforms surges amid the second wave of the pandemic.

## 6. TYPES OF RETAIL FORMATS:

The Retail enterprises can broadly be divided into modern and Traditional formats. The modern formats include Shopping Malls (multi-format, multi-product, multi-brands catering to lifestyle needs and covers over an area of 60,000 – 7,00,000 sq. ft.); Hypermarkets (multi-verticals and covers over an area of 50,000 – 70,000 sq. ft.); Supermarkets (single vertical and covers over an area of 5,000 – 10,000 sq. ft.); Departmental Stores (single vertical and covers over an area of 20,000 – 50,000 sq. ft.); Apparel Stores (multi-branded single verticals, focusing on high-end customers and covers over an area of 20,000 – 25,000 sq. ft.); Specialty Formats (multi-branded, single vertical on specific needs of customers and covers over an area of 2,000 – 5,000 sq. ft.); Exclusive Format (owned / franchised single product and covers over an area of 500 – 5,000 sq. ft.); Chain of stores (a single retailer establishes a chain of stores e.g. Raymond's, Khazana); Shopping Plaza (a configuration of many events with 1000sft in a single building e.g. Fountain plaza, Modi Arcade plaza); Factory / Second Outlets (Low priced because of cancellation of orders, publicity e.g. Indigo, Peter England); Kiosk (a store located within the mall or bus station, Airport to sell at concessional price and provide additional service within the store). Conventional formats are Kiranas – these are food and non-food neighborhood counter stores, also called mom and pop stores' in western countries. These are big chunks forming the segregated and unorganized retail segment. These are family-owned-and-run retail-outlets picking the goods from wholesalers totaling to around 12 million stores across India, Mandis - these are the largest chunk of unorganized retail catering to urban and rural masses. Mandis are physically located at different regions to enhance convenient shopping. The sellers bring across various products like eatables, vegetables and fruits, pulses, cereals, spices, etc. the most prominent of them are sabzi mandis found in most of the localities across India, Village Haats – this form operates in rural areas where buyers and sellers gather once in a week or month from nearby villages and small towns to cater to their livelihood and leisure needs. These haats are a source of entertainment and socialization among rural masses and Push Cart Vendors – these are categories of vendors roaming door to door in various localities selling fruits, vegetables and other eatables.

## 7. TRENDS AND TRANSFORMATIONS IN THE RETAIL INDUSTRY ACROSS THE GLOBE:

We are living through a time of unprecedented disruption and loss in our personal, domestic and professional lives. Owing to the COVID-19 pandemic, societies across the world are facing a period of significant change and adjustment to new ways of living and operating. The retail industry, already subject to significant transformation via the introduction of new technologies and processes, is right at the forefront of this development. Digital Transformation, enabled by mobile, Artificial Intelligence (AI), Internet of Things (IoT) and cloud technologies, is the outcome of this journey for all involved, including shoppers, store colleagues and operations managers. Online/offline shopping, automation, digital customer experiences, and mixed inhouse and offsite data processing will give an enriching shopping experience. (<https://www.fujitsu.com>). Some of the top trends in the retail industry are Omnichannel shopping-Retailers are trying to create a seamless experience for customers whether they shop online, in-store, or through a mobile app, followed by Augmented reality (AR)-AR has become more important since the pandemic as shoppers try to bridge the gap between online and physical shopping; Mobile payments-Retailers are offering more secure and convenient payment options for customers through mobile wallets, cryptocurrency, and other digital currencies; AI-AI is being used as a consumer application and as a co-pilot for retail workers to improve performance and productivity; Sustainable and ethical shopping-There is a growing demand for eco-friendly and sustainable products; Blockchain technology- Retailers are using blockchain technology to enhance security and traceability, streamline payments, and enable smart contracts; In-store efficiency-Retailers are focusing on in-store efficiency through product demonstrations, good restrooms, free samples, good fitting rooms, loyalty points, friendly service, and free gifts; Other trends include: Phygital retail; Frictionless delivery; Creator commerce; Contactless and frictionless payments; Voice commerce; Social shopping; Personalized shopping experiences; Last-mile delivery services. Additionally, according to [Statista](#), online e-commerce sales are projected to grow from about \$360 billion in 2016 to over \$638 billion by 2022. While [Business Insider](#) found that m-commerce (mobile) will reach \$285 billion, or 45 percent of the total U.S. e-commerce market by 2020 (<https://ionic.io>). The Transformation of the Retail Industry are

### 7.1 AI and ML:

The integration of artificial intelligence (AI) and machine learning (ML) into retail operations is becoming increasingly prevalent. Chatbots, personalization, and predictive analytics are just a few examples of how AI and ML can be used to improve the shopping experience for customers. With the ability to analyse vast amounts of data and predict consumer behavior, retailers can offer personalized recommendations and promotions, improving customer engagement and loyalty. As AI and ML continue to evolve, their potential impact on the retail industry will be nothing short of exciting.

### 7.2 Social Commerce

With the growth of social media, social commerce has emerged, providing consumers with a convenient and seamless shopping experience. Brands use social media platforms like Instagram and Facebook to directly sell their products, creating a new retail channel for businesses to reach potential customers. This trend is set to continue and will likely play a significant role in the future of retail.

### 7.3 Skyrocketing Growth of Mobile Commerce

The proliferation of mobile commerce persists as more consumers opt to use their smartphones for both online shopping and in-store purchases. This means future shopping experiences will be delivered to the fingertips before shoppers are inside the retail premises. Using location marketing technology, everything from promotions to carting experience will be via phones.

### 7.4 Voice Commerce

As smart speakers and digital assistants like Alexa and Google Assistant become more commonplace in households, voice commerce will gain momentum. This trend will change the way customers interact with brands and make purchases. With the ease and convenience of voice assistants, customers can easily shop for products and services with just a few phrases, making it an important area for retailers to explore and optimize.

### 7.5 AR and VR in Retail

Augmented reality (AR) and virtual reality (VR) are becoming more prevalent in retail, providing innovative ways for customers to experience products and shop more efficiently. By creating immersive shopping experiences and enabling customers to try on products virtually, AR and VR are transforming the retail industry. According to retail technology trends, retailers are increasingly incorporating AR and VR into their operations to enhance customer experiences and drive sales.

### **7.6 Subscription-Based Business Models**

As consumers seek convenience and personalized experiences, subscription-based business models are expected to see continued growth, particularly in industries like beauty and fashion. These models offer a unique opportunity for retailers to establish a loyal customer base by providing curated and customized products regularly. Additionally, subscription models will provide a predictable revenue stream for businesses and reduce customer churn. As the subscription economy continues to evolve, retailers will need to find innovative ways to differentiate themselves and provide value to their customers.

### **7.7 Data Privacy and Security**

With the rise of data breaches and privacy concerns, consumers are becoming increasingly cautious about sharing their personal information with retailers. This has led to a greater focus on data privacy and security in the retail industry. Retailers are now expected to provide clear and concise information on how they collect, use, and store customer data. In addition, they must implement robust security measures to protect this data from unauthorized access or theft. As consumer awareness around data privacy and security continues to grow, retailers must remain vigilant in their efforts to safeguard customer data and maintain their trust.

### **7.8 Delivering Above Expectations with Technology and Innovation**

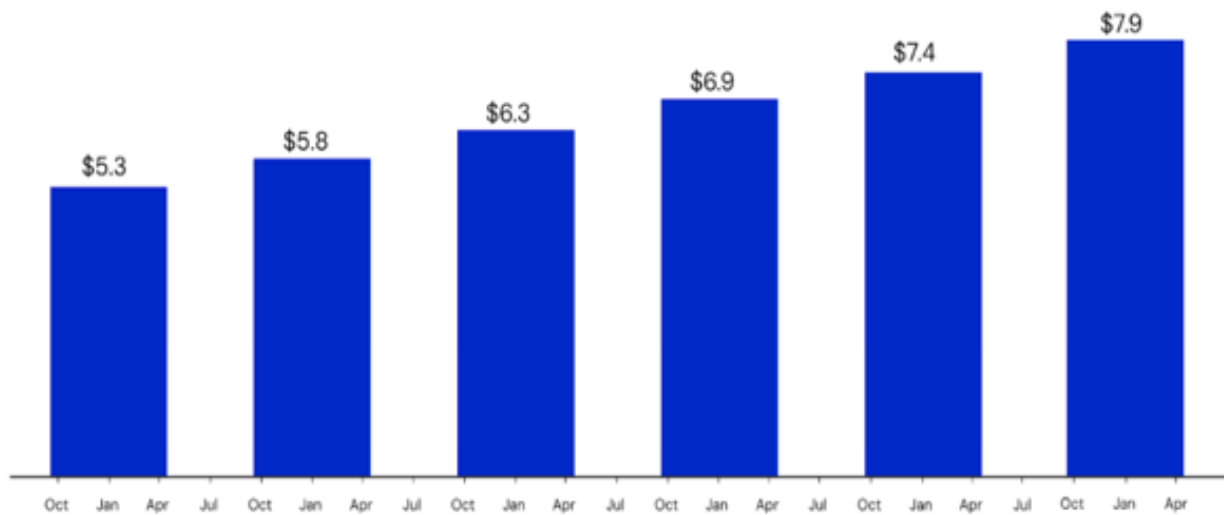
With technology leading the way, retailers can now wield advanced tools and software like never before, giving them the power to streamline their operations, create personalized shopping experiences, and knock customer service out of the park. By leveraging technologies such as artificial intelligence, big data analytics, and virtual reality, retailers can tap into the minds of their customers to better understand their needs and preferences, predict upcoming trends, and offer tailored recommendations that keep them coming back for more. And, with the rise of e-commerce and mobile shopping, retailers simply can't afford to ignore technology anymore if they want to keep up with their competitors and keep customers happy. So if retailers want to stay on top of their game, investing in technology and staying up-to-date with the latest innovations is an absolute must to meet the ever-changing demands of their customers (<https://mapsted.com>).

### **7.9 Retail E-commerce:**

E-commerce and offline retail are two essential components of the retail industry. They are interrelated and interdependent (Tianyu Wang 2024). Retail E-Commerce is the buying and selling of goods and services over the Internet. It is conducted over computers, tablets, smartphones, and other smart devices. It has lowered the barriers to entry for many types of businesses, such as retailers. The 5 Cs of e-commerce stands for Company, Collaborators, Customers, Competitors, and Context/ Climate. The main categories of e-commerce are Business-to-business (B2B), followed by Business-to-consumer (B2C), Consumer-to-business (C2B), Consumer to consumer (C2C), Business to administration (B2A) and Consumer-to-administration (C2A). As of 2023, the revenue growth of the e-commerce market was 10 percent in India. The e-commerce market had the highest growth at 53 percent in 2020 (Satyajeet S Deshpande 2024). The largest retailers are now pursuing Internet-enabled advantages and cost reductions in operations, which could translate to an enhanced competitive position in process, structure, and relationships.



## The Growth in Retail E-commerce sales worldwide 2022-27 (in trillions)



Source: <https://www.antino.com/blog/digital-transformation-in-retail>

Channel less or phygital retail refers to a type of retail where the physical and digital channels are integrated to provide a seamless customer experience. This type of retail is becoming increasingly popular as more and more consumers shop online and through mobile devices, whereas, Phygital commerce is the combination of physical and digital channels which includes in-store digital displays, online order tracking, and mobile apps that allow customers to shop online and pick up in store. Omnichannel retailing is a fully integrated approach to commerce, providing shoppers a unified experience across all channels or touchpoints. It allows merchants to reach customers where they want to buy products and also customers to browse on a desktop, compare prices on a mobile device, then visit your brick-and-mortar location to finalize a purchase. Omni-channel retailing is a model in which shoppers can interact with multiple physical and digital sales channels at once, and have their information retained by the retailer as they move between them. This links together all channels, combining your physical storefront with your website, retail app, and social media channels to create a single, unified experience.

### 8. CHALLENGES IN THE DIGITAL TRANSFORMATION OF THE RETAIL INDUSTRY

There are many other challenges that retailers have to address. Some of them are Human Resources, followed by Space and Infrastructure, Absence of retailer-friendly laws, Lack of technical know-how. Mainly, the challenges of digital transformation in the retail industry are 1. Coping with change: Retailers managing their business traditionally might find it challenging to shift to a new system. This might create resistance to change to digital methods from in-store employees, store managers, corporate employees, and customers. 2. Budget constraints: Digitally transforming a retail company is a costly affair. It involves both tech and human resources working together to implement an efficient management system. A significant challenge faced by medium and small-scale retailers is a lack of funds to enable a digital transformation. 3. Complexity: Implementing technologies such as blockchain, internet of things, and augmented reality is complex. The intricate details, analysis, steps, and procedures can be confusing, and people with little or no

expertise can find it hard to navigate through a digitized retail system, leaving many retail businesses to turn to digital transformation consulting companies. Even more familiar retail technologies like POS systems and self-checkout may seem like they've reached critical adoption. However, these technologies often still cause friction for customer and employee end-users, causing poor experiences, frustrated customers, and negatively impacting team member productivity, making POS implementation difficult (<https://whatfix.com>).

## 9. DISCUSSIONS AND CONCLUSIONS

Innovation and technologies that enable fast communication and transfer of information have a huge impact on the rapid spread of trends in the retail industry. The digital age has a lot to do with the transformation that is taking place in the market. As a retailer, adopt an effective digital transformation strategy into place that meets the changing demands of consumers and the marketplace. This study analyses the trends and transformations in retail trade across the Globe. It has been demonstrated that large enterprises are introducing modern digital tools that, in one way or another, influence consumers' willingness to make purchases. An important element of this system is the proliferation of retail formats: conventional store-based trade, trade in open markets, i.e., offline retail, and e-commerce - online and mixed; the proliferation of such forms affects both the speed of digital development and the way individual businesses respond to certain environmental events. To remain competitive in today's economy, retailers must transform their operations based on modern marketing concepts, including the development of communication relationships with consumers and the introduction of innovative marketing capabilities and digital marketing technologies. It is relevant for further research to explore the specific features of the development of digital transformation in other countries and to find opportunities to use their experience. In addition, it is important to conduct further research in this area and find opportunities to develop the country's future policy in terms of digitalization and the development of new technologies.

## 10. SUGGESTIONS:

The retail landscape is changing. It's driven by factors such as online shopping growth, evolving customer expectations, and the like. Hence, businesses must embrace digital transformation, that leverages technology to create a seamless and personalized customer experience. This requires a well-defined roadmap with key elements like customer centricity, omnichannel strategy, and data-driven insights. By implementing these strategies, retailers can stay competitive and achieve long-term success. Digital transformation has emerged as a vital force reshaping the retail industry. Implementation of technology-driven strategies allows retailers to meet the evolving needs of their customers, drive operational efficiency, and achieve sustainable growth. By leveraging the power of digital transformation, retailers can position themselves for success in an increasingly competitive landscape.

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