

HEALTHCARE E-COMMERCE: NAVIGATING REGULATORY CHALLENGES AND BUILDING TRUST THROUGH MARKETING

¹Dr Gangadhar G Hugar

Designation - Director – SRIMCA MBA Department & **Dean** – Faculty of Commerce & Management,
UKA TARSADIA UNIVERSITY, BARDOLI, GUJARAT.

Department - MBA

University - UKA TARSADIA UNIVERSITY

Email – gangadharhugar@gmail.com

ABSTRACT

The term "e-commerce" refers to the buying and selling of products and services that take place entirely online, with the use of electronic funds transfers and other data transmission methods. By facilitating product knowledge and better decision-making, e-commerce is leading the charge in revolutionising marketing techniques based on new technology. The challenge of selecting an appropriate marketing strategy to meet customer expectations arises as a result of the growing reliance on massive volumes of data for customer demand analysis. Both the expansion of e-commerce literature and its relationship to consumer marketing strategy are the foci of this literature assessment. The majority of the existing literature on the topic of social network marketing has focused on online and social media marketing, but it has also attempted to understand other aspects of this shift in human contact, such as the rise of online purchasing trust, the improvement of information quality, and the reduction of transaction costs. However, up until now, study has only scratched the surface of the many research streams, their interplay, and the potential for new knowledge they hold. It is a good time to do a literature assessment on consumer marketing strategies for e-commerce in the recent decade. Through a Systematic Bibliometric Literature Review (LRSB) of research on e-commerce marketing strategy, this report seeks to uncover research trends in the area. The 66 papers included in the study are the most recent ones published on the subject and may be found in the Scopus® database. The LRSB findings were integrated into the many subthemes of the ongoing study. This report presents the following results: In today's cutthroat global business climate, many companies are turning to e-commerce and online businesses as a means to gain a better grasp on customer wants and needs, streamline marketing to those wants and needs, and disseminate cutting-edge information. A combination of the paper's LRSB approach with an existing review of unclassified papers constitutes its unique contribution.

Keywords: consumer; marketing strategy; social media

I. INTRODUCTION

Businesses have reevaluated their advertising approaches in light of the fact that more and more items, both informational and otherwise, have been digitalized as a result of advances in technology and the expansion of the internet. An online marketplace has emerged to rival traditional brick-and-mortar stores, raising the level of competition in both [1]. As a result, E-commerce has grown as businesses have incorporated the online market into their operations to boost brand awareness and get access to international markets [2]. When people buy and sell products and services online, using data and financial transfers, this is called e-commerce [3]. Online marketplaces make it easier to find product details, which in turn makes it easier to compare and choose [4]. By simulating customers' in-store encounters and experiences, they hope to influence their purchase choices [5].

To sum up, in today's internet-enabled economy, interactive marketing is king. Enhanced interaction and the distribution of information resources to increase understanding and comprehend individual demands are consumer marketing techniques in this instance. Businesses need help figuring out how to engage customers and meet their expectations in light of the ever-increasing amount of information available online [6]. To that end, this work of literature seeks to examine the fast changes and advancements, as well as possible solutions, surrounding the expansion of online shopping over the last decade and how it interacts with consumer marketing strategies. To this purpose, we conduct a Systematic Bibliometric Literature Review (LRSB) of 66 publications from Scopus® to determine emerging patterns in the field of study. Subthemes are used to synthesise the data, and the findings are then presented.

I. MATERIALS AND METHODS

The purpose of this article is to review the most recent research on online shopping in an effort to determine the most important trends and their effects on marketing tactics. In order to achieve this aim, 66 papers published in the Scopus® database were included in a Systematic Bibliometric Literature Review (LRSB). In order to synthesise representative data on e-commerce and consumer marketing strategy and produce analytical viewpoints and frameworks, the study utilises the LRSB approach, which adds uniqueness. It also reviews current publications that have not been reviewed up to date. In order to better comprehend a subject or situation, LRSB is defined by Torraco [7] as a kind of research that entails finding relevant information sources, doing searches, and then analysing and integrating the material. A basic tool for expanding one's understanding of both established and new fields is an article review. By synthesising information, offering suggestions, and identifying knowledge gaps for future research, integrated reviews put the study issue in perspective by combining results from several studies [8]. The information required to design and execute plans to boost a company's competitiveness, performance, and productivity may be found in a thorough evaluation, especially given the fast expansion of e-commerce.

An integrated literature review screens and selects information sources thoroughly to present and interpret data accurately [9, 10, 11, 12]. That is why this study followed Russell's [13] five-step scientific process for a literature review: question formulation, search, data evaluation, analysis, and interpretation and presentation of findings.

The scientific publications used were sourced from SCOPUS, the preeminent academic resource for peer review. We do note, however, that the analysis does not account for all academic databases; it just uses

SCOPUS [9, 10, 11, 12]. Scientific publications that have been peer-reviewed and published up to March 2021 are included in the bibliographic search.

"Marketing," "online commerce," "internet marketing," and "consumer marketing strategy" are some of the keywords used to choose titles and abstracts. The subject area 'business' and publication dates from 2011 to 2021 were used to refine the search and find sources with relevant information that specifically addresses the research issue. The precise keywords 'e-commerce' and 'e-commerce' were also employed.

This led to the identification of sixty-six sources that were ultimately used to compile the study report (Table 1).

Table 1. Screening Methodology.

Database Scopus	Screening	Publications
Meta-search	keyword: Consumer	480,229
First Inclusion Criterion	keyword: Consumer, Marketing Strategy	5.494
Second Inclusion Criterion	keyword: Consumer, Marketing Strategy Subject area: Business, Management and Accounting	3.131
	keyword: Consumer, Marketing Strategy Subject area Business, Management and Accounting and 2010–2021 period	2.155
Screening	keyword: Consumer, Marketing Strategy Subject area: Business, Management and Accounting Accounting and 2010–2021 period Exact keyword: Electronic Commerce, E-commerce Published until March 2021	66

Source: own elaboration.

II. PUBLICATION DISTRIBUTION

The peer-reviewed literature on the subject from 2010 to 2021 is summarised in Figure 1. Here are the many types of publications: Journal of Retailing And Consumer Services(5), Decision Support Systems(6), Electronic Commerce Research And Applications(2), International Journal of Recent Technology And Engineering(2), and Proceedings of The International Conference On E Business And E-Government ICEE 2010 (2) are among the journals that have published five times, with the following categories having only one publication each: The proceedings of the 2nd International Conference on Artificial Intelligence Management Science and Electronic Commerce (AIMSEC 2011), the 2nd International Conference on E-Business and Information System Security (EBISS 2010), and the International Conference on Computing, Mathematics, and Engineering-Technology, Innovation, and Integration for Socioeconomic Development (ICCMEET 2011). "ICOMET 2018 Proceedings; Academy Of Marketing Studies Journal; Asian Academy Of Management Journal; Business Horizons; Education Business And Society Contemporary Middle

Eastern Issues; Emerald Emerging Markets Case Studies; Indian Journal of Marketing; Industrial Marketing Management; Information Resources Management Journal; Information Systems Research; International Journal of Business Information Systems; International Journal of Culture Tourism And Hospitality Research; International Journal of E Entrepreneurship And Innovation; International Journal of Information And Management Sciences; International Journal of Information System Modeling And Design; International Journal of Logistics Systems And Management; International Journal of Networking And Virtual Organisations; International Journal of Production Economics; International Journal of Production Research; International Journal of Retail And Distribution Management; International Journal of Retail Distribution Management; Journal of Business Research; Journal of Cleaner Production; Journal of Direct Data And Digital Marketing Practice; Journal of Enterprise Information Management; Journal of International Consumer Marketing; Journal of Internet Banking And Commerce; Journal of Textile And Apparel Technology And Management; Journal of The Academy Of Marketing Science; Journal of Theoretical And Applied Electronic Commerce Research; Systems Based on Knowledge; The following books have been published: Lecture Notes in Business Information Processing, Emerging Applications and Theories of Managing Information Resources and Technology, Proceedings of the 2019 International Conference on Information Management and Technology (ICIMtech), and the 3rd International Conference on Data Science and Business Analytics (ICDSBA 2019). Journal of the Service Industry; Economics of Tourism".

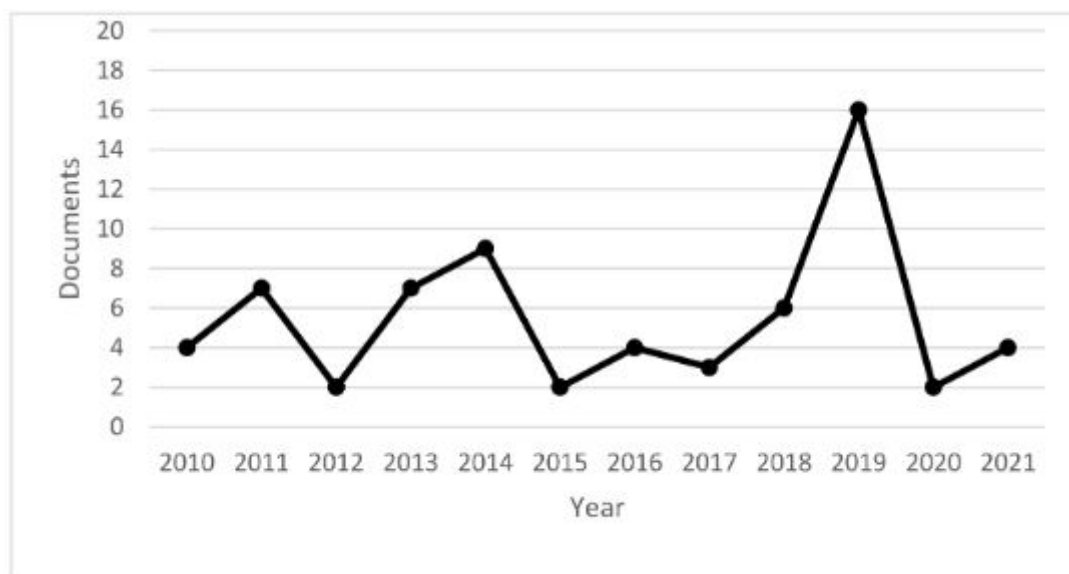
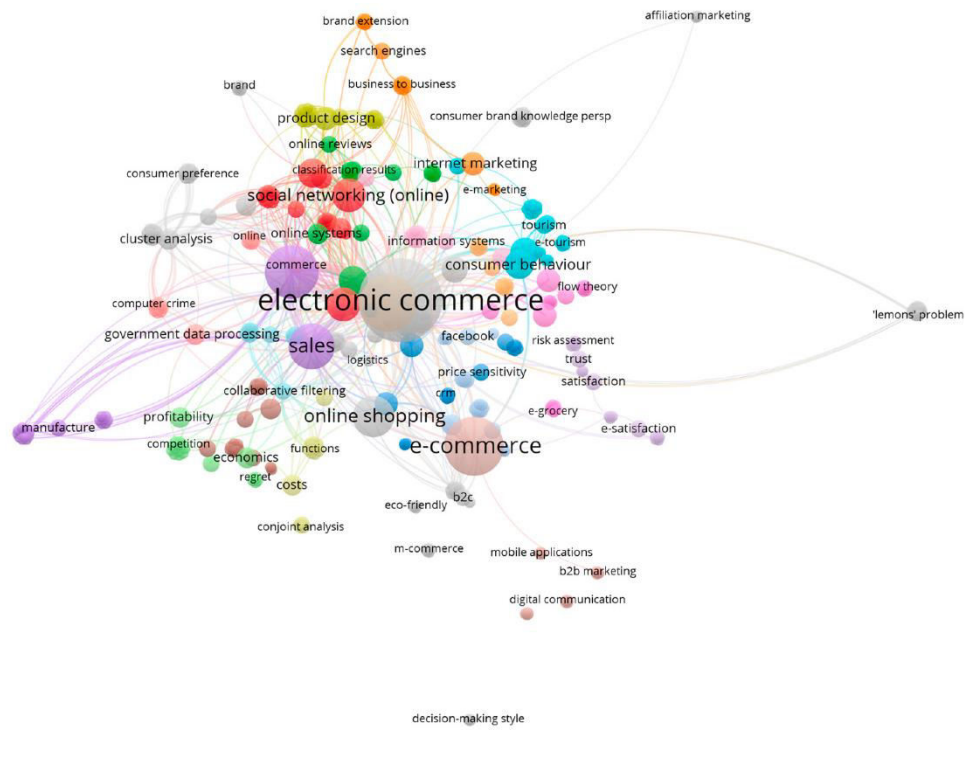


Figure 1. Documents by year. Source: own elaboration

Figure 2 shows the results of a bibliometric analysis that tracked the evolution of scientific literature according to its most important keywords. Aiming to discover the primary research keywords "Consumer," "Marketing strategy," and "E-commerce" via the assessment of bibliometric outputs using the scientific programme VOS view.



The study's basis was the publications on consumer marketing strategy in e-commerce during the last decade. Figure 4 displays the associated keywords, which helps clarify the interconnected network of terms used in each scientific study, grasp the subjects covered, and spot patterns in future research. Additionally, Figure 5 shows co-citations with a reference analysis unit.

III. DISCUSSION

Online sales and transactions are made possible by the usage of digital technology in e-commerce. The term "e-commerce" was first used by Kabugumila et al. [14] to describe the buying and selling of products and services conducted over the Internet and other communication networks. The perceived ease and lower prices of online shopping and product information collecting have contributed to their rise in popularity as a result of global technical trends and improvements [15]. To adapt to these developments and meet the expectations of their customers, businesses are opening online storefronts in addition to their physical locations [16]. Furthermore, retail platforms like Alibaba and Amazon have flourished thanks to the expansion of e-commerce. Different types of online business have given rise to different ways of classifying e-commerce; they include B2B, B2C, C2C, and G2B/C, which stands for government-to-business/consumer [17]. Businesses like this contribute to economic development on a global and regional scale because of the convenience and connectivity made possible by today's technology.

A. The Evolution of E-Commerce and Consumer Behavior

The original use of the term "e-commerce" was to denote the practice of conducting commercial transactions online via the use of EFT and EDI-based technology. Invoices and electronic purchase orders were created in the late 1970s to facilitate information exchange and electronic transaction execution across organisations [14]. While these technologies did lay the groundwork for electronic commerce, it was the expansion of the internet and other technical developments that really sped up the process, allowing for the emergence of

electronic businesses that merged data interchange with financial and non-financial activities. The phrase "e-commerce" was coined in the 1990s, when new software and technology turned the internet into a marketplace, according to Ferrera and Kessedjian [18]. According to Wu and Hsieh [19], companies were able to influence customer purchase choices by sharing product and service information thanks to new technology. Because of the internet's emphasis on connectivity, customers may participate in a wide range of online activities; this, in turn, provides a venue for businesses to raise brand and product recognition [20].

On the other hand, changes have occurred in e-commerce due to technological advancements [21]. Modern e-commerce entails buying and selling things online, whereas traditional e-commerce includes corporations using electronic technology to execute activities, such as emailing papers after an order [22]. E-commerce systems allow customers to browse and buy a variety of things without having to physically visit businesses, which is both more convenient and cheaper for them.

Customer participation and engagement in online settings are crucial to the growth of e-commerce. According to Hsu [20], it employs an experiential marketing technique in which customers' reactions to an event—whether they attended or just watched—serve as stimulants for future purchases. Online interactions provide a window into consumers' thoughts, feelings, and actions, all of which may be captured by a customer marketing plan. Yen [23] elaborates by saying that the proliferation of online shopping has changed customer habits and objectives. Customers currently care a lot about things like company image, data satisfaction, and extended perks, to name a few. Therefore, in order to maximise the diffusion of information and the exposure of their brand, corporations are combining e-commerce with social media.

In contrast to the information that can be found on social media about a company and its offers, e-commerce platforms give a one-stop shop for all items and details that customers need to make an informed purchase choice. Famous brands reduce customer apprehension and provide the foundational trust necessary for online purchases, as Yen [23] argues. Because of the rise of e-commerce, customers may now get all the information they need about a company, its goods, and its business methods via reviews and testimonials left by previous customers [24]. As a result, e-commerce relies heavily on eWOM to draw in new consumers and keep the ones they already have [25]. The success of firms in online business settings depends on improving customer happiness via better services, higher-quality goods, engagement, and experiences. In order to better meet the demands and expectations of their customers, businesses are able to use data technology to monitor their buying habits and demographic information.

B. The Role of Websites in E-Commerce and Consumer Marketing

Online transactions, including the purchase and sale of goods and services, are known as e-commerce. In this way, e-commerce websites serve as entry points for the exchange of commodities, as well as for the transmission of money and personal data. They function like online stores, allowing customers to peruse inventory, choose desired items, and then pay for and await delivery. Web design and interface aspects, including language, colour, contrast, layout and placement, size and shape, and texture, should be carefully considered by organisations to improve efficiency and user-friendliness, according to Hagag et al. [26]. Furthermore, users are more likely to engage with the highlighted items and spend more time on the platform if it is visually appealing, consistent, clear, concise, and responsive [27, 28]. Businesses need to take cultural values and views of web design into account when they create new websites. Cultural beliefs impact the perception of certain traits in some cultures, which in turn impact symbols, language, colours,

and navigation techniques. To better understand the relationship between culture, online interface, and consumer preferences and behaviours, Hagag et al. [26] suggest utilising cultural frameworks like Hofstede's five dimensions of cultural variability and Hall's context model (1984). One example is the low-context and high-context cultural categories proposed by Hall's context model (1984) (p. 69). In high-context cultures, people prefer nonverbal cues, while low-context cultures value clear, straightforward communication [29]. To accommodate the cultural preferences of its target audience, an e-commerce website's language might be shaped by these variations. In order to guarantee efficacy and acceptability, it is crucial to do market research and precisely identify target consumers along with their cultural values prior to developing a website.

The main advantages of online shopping platforms stem from their capacity for user interaction and connection. According to Jih [30], websites are the major venue for engagement where businesses may engage with current and future consumers to influence their purchase choices. Businesses and consumers alike rely on websites as marketing tools to make the most of the online shopping market [31]. In the knowledge economy, both sides benefit from the accumulation and dissemination of information and expertise. Companies may get strategic value from customer interactions via well-designed and managed websites, and customers can utilise the knowledge to empower themselves and become value co-creators [32]. Consequently, e-commerce websites have given consumers more agency than in conventional marketing, giving them more say in how brands operate.

Therefore, businesses should adopt consumer-centred strategies and assess their connections and performance from the customer's point of view [33]. New developments in areas like distributed databases, voice-over-IP, social media, and search engines have made it possible to personalise and engage with customer experiences in more meaningful ways [34]. Also, customers today have more options and better access to high-quality goods and services because of the abundance of information accessible online. Consumers' wants and requirements have become more important parts of company plans and procedures as a result of this new development, which has enhanced competitiveness. As a result, both customers and businesses gain from the marketing and business tactics used in the online marketplace.

Furthermore, e-commerce lowers transaction costs and opens up worldwide relationships by removing geographical obstacles. Essential communication and connecting tools, e-commerce websites allow businesses to tell both local and worldwide customers about their goods and services. As an example, e-commerce websites serve as the main sources of information for the tourism business, as described by Davies et al. [35]. Visitors research the area's services, accommodations, transportation options, and more by perusing these sites. Customer support and engagement are key ways for firms to meet the active experience demands of today's customers [36]. Customers feel more connected to the company and have a stronger feeling of ownership when they contribute ideas online. This fosters brand loyalty and encourages regular purchases. Decisions and operations should be grounded on customer knowledge and a systematic understanding of customer relationships, according to Jih [30]. Several behavioural characteristics impact consumers' intents and actions to buy, and consumer profiling is made easier with the use of current information and communication technology (ICT) technologies used in consumer research [37]. With more and more people shopping online, businesses and customers all over the globe are becoming more dependent on one another, with the choices and actions of one impacting the other.

In order to increase their income and growth rate, small and medium-sized firms (SMEs) rely heavily on e-commerce websites, which link them to worldwide marketplaces. In contrast to multinational corporations, small and medium-sized enterprises (SMEs) often have to settle for domestic markets due to a lack of capital. According to Fan [38], buyers in one nation may take advantage of reduced pricing on items from another country via online imports made possible by cross-border e-commerce (CBEC). These advancements in technology have made it possible for SMEs to build websites or lease space on e-commerce platforms like Amazon and Tmall, allowing them to connect with prospective clients all over the world. Electronic commerce is described by Ballestar et al. [39] as a "new system with no rules" in which both big and small network groups form affiliates in order to get value. The lack of intermediaries and the relatively cheap cost of global internet access have made it possible for even the smallest businesses to sell their wares online [40]. Small and medium-sized enterprises (SMEs) rely on partnerships with other groups to improve their marketing, shipping, packing, and payment services, as well as to make the most of possibilities in global marketplaces [41]. These innovations have lowered the trade barriers of conventional e-commerce, which often encourage the establishment of monopolies and huge corporations at the expense of SMEs, who have control over a smaller portion of the market. According to Fan's [38] projections, the worldwide business-to-consumer e-commerce market will expand from \$230 billion in 2014 to \$994 billion in 2020. Although major companies take home the majority of these profits, small and medium-sized enterprises (SMEs) are given a fighting chance by CBEC, which helps them take advantage of the possibilities presented by the cross-border e-commerce ecosystem. Understanding the export growth model may help SMEs find and execute ways to boost their performance in both domestic and global markets. Small and medium-sized enterprises (SMEs) may build e-commerce websites that rival larger organisations in the internet-enabled business world by thinking about layout, content, and navigation.

C. Consumer Behavior and Purchasing Decisions in E-Commerce

The availability of product-related information and prices affects online buyers' behaviours and desire to purchase. Online resources make it easy for shoppers to research items, read reviews, and compare prices for a wide range of necessities [42]. In order to better understand customer interests and preferences and deliver relevant product suggestions, e-commerce makes use of software technologies to build consumer profiles. To begin with, these innovations help with issues caused by the abundance of information available online; this may be a real pain for customers trying to find brand data to use in making decisions [43]. Online marketplaces facilitate two-way contact between sellers and buyers by including tools that facilitate the exchange of product-related information and technical help [41]. By keeping tabs on users' consumption and browsing habits and prompting them to provide feedback on how to enhance their experiences and the quality of the services they get, consumer data collecting also makes personalisation easier. To improve customer engagement, several businesses use recommendation agents (RAs) to help customers find what they are looking for and make more informed purchases. When developing and launching promotional efforts, consumer marketing relies heavily on feedback from target audiences [44]. To guarantee that methods used in today's internet-based business settings meet the requirements of consumers and appeal to target audiences, it is essential that customers actively participate in all aspects of corporate operations. Thus, recommendation systems have been included in the websites of e-commerce giants like Yahoo!, Amazon, and eBay in order to solicit customer preferences via two-way communication, whereby users may express their ideas and seek information to assist with decision-making. These advances emphasise the importance of product information in influencing online behaviours and purchase intentions.

Not only are RA technologies being used by e-commerce websites, but augmented reality (AR) is also being used to enhance the user experience and increase the likelihood of a purchase. Using augmented reality (AR), consumers may virtually try out goods and services before making a purchase, according to Qin et al. [45]. When shopping for furniture online, for instance, customers might use augmented reality to digitally equip actual rooms by deciding on pieces from an online showroom and then visualising them in the desired location [46]. Customers can rest easy knowing that their online purchases will look great both online and in person, thanks to augmented reality technology like the Amazon AR View. Thus, whereas RA offers information resources, AR allows users to observe and interact with the targeted product via a visually enhanced experience made possible by technology. These innovations keep pushing the boundaries of e-commerce and shaping consumers' propensity to shop online.

The goal of consumer marketing in online retail is to increase product recognition and sales via the utilisation of social media platforms. With the use of social media, businesses may attract an online following that will promote their goods, profile, and brand, ultimately leading to online sales. Low connection costs enable social networks to link enterprises to their target customers and connect various market players who share standard information about products and services, according to Di Pietro and Pantano [47]. Marketers are able to collect data on customer demographics to create targeted promotional messages and direct advertisements thanks to global connectivity [48]. It generates an online environment where groups and individuals may post, exchange, and access product and service information [49]. Popular platforms like Facebook allow users to post text, photographs, and videos, as well as start conversations about certain businesses or concerns. Using the information collected from these platforms, businesses better understand their customers' wants and requirements and come up with new and exciting goods and services. Also, other prospective customers may rely on customer reviews posted on social media platforms to get an idea of what others think of a business [50]. Customers' positive experiences and suggestions serve as virtual recommendations that drive traffic to an online storefront [51]. Building brand awareness via brand-consumer and consumer-consumer connections and interactions is made easier by the proliferation of social media, which also makes it harder for companies to control what people say about them online. It encourages relationship marketing, which in turn increases trust and loyalty, which in turn generates steady income.

The expansion of e-commerce platforms is influenced by consumers' familiarity and popularity with online businesses, which in turn affects their purchase choices. Online customers choose well-known and famous shops, according to Okamoto's [52] study. Customer satisfaction, ease of use, and the quality of the store's products and services are all elements that contribute to the store's popularity. Customers pay close attention to a website's privacy, security, and usability aspects because of the dangers and uncertainties associated with doing business online [50]. Delivery options, ease of use, pricing, reliability, and selection are further characteristics. When these needs are satisfied, customers will have a better experience and be more satisfied overall, which will lead to more purchases and stronger connections. According to Okamoto [52], customers anticipate getting advantages and value from online buying that are not accessible in brick-and-mortar establishments, such as lower costs, more selection, and easier checkout procedures. Therefore, the value that customers feel in completing certain online transactions is a key factor in determining the expansion of e-commerce [53]. However, when it comes to choosing a shopping experience, customers value various things. Because of this variety, businesses and marketers must study customer trends and habits when they

shop online in order to tailor offerings and enhance delivery [54]. E-commerce websites must use sophisticated data-collecting and analysing technology. Brand popularity and customer advocacy may be achieved via trustworthy purchase and delivery methods, inexpensive and high-quality goods and services, and an overall positive reputation for the brand.

As a result, the O2O e-commerce model has gained popularity as an operational approach that aims to maximise the advantages and value for customers. Multichannel e-commerce has emerged as a preferred method of product sourcing for customers due to the abundance of information available on items and brands [55]. Some shoppers, for instance, compile information about products (such as pricing and reviews) from e-commerce websites before making an in-store purchase. Multichannel customers, according to Wang et al. [56], research online for things like pricing and brand reputation but then go to physical shops to see and touch products to make sure they are good. For others, the convenience of in-person transactions outweighs the dangers of internet fraud and data theft, so they stick to more conventional forms of business [57]. Accordingly, the O2O business model may increase customer happiness by appealing to both online and offline shoppers by providing them with a variety of information and experiences across both channels [58]. The lack of actual product experiences and comprehensive consumer services is a major drawback of online platforms, despite the fact that they provide a variety of items, appealing pricing from many vendors, adequate product information, and easy transactions [54]. Customers are forced to resort to cross-channel purchasing because neither conventional e-commerce nor online shopping platforms can meet their needs to the fullest extent. Despite doing brand research online, some buyers still prefer to purchase in physical locations. So, even if more and more people shop online, businesses should have brick-and-mortar locations to meet the demands of a wide range of customers and to foster brand loyalty via superior service.

One major obstacle to e-commerce is the fact that consumers are less likely to purchase online due to their sense of risk. "Performance risk, physical risk, economic risk, psychological risk, social risk, and time/convenience risk" (p. 2188) are the six categories that comprise the vast majority of perceived hazards, according to Gao and Hu [59]. Many people dread making purchases online due to concerns that the items will not be up to par in terms of quality and functioning since there is no way to test them before purchase. Incidental hazards, worries about privacy and quality, and other similar factors all impact online transactions [60]. Some people are wary of making online purchases because they do not want to put themselves in danger of losing money [61]. An example of an online crime that might result in financial loss is the fraudulent use of credit cards. Not to mention that certain products might be damaged in transit. Due to the perceived hazards caused by these concerns, internet users are discouraged from participating in e-commerce [57].

In conclusion, in order to entice online customers and ensure the completion of online transactions, organisations must demonstrate suitable risk reduction tactics. In light of these problems, it is clear that Okamoto's [52] claim that people prefer to buy from famous and trustworthy online retailers is valid. The business procedures, product quality, and delivery processes of the well-known and well-respected firm are known and respected by customers, which in turn reduces the perceived risks. In addition to providing high-quality goods and services, marketers should prioritise customer trust and relationship building via consumer-centred activities.

D. The Use of Big Data in Consumer Marketing and E-Commerce

There is a growing demand for analytics solutions to help with e-commerce optimisation due to the impact that fast scientific and technological advancements have had on the flow of information in this sector. Data quantities have exploded due to the internet's open platform for sharing and transferring information from both individuals and companies. In order to gain a competitive edge, e-commerce firms use big data to enhance decision-making, product quality, performance, and operations. According to Shi and Xu [62], technology has become more important because of the change in focus from products to consumers. Because of technical advancements that have given power to consumers all over the world, modern corporate settings need customer-centric strategies and product designs [63]. Science and technology are integral parts of competitive product design, which aims to improve experiences and satisfaction by influencing consumers' sentiments, values, culture, and awareness [64]. To better meet the needs of their customers, businesses are using big data technology to collect and analyse consumer data in order to provide individualised goods and services.

Moreover, it allows marketers to analyse trends and anticipate changes, which in turn allows them to develop and execute marketing plans that are both practical and timely, addressing a range of issues that might threaten the viability of e-commerce business models [65]. One example is how anybody may write a review of a product, service, or brand on the internet. Reviews and suggestions may drive sales, but the free flow of information also has risks, such as the spread of misleading information that might tarnish a company's good name. As a result, marketers and other communication and public relations experts may use big data technology to trace and analyse this information to learn where it came from, what it stands for, and what damage it might do.

More and more businesses are using recommender systems (RS) to cater to customers' tastes in online shopping as a result of the deluge of data available online. According to Beladev et al. [66], RS is defined as an application that filters information in order to provide online buyers with personalised suggestions for goods and services by enhancing users' exposure to high-quality items and services based on their search and providing recommendations for further relevant products, recommender systems in e-commerce aim to convert online surfers into purchasers [65]. By facilitating better navigation and simple access to a variety of products and services, these technologies elevate user experiences. By directing customers to the exact goods and services they need, RS boosts sales and improves a business's marketing strategies. According to Beladev et al. [66], RS excels in product bundling, a marketing tactic that involves selling many products at a discounted cost compared to purchasing them separately. In this scenario, RS is advantageous for both the business and its customers since it increases sales and profits while broadening the customers' buying options [33]. The RS can steer customers towards product bundles that include items that would not have been purchased alone. Whether or not a customer buys a product again depends heavily on its pricing. According to Abdul-Muhmin [36], the key to the e-commerce industry's long-term success is attracting customers who are committed to making recurring purchases. Information about products, such as their quality, sustainability, and pricing, is readily available to buyers on the Internet [67]. They use this data to evaluate various items and choose the ones with the best deals. In a similar vein, businesses and marketers may make use of web data to develop pricing plans that draw in and keep the people they want, which boosts their competitiveness and helps their brand's reputation.

To thrive in today's fast-paced, cutthroat business climate, it is essential to have a firm grasp of and ability to predict what customers want. Due to the rising demand for customisations, the emphasis in e-marketplaces has switched from reducing manufacturing costs and improving product quality—the traditional ways that enterprises become competitive in conventional commerce—to standardising goods and services [68]. Data science and information technology provide producers with resources that deepen their comprehension of customer needs. For instance, businesses may anticipate product demand with the use of real-time inventory data and geographical mobility collected by Radio Frequency Identification Tags (RFID) [64]. They enhance procedures, performance, and product quality by using data analytics to comprehend intricate linkages among different aspects of the organisation. In today's customer-oriented business models, informational resources are crucial to understanding the interdependent interactions between consumers and firms, which is why they have become essential components of corporate strategy [69]. By using big data technology, companies may acquire multichannel data, which can be used to enhance the supply chain and tap into previously unrealized business insights. Among Twitter users who engage with posts, 53% suggest items or companies, and 48% actually buy them, according to Chong et al. [64]. The findings show that user-generated content has much influence on people's consumption choices. As a result, businesses may plan accordingly by using Twitter analytics tools to predict product demand. For the e-commerce sector to continue to thrive, big data technologies are essential.

Emerging markets have emerged as a result of rising incomes and global economic expansion, providing chances for businesses to extend their operations globally. However, in order to assess the overall business climate and identify purchasing habits in these emerging international markets, a thorough examination of economic, social, security, and cultural data is necessary [70]. Between 2012 and 2016, the authors predicted that India's e-commerce business would see economic growth ranging from 1.6 billion to 8.8 billion USD. Because of this expansion, India is now seen as a developing economy with the potential to become the world's fifth-largest consumer market by the year 2025. Despite these encouraging numbers, businesses still need more information to comprehend the operational challenges and business climate in India, which prevents them from capitalising on new prospects. In order to boost performance and develop realistic business goals, big data may shed light on customer demographics, value generation, and resource management. The difficulties that manufacturers face while breaking into new markets are recognised by Liu et al. [70], who also note that strategic choices have a direct impact on marketing and sales results. To help with successful penetration into these growing areas, Dominici et al. [68] suggest utilising distributors or other local agents.

Nevertheless, in order to make the right data-driven decisions, a company's supply chain should include data science and information technology [70]. Consumers' habits shift as a result of the increased flow of information and monetary changes brought about by economic development, underscoring the need of having reliable monitoring systems. Consequently, marketing initiatives should make use of big data to raise awareness of the brand and execute data-driven plans for predicting the present and future of product demand and market success.

Companies and marketers may better understand their segments and the content preferences of those segments with the use of big data, which in turn helps with customer marketing strategy. Markets may be divided into smaller, more manageable groups based on similar features like demographics, hobbies, requirements, and geographic location via segmentation. According to research by Arbi Siti et al. [71],

marketing material that is successful in reaching its target audiences and inspiring them to make a purchase is more visually attractive and has a human touch. To keep up with customers' ever-evolving wants and demands, businesses may use big data to access massive volumes of customer information [72]. Businesses must realise that a myriad of variables impact customer wants and demands, including but not limited to technical advancements, information abundance, economic shifts, and level of education [73]. Because of this, a person's expectations today could shift tomorrow as a result of various advances and changes in lifestyle. Through the analysis of activity-based data, social networks, and sentiment data (including brand connections, reviews, and comments), big data enables firms to follow these changes. The authors Arbi Siti et al. [71] break down consumers into three groups based on three factors: demographics, behaviour, and marketing material.

IV. CONCLUSIONS

As a result of technological advancements, both information and non-information items have been digitalized, prompting companies to rethink their sales and marketing approaches. As a direct outcome of these technological advancements, the focus of commerce has migrated from brick-and-mortar establishments to online markets, a phenomenon known as e-commerce. Efficient, enjoyable, and satisfying customer experiences are the results of an information-and interaction-based consumer marketing strategy, which is made possible by online enterprises. For example, in order to increase engagement and interaction, e-commerce websites include design elements that guarantee timeliness, clarity, consistency, and concision. Design elements that are user-friendly and meet the expectations of target customers include colours, languages, navigation styles, and layouts. To boost interaction and connection, people use social networking sites in tandem with e-commerce platforms. Social networking sites (SNSs) provide two-way communication channels, allowing for interactions between consumers and both companies and consumers themselves, in addition to the items and services offered by websites. Thanks to the open lines of communication, we are able to pool our knowledge and create cutting-edge products that meet the requirements of our customers. To further encourage customisation and personalisation of customer experiences, e-commerce platforms use IT and big data technology. Enhancing customer interactions and offering ideas for products or services is the goal of software technologies like recommendation agents (RA) and recommender systems (RS). Using data analytics technologies, businesses and marketers may monitor customer actions and trends, as well as the factors that influence their purchase choices. To thrive in today's cutthroat global marketplace, e-commerce companies must pay close attention to customer feedback and wants.

V. REFERENCES

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