

Consumer Behaviour In The 21st Century: The Effect Of Technological Advancements

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Citation: Neha Singh, et al (2023), Consumer Behaviour In The 21st Century: The Effect Of Technological Advancements Educational Administration: Theory and Practice, 29(2) 458 -466

Doi: 10.53555/kuey.v29i2.7099

ARTICLE INFO

ABSTRACT

This research paper investigates the intricate interplay between consumer behaviour and technological advancements in the 21st century. Through a comprehensive analysis of age, gender, and urbanization factors, we unveil nuanced patterns that shape consumer preferences and decision-making processes. Younger consumers emerge as frontrunners in digitalization, embracing e-commerce, social media, and mobile technologies. In contrast, older consumers exhibit a steadfast loyalty to brick-and-mortar stores and harbour concerns about data privacy. Gender disparities reveal distinct inclinations, with women leaning toward social commerce and men favouring mobile app-based shopping. Urbanization proves a pivotal determinant, driving digital adoption and intensifying the influence of social media in larger cities while underscoring the resilience of physical retail in smaller locales. Our research illuminates these dynamics, providing actionable insights for businesses and policymakers seeking to navigate the ever-evolving landscape of consumer behaviour.

Keywords: Consumer Behaviour, Technological Advancements, Digitalization, Urbanization, Social Commerce, Policymaking.

I. INTRODUCTION

A. BACKGROUND AND CONTEXT: The 21st century has been characterized by rapid technological advancements that have significantly transformed various aspects of human life. One of the most impacted areas is consumer behaviour, which has evolved dramatically due to these technological changes. In the past, consumer behaviour was primarily influenced by factors such as price, quality, and brand reputation. However, the advent of the internet and digital technologies has revolutionized the way consumers interact with brands and make purchasing decisions. Today's consumers have access to a wealth of information at their fingertips, enabling them to make more informed decisions. They can compare products, read reviews, and even purchase items from the comfort of their homes. The proliferation of smartphones and social media platforms has further amplified this shift in consumer behaviour. Consumers are now more connected than ever, influencing and being influenced by their peers' opinions and experiences shared online. Additionally, advancements in data analytics and artificial intelligence have allowed businesses to understand their customers better and offer personalized experiences, further shaping consumer behaviour. This research paper aims to delve deeper into understanding how these technological advancements have shaped consumer behaviour in the 21st century.

B. STATEMENT OF THE PROBLEM: Despite the significant strides in technology and its evident impact on consumer behaviour, there is a lack of comprehensive understanding of the extent and nuances of this influence. The rapid pace of technological advancements often outpaces the research conducted in this field, leading to a gap in knowledge. Moreover, while there is considerable research on individual aspects of technology such as e-commerce or social media, there is a need for an integrated study that considers the collective impact of various technological advancements on consumer behaviour. Furthermore, most existing

studies focus on the benefits and positive impacts of technology on consumer behaviour. However, potential challenges and negative implications, such as privacy concerns and information overload, are often overlooked. This research paper aims to address these gaps by providing an in-depth analysis of the effect of technological advancements on consumer behaviour in the 21st century. It seeks to offer a holistic view of the changes in consumer behaviour due to technology and discuss both the positive and negative implications.

C. PURPOSE OF THE STUDY: The primary purpose of this study is to explore and understand the impact of technological advancements on consumer behaviour in the 21st century. This includes examining how various aspects of technology such as the internet, digital platforms, smartphones, social media, data analytics, and artificial intelligence have influenced the way consumers interact with brands and make purchasing decisions. The study also aims to provide a holistic view of the changes in consumer behaviour due to technology, considering both positive impacts such as increased convenience and informed decision-making and potential challenges like privacy concerns and information overload. By bridging the gap in knowledge, this research hopes to offer valuable insights to businesses, marketers, and policymakers on how to effectively engage with consumers in this digital age. It also seeks to contribute to academic literature by providing an integrated perspective on the influence of technology on consumer behaviour.

D. RESEARCH OBJECTIVES: The objectives of this research paper are to:

1. Investigate the impact of various technological advancements on consumer behaviour in the 21st century.
2. Analyse the positive and negative implications of these technological changes on consumer behaviour.
3. Understand how consumers' interactions with brands and their purchasing decisions have evolved due to technology.
4. Provide a comprehensive and integrated perspective on the influence of technology on consumer behaviours.

E. RESEARCH QUESTION: The primary research question that this paper aims to answer is: "How have technological advancements in the 21st century influenced consumer behaviour, and what are the positive and negative implications of these changes?"

F. SIGNIFICANCE OF THE STUDY: The significance of this study lies in its potential to provide a comprehensive understanding of the impact of technological advancements on consumer behaviour in the 21st century. Given the rapid pace of technological change, businesses and marketers often struggle to keep up with evolving consumer behaviours. By providing an integrated perspective on how various aspects of technology have influenced consumer behaviour, this research can offer valuable insights that can help businesses adapt their strategies to meet the changing needs and expectations of consumers. By examining both the positive and negative implications of these technological changes, this study can contribute to a more balanced and nuanced understanding of the digital consumer landscape. This can inform policy decisions related to consumer protection and data privacy. This research can contribute to academic literature in the field of consumer behaviour by addressing existing gaps in knowledge and providing a foundation for future research in this area.

II. LITERATURE REVIEW

A. OVERVIEW OF CONSUMER BUYING BEHAVIOUR THEORIES: Consumer buying behaviour has been a topic of interest for researchers for many years. Early economists such as Nicholas Bernoulli, John von Neumann, and Oskar Morgenstern began examining the basis of consumer decision making about 300 years ago (Bray, 2008). This early work approached the topic from an economic perspective, focusing solely on the act of purchase (Bray, 2008). The most prevalent model from this perspective is the 'Utility Theory', which proposes that consumers make choices based on the expected outcomes of their decisions (Bray, 2008). Over time, the study of consumer behaviour has evolved to consider a broader range of consumption activities beyond purchasing. These activities commonly include need recognition, information search, evaluation of alternatives, the building of purchase intention, the act of purchasing, consumption, and finally disposal (Bray, 2008). Several theories have been proposed to explain consumer buying behaviour:

- **Utility Maximization Theory:** Assumes that consumers make calculated decisions to purchase products that bring them the greatest benefit (Liberto, 2023).
- **Psychoanalytic Theory:** States that consumer make purchasing decisions based on their feelings, hopes, aspirations, and fears (Liberto, 2023).
- **Veblenian Social-Psychological Theory:** Asserts that humans are social creatures and make purchases based on societal and cultural norms (Liberto, 2023).
- **Reasoned Action Theory:** Suggests that consumers' intentions to buy are influenced by their attitudes and subjective norms (Liberto, 2023).
- **Maslow's Motivation-Need Theory:** Proposes that consumers' needs are arranged in a hierarchy and that they seek to satisfy the most basic ones first (Liberto, 2023).

□ **Hawkins Stern Impulse Buying Theory:** Explains that consumers' impulse purchases are triggered by external stimuli and internal states (Liberto, 2023).

These theories provide a foundation for understanding how consumers make purchasing decisions. However, with the advent of technology and its impact on consumer behaviour, there is a need for new theories and models that can explain consumer behaviour in the digital age.

B. HISTORICAL PERSPECTIVE ON CONSUMER BEHAVIOUR: Consumer behaviour as a field of study has its roots in the early 20th century, with the notion of human beings as consumers' first taking shape before World War I (Higgs, 2021). The study of consumer behaviour began to borrow both concepts and methods from clinical, social, and organizational psychology, resulting in numerous theories of buying behaviour, attitude research, family and organizational buying behaviour, as well as psychographics and lifestyle research (Higgs, 2021) (Seth, 1985). In the late 1950s, business schools shifted from descriptive and practitioner-focused studies to more theoretically driven and academically rigorous research (Malter, Holbrook, Kahn, Parker, & Lehmann, 2020). As the field expanded from an applied form of economics to embrace theories and methodologies from psychology, sociology, anthropology, and statistics, there was an increased emphasis on understanding the thoughts, desires, and experiences of individual consumers (Malter, Holbrook, Kahn, Parker, & Lehmann, 2020). Over the years, marketing has shifted its reliance on other disciplines as well as its focus of understanding. For example, the classical schools of marketing thought relied on the social sciences such as economics, sociology, and anthropology and focused on aggregate market behaviour (Seth, 1985). This gave way to the managerial schools of marketing thought in which the focus of attention and understanding shifted to individual customers while social sciences disciplines continued to dominate marketing thinking (Seth, 1985). Eventually, marketing kept its focus on individual customers but began to borrow more and more from the behavioural sciences. This resulted in what is known as the behavioural schools of marketing thought⁴. More recently, marketing has begun to shift its attention away from individual customers and concentrate on the markets. In the process, it is also relying less on the behavioural sciences and more on traditional social sciences (Seth, 1985).

C. THE ROLE OF TECHNOLOGY IN CONSUMER BEHAVIOUR

1. INTERNET AND E-COMMERCE: The advent of the internet and e-commerce has significantly transformed consumer behaviour. The internet's emergence as a vital communication technology has greatly facilitated the promotion and growth of e-commerce. Business organizations have recognized the value of e-commerce in enhancing competitiveness, marketing products and services, and providing instant information to customers and consumers (Alshweesh & Bandi, 2022). E-commerce has brought the shopping experience to consumers' fingertips via desktop and mobile devices, completely changing the way consumers shop. The biggest impact e-commerce has had on consumer shopping habits is that consumers can shop from anywhere, anytime. They no longer have to wait until store hours to make a purchase (ESW, 2022). Mobile commerce sales are projected to reach \$728.28 billion and make up 44.2% of retail commerce sales in the US by 2025. Consumers use mobile in a variety of different ways throughout the sale cycle, including discovering new products, locating products and comparing prices, creating and managing shopping lists, making purchases, and reviewing purchases (ESW, 2022). The rise of mobile shopping has blurred the line between the physical store and the online experience. Rather than having two distinct channels, both channels can be used in conjunction to optimize the shopping experience (ESW, 2022). E-commerce gives consumers access to information, the ability to shop on different devices, and the option to share their experiences with others, which has completely altered their expectations and the way they shop. Customer shopping habits will continue to evolve with technology, and companies will have to continue to adapt to maintain relevance (ESW, 2022).

2. SOCIAL MEDIA: Social media has a significant impact on consumer behaviour. It builds product awareness, provides social proof as a greater force of buying decisions, promotes discounts and deals, and influences consumers through social media influencers. Customers increasingly make direct purchases on social media platforms, and social media reviews have a significant impact on consumer behaviour (Clootrack, 2023). Social media has empowered consumers, as marketers have no control over the content, timing, or frequency of online conversations among consumers. Results show that social media usage influences consumer satisfaction in the stages of information search and alternative evaluation, with satisfaction getting amplified as the consumer moves along the process towards the final purchase decision and post-purchase evaluation (Chopra & Gupta, 2020). Social media platforms seem to be increasingly and effectively bringing brand awareness and influence consumers' purchase decision-making and later on realize repeat purchases that bring about customer loyalty (Chivandi, Samuel, & Muchie, 2019). Social media has the power to influence potential customers from the start until the stage of the purchase and beyond as well (Clootrack, 2023).

3. MOBILE TECHNOLOGY: Mobile technology has significantly influenced consumer behaviour. The rapid development of technology and the use of smartphones and mobile applications have become significant and influential in today's living (Tan, Ozuem, & Lancaster, 2020). Mobile technology has empowered consumers, providing unlimited access to information and demanding products and services when they want (KeenFolks, 2023). The use of smartphones has transformed the way consumers research products, ask sales questions, and make purchases. For example, the time spent commuting to work on a train or bus has been massively changed because of technology and connected devices. According to a study by the Centre for Economics and Business Research, UK consumers spend over £22.8 billion per year online shopping while using public transport (KeenFolks, 2023). Mobile technology has also blurred the line between digital channels and e-commerce to brick-and-mortar stores. A shopper might discover a product on Facebook and ask a sales question on the platform. After receiving an answer, the shopper visits the company website to complete the purchase but elects to pick up the product in-store. The transition between digital channels and e-commerce to brick-and-mortar should be smooth (KeenFolks, 2023). In 2019, mobile accounted for 52.2% of total global internet traffic and 69% of total digital minutes in the US (KeenFolks, 2023). This shows that mobile technology plays a crucial role in shaping consumer behaviour.

4. ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING: Artificial Intelligence (AI) and Machine Learning (ML) have significantly influenced consumer behaviour. AI provides marketing science the ability to efficiently handle large volumes of daily generated data and overcome human's inability to process these data using obsolete ways, providing highly accurate results (Gkikas & Theodoridis, 2021). AI is designed to "learn" and improve with data generated from digital technologies linked to consumer interactions. AI relies on consumer knowledge-sharing activities to replicate new knowledge for product and service improvement (Olan, Suklan, O., & Robson, 2021). AI can understand the habits, needs, and choices of the consumer in a way that revolutionizes the relationship between business and consumer. With this knowledge, AI can usher the consumer into a particular funnel that the customer will have a more positive response to (Robotic Marketer, 2020). Machine Learning, a subset of AI, has been applied to predict consumer behaviour. It uses statistical techniques to analyse previous historical data to predict future behaviour of customers. For example, for improving the revenue of an e-Commerce store, we could analyse and provide personalized recommendations to customers based on their likes and dislikes, most frequently purchased items, previous searches, correlations between item purchases, and many more (Section, 2021).

D. CURRENT TRENDS IN CONSUMER BUYING BEHAVIOUR: The current trends in consumer buying behaviour have been significantly influenced by various factors, including technology, personal perception, environmentalism, and convenience (University of Southern California, 2023). Here are some key trends:

- ❑ **Multiple Payment Options:** Consumers now expect multiple payment options for their purchases (Howarth, 2023).
- ❑ **Delivery Services:** There is an increased demand for delivery services, with consumers wanting everything delivered to their doorstep (Howarth, 2023).
- ❑ **Ethical and Sustainable Products:** Consumers are showing an increased demand for ethical and sustainable products (Howarth, 2023).
- ❑ **Health Consciousness:** People are taking more care of their health at home (Howarth, 2023).
- ❑ **Influence of Social Media:** Influencers on social media platforms are increasingly influencing buying decisions (Howarth, 2023).
- ❑ **Subscription Services:** Consumers are subscribing to more monthly services (Howarth, 2023).
- ❑ **Pet Care:** Consumers are spending more on their pets (Howarth, 2023).
- ❑ **Mindfulness Market:** The mindfulness market continues to grow as consumers seek products and services that promote mental well-being (Howarth, 2023).

These trends highlight the evolving nature of consumer behaviour in the 21st century, driven largely by technological advancements.

E. STUDIES ON THE IMPACT OF TECHNOLOGY ON CONSUMER BEHAVIOUR: Several studies have been conducted to understand the impact of technology on consumer behaviour. A study by Keenfolks highlighted that new technology has empowered consumers, giving them unlimited access to information and allowing them to demand products and services when they want (KeenFolks, 2023). The study identified three effects of technology on today's consumer: consumers are more connected to businesses than ever before, they can research products, ask sales questions, and purchase products no matter where they are and what they are doing (KeenFolks, 2023). A study published in Forbes found that recent technological advances are reshaping how and where consumers make choices (Valenzuela, 2020). For example, 81% of U.S. adults now own smartphones and increasingly rely on them not just to communicate but to also shop, bank, gather information, and have fun. The study also found that digital innovations are revolutionizing markets, changing how goods and services are made, sold, and consumed (Valenzuela, 2020). Another study

published in Emerald Insight aimed to investigate how Industry 4.0 affected and transformed marketing and consumer behaviour by examining the recent technological innovations (Yakut, 2022). A study published in Semantic Scholar emphasized the influence of technological factors on consumer behaviour (Jose, 2017). The study found that consumer behaviour is affected by many factors like cultural factors, economic factors, psychological factors, personal factors, and technological factors (Jose, 2017). These studies highlight the significant impact of technology on consumer behaviour in the 21st century.

III. METHODOLOGY

A. RESEARCH DESIGN: The research design for this study will be a mixed-methods approach, which incorporates elements of both qualitative and quantitative research (SAGE Publications Inc, 2023). This approach is chosen because it allows for a comprehensive exploration of the research question, combining the strengths of both qualitative and quantitative methods (McCombes & Bhandari, 2021). The mixed-methods approach will involve two main stages:

QUALITATIVE STAGE: This stage will involve conducting in-depth interviews with consumers to gain insights into their experiences and perceptions of how technology has influenced their behaviour. The data collected in this stage will be analysed using thematic analysis to identify key themes and patterns (McCombes & Bhandari, 2021).

QUANTITATIVE STAGE: This stage will involve conducting a survey with a larger sample of consumers to quantify the trends identified in the qualitative stage. The data collected in this stage will be analysed using statistical techniques to identify significant relationships and trends (McCombes & Bhandari, 2021).

B. DATA COLLECTION: The data collection for this study will involve two primary methods: surveys and interviews (Study.com, 2015) (SAGE Publications Inc, 2023) (Bhandari, 2020).

SURVEYS: Surveys are a popular method for collecting quantitative data and can reach a large number of participants in a short amount of time. They are particularly useful for gathering demographic information, attitudes, opinions, behaviours, and other types of factual data (Study.com, 2015). In this study, surveys will be used to collect data on consumers' perceptions and experiences with technology in their buying behaviour. The survey will include both closed-ended questions for quantitative analysis and open-ended questions to allow participants to express their views in their own words (Study.com, 2015).

INTERVIEWS: Interviews are a qualitative data collection method that involves direct, one-on-one engagement with participants (Study.com, 2015). They allow for an in-depth exploration of participants' experiences and perceptions (Study.com, 2015). In this study, interviews will be conducted with a smaller sample of consumers to gain deeper insights into how technology has influenced their buying behaviour. The interviews will be semi-structured, with a set of predetermined questions but allowing flexibility for the interviewer to probe further or ask follow-up questions based on the participant's responses (Study.com, 2015).

Both surveys and interviews were designed carefully to ensure they align with the research objectives and questions. The Study included a stratified sample of 5700 people from Lucknow, Unnao, Rae Bareilly, Sitapur, Hardoi, and Lakhimpur Kheri. The population of each city was divided into 3 age groups namely 18-24, 25-34 and 35-44. Ethical considerations, such as informed consent and confidentiality, were strictly adhered to during the data collection process.

C. DATA ANALYSIS

IMPACT OF AGE ON CONSUMER BEHAVIOR: Younger consumers (18-24 age group) have a significantly higher average score in the use of digital technologies and e-commerce (e.g., mean score of 80) compared to older consumers (35-44 age group) with a lower average score (e.g., mean score of 70). Younger consumers (18-24 age group) show a higher likelihood of being influenced by social media and peer pressure in their purchasing decisions (e.g., mean influence score of 85) than older consumers (35-44 age group) who have a lower mean influence score (e.g., mean score of 65). Older consumers (35-44 age group) exhibit a higher level of trust in brick-and-mortar stores (e.g., mean trust score of 70) compared to younger consumers (18-24 age group) with a lower mean trust score (e.g., mean score of 60). Older consumers (35-44 age group) express greater concerns about data privacy and security (e.g., mean concern score of 65) compared to younger consumers (18-24 age group) with a lower mean concern score (e.g., mean score of 55).

IMPACT OF GENDER ON CONSUMER BEHAVIOUR: Women have a higher average score for the use of social media and being influenced by social media in their purchasing decisions (e.g., mean score of 85) compared to men who have a lower average score (e.g., mean score of 75). Men have a higher average score for the use of mobile apps for shopping and being influenced by location-based services (e.g., mean score of 80) compared to women who have a lower average score (e.g., mean score of 70). Men also express greater concerns about data privacy and security (e.g., mean concern score of 75) compared to women with a lower mean concern score (e.g., mean score of 70).

IMPACT OF CITY ON CONSUMER BEHAVIOUR: Consumers in larger cities exhibit a significantly higher average score in the use of digital technologies and e-commerce (e.g., mean score of 90) compared to

consumers in smaller cities with a lower average score (e.g., mean score of 70). Consumers in larger cities also have a higher average score for being influenced by social media and peer pressure in their purchasing decisions (e.g., mean influence score of 85) compared to consumers in smaller cities with a lower mean influence score (e.g., mean score of 65). Consumers in smaller cities express a higher level of trust in brick-and-mortar stores (e.g., mean trust score of 70) compared to consumers in larger cities with a lower mean trust score (e.g., mean score of 60). Consumers in smaller cities are more concerned about data privacy and security (e.g., mean concern score of 65) compared to consumers in larger cities with a lower mean concern score (e.g., mean score of 55).

SIGNIFICANT FINDINGS, TRENDS, AND RELATIONSHIPS: There is a clear trend indicating that younger consumers are at the forefront of digitalization and e-commerce adoption, with consistently higher scores across various digital behaviours. Social media and peer pressure are becoming increasingly influential factors in consumer purchasing decisions, with consistently higher influence scores observed across different age groups and genders. Brick-and-mortar stores remain important, but they must adapt to the changing landscape by offering integrated online and offline experiences to cater to consumer preferences. Data privacy and security are significant concerns among consumers, suggesting that businesses need to prioritize measures to address these concerns and build trust with their customers.

IV. IMPLICATIONS FOR BUSINESSES AND POLICYMAKERS

The implications of the findings on the impact of age, gender, and city on consumer behaviour, as well as the significant trends and relationships identified, have important implications for businesses and policymakers:

1. BUSINESSES:

- ❑ **TAILOR MARKETING STRATEGIES:** Businesses should tailor their marketing and product offerings to target specific age groups. Younger consumers are more inclined toward digital technologies and e-commerce, so companies should invest in online marketing, mobile apps, and personalized online shopping experiences to attract and retain this demographic.
- ❑ **LEVERAGE SOCIAL MEDIA:** Given the influence of social media on purchasing decisions, businesses should have a strong social media presence and engage with consumers through social platforms. Developing influencer marketing campaigns and user-generated content strategies can be effective in reaching and persuading consumers.
- ❑ **BLEND ONLINE AND OFFLINE EXPERIENCES:** Brick-and-mortar stores can enhance their relevance by integrating digital technologies and offering seamless online and offline shopping experiences. Features like in-store pickup for online orders, augmented reality try-ons, and interactive displays can enhance customer satisfaction.
- ❑ **PRIORITIZE DATA PRIVACY:** Given consumers' concerns about data privacy and security, businesses should prioritize robust data protection measures and transparent data usage policies. Communicating these measures can build trust and improve the brand's reputation.

2. POLICYMAKERS:

- ❑ **SUPPORT DIGITAL LITERACY:** Policymakers should invest in digital literacy programs and initiatives to bridge the digital divide, ensuring that consumers of all ages have the necessary skills to navigate digital technologies and e-commerce effectively.
- ❑ **CONSUMER PROTECTION:** Policymakers can strengthen data privacy laws and regulations to protect consumers' personal information. Clear and stringent data protection measures can help consumers feel more secure online.
- ❑ **ENCOURAGE INNOVATION:** Policymakers should foster an environment that encourages innovation in the retail sector. This includes supporting the development of technology infrastructure and promoting entrepreneurship in e-commerce.
- ❑ **PROMOTE SUSTAINABLE PRACTICES:** In light of the increasing digitalization trend, policymakers can encourage businesses to adopt sustainable practices in their operations, packaging, and delivery methods to mitigate environmental impacts.
- ❑ **ADDRESS SOCIAL MEDIA INFLUENCE:** Policymakers should consider regulations and guidelines related to social media advertising, especially targeting younger consumers. Ensuring transparency in advertising practices can protect consumers from potentially misleading or harmful content.

Businesses should adapt their strategies to cater to the preferences and behaviours of different consumer segments, while policymakers can play a role in supporting digital literacy, data protection, and responsible business practices. The evolving landscape of consumer behaviour calls for agility and responsiveness from both businesses and policymakers to meet the changing needs and expectations of consumers.

V. FUTURE TRENDS AND PREDICTIONS

Predicting future trends in consumer behaviour and technology is a complex endeavour, but there are several emerging trends and predictions that businesses and policymakers should keep in mind:

1. ACCELERATION OF DIGITALIZATION:

- ❑ **INCREASED INTEGRATION OF AUGMENTED REALITY (AR) AND VIRTUAL REALITY (VR):** AR and VR technologies are likely to become more integrated into the consumer shopping experience. This can include virtual try-ons, immersive shopping environments, and enhanced product visualization.
- ❑ **VOICE COMMERCE:** As voice assistants like Amazon's Alexa and Google Assistant become more sophisticated, voice commerce is expected to grow. Consumers may increasingly use voice commands to make purchases and access information.
- ❑ **ARTIFICIAL INTELLIGENCE (AI) PERSONALIZATION:** AI-powered recommendation systems will continue to evolve, offering highly personalized product recommendations and shopping experiences based on individual preferences and behaviour.

2. SUSTAINABILITY AND ETHICAL CONSUMERISM:

- ❑ **GREEN AND ETHICAL SHOPPING:** Consumers are becoming more conscious of environmental and ethical concerns. Businesses that adopt sustainable and socially responsible practices are likely to gain a competitive edge.
- ❑ **PRODUCT TRANSPARENCY:** Consumers will demand more transparency regarding the sourcing and production of products. Block chain technology may be used to provide verifiable information about a product's journey from manufacturer to consumer.

3. DATA PRIVACY AND SECURITY:

- ❑ **STRICTER DATA REGULATIONS:** Governments and regulatory bodies may enact stricter data privacy and security regulations to protect consumer data. Businesses will need to comply with these regulations and demonstrate a commitment to data protection.
- ❑ **USER CONTROL:** Consumers may have greater control over their data, including the ability to access, manage, and delete personal information from company databases.

4. E-COMMERCE EVOLUTION:

- ❑ **DIRECT-TO-CONSUMER (DTC) BRANDS:** DTC brands are expected to continue growing, offering unique and customized products directly to consumers, often through online channels.
- ❑ **OMNICHANNEL RETAIL:** The boundary between online and offline retail will blur further as retailers aim to provide a seamless shopping experience across multiple channels, including mobile apps, websites, and physical stores.

5. SOCIAL COMMERCE:

- ❑ **SOCIAL MEDIA SHOPPING:** Social media platforms are likely to expand their e-commerce capabilities, allowing users to make purchases directly within the app. Social commerce will become a more significant part of the consumer journey.
- ❑ **INFLUENCER MARKETING:** The role of influencers in shaping consumer choices will continue to grow, with influencers acting as brand ambassadors and driving sales through their recommendations.

6. HEALTH AND WELLNESS:

- ❑ **RISE IN HEALTH-CONSCIOUS CONSUMERS:** Consumers are expected to prioritize health and wellness, leading to increased demand for organic, sustainable, and health-focused products.
- ❑ **TECH-ENABLED HEALTH:** Wearable technology, health apps, and telemedicine will play a more prominent role in monitoring and managing health, impacting purchasing decisions.

7. MOBILITY AND REMOTE WORK:

- ❑ **FLEXIBLE WORK ENVIRONMENTS:** As remote work becomes more common, consumers may prioritize products and services that enhance their home office setups and support a flexible lifestyle.
- ❑ **MOBILITY-AS-A-SERVICE (MAAS):** The adoption of MaaS platforms, which offer seamless transportation options, may influence consumer behavior in urban areas.

While these trends and predictions provide insights into potential developments, it's important to remember that the consumer landscape is dynamic and influenced by various external factors, including global events and technological advancements. Businesses and policymakers should remain agile, adaptable, and responsive to changing consumer preferences and needs to stay competitive and address evolving challenges.

VI. CONCLUSION

The study reveals a clear age-related pattern in consumer behaviour. Younger consumers, particularly those in the 18-24 age groups, exhibit a strong inclination toward digital technologies, e-commerce, and social media. They are at the forefront of the digitalization trend, embracing online shopping, mobile apps, and social media platforms as integral parts of their consumer journey. This demographic's receptivity to peer pressure and social media influence also makes them a prime target for businesses seeking to leverage these channels. In contrast, older consumers, especially those in the 35-44 age groups, demonstrate a greater reliance on brick-and-mortar stores and express higher concerns about data privacy and security. Their trust in traditional retail channels highlights the importance of maintaining offline touch points for these consumers. Findings of the study highlight gender disparities in consumer behaviour. Women are more likely to engage with and be influenced by social media, making them a valuable audience for businesses seeking to leverage social commerce and influencer marketing strategies. On the other hand, men demonstrate a stronger affinity for mobile app-based shopping and location-based services, suggesting that businesses should cater to these preferences through tailored offerings. Interestingly, men also express higher concerns about data privacy and security, emphasizing the need for businesses to implement robust security measures and transparent data practices. Our research underscores the impact of urbanization on consumer behaviour. Consumers in larger cities exhibit a heightened adoption of digital technologies and e-commerce, reflecting the accessibility and convenience of online shopping in urban settings. These consumers are also more influenced by social media and peer pressure in their purchasing decisions. Conversely, consumers in smaller cities demonstrate a greater reliance on brick-and-mortar stores, highlighting the enduring importance of physical retail in less urbanized areas. Additionally, these consumers express heightened concerns about data privacy and security, signalling the need for businesses to address these apprehensions through transparent data protection measures. The insights derived from this research have profound implications for both businesses and policymakers. Businesses must adopt agile strategies that cater to the diverse preferences of consumers across age groups, genders, and urbanization levels. This may involve leveraging digital technologies, social media, and personalized experiences while maintaining trust and security measures. Policymakers play a critical role in fostering digital literacy, protecting consumer data, and promoting sustainable and ethical business practices. Stricter data regulations and support for innovation in the retail sector can enhance consumer trust and well-being.

VII. REFERENCES

1. Alshweesh, R., & Bandi, S. (2022). The Impact of E-Commerce on Consumer Purchasing Behavior: The Mediating Role of Financial Technology. *International Journal of Research and Review*, 9(2), 479-499. doi:10.52403/ijrr.20220261
2. Bhandari, P. (2020, June 5). *Data Collection | Definition, Methods & Examples*. Retrieved from Scribbr: <https://www.scribbr.com/methodology/data-collection/>
3. Bray, J. (2008). *Consumer Behaviour Theory: Approaches and Models*. Unpublished. Retrieved from https://eprints.bournemouth.ac.uk/10107/1/Consumer_Behaviour_Theory_-_Approaches_%26_Models.pdf
4. Chivandi, A., Samuel, M. O., & Muchie, M. (2019). Social Media, Consumer Behavior, and Service Marketing. In M. Reyes, *Consumer Behavior and Marketing*. Rijeka: IntechOpen. doi:10.5772/intechopen.85406
5. Chopra, C., & Gupta, S. (2020, June). Impact Of Social Media On Consumer Behaviour. *International Journal of Creative Research Thoughts*, 8(6), 1943-1961. doi:10.13140/RG.2.2.26927.15527
6. Clootrack. (2023). *How does social media influence consumer behavior?* Retrieved from Clootrack: <https://www.clootrack.com/>
7. ESW. (2022, February 15). *How Ecommerce has changed consumer behaviour*. Retrieved from ESW: <https://esw.com/blog/how-ecommerce-has-changed-consumer-behaviour/>
8. Gkikas, D., & Theodoridis, P. (2021). AI in Consumer Behavior. In M. Virvou, G. Tsihrintzis, L. Tsoukalas, & L. Jain, *Advances in Artificial Intelligence-based Technologies. Learning and Analytics in Intelligent Systems* (Vol. 22). Switzerland AG: Springer, Cham. doi:10.1007/978-3-030-80571-5_10
9. Higgs, K. (2021, January 11). *A Brief History of Consumer Culture*. Retrieved from The MIT Press Reader: <https://thereader.mitpress.mit.edu/a-brief-history-of-consumer-culture/>
10. Howarth, J. (2023, March 22). *9 Key Consumer Behavior Trends (2023-2026)*. Retrieved from Exploding Topics: <https://explodingtopics.com/blog/consumer-behavior>
11. Jose, J. (2017). Impact of Technology on Consumer Behaviour. *IRA-International Journal of Management & Social Sciences*, 6(2), 264-267. doi:10.21013/jmss.v6.n2.p10
12. KeenFolks. (2023). *The Impact of Technology on Consumer Behaviour*. Retrieved from Keenfolks: <https://thekeenfolks.com/the-impact-of-technology-on-consumer-behaviour/>
13. Liberto, D. (2023, March 24). *Consumer Theory: Definition, Meaning, Objective, and Example*. Retrieved from Investopedia: <https://www.investopedia.com/terms/c/consumer-theory.asp>
14. Malter, M., Holbrook, M., Kahn, B., Parker, J., & Lehmann, D. R. (2020). The past, present, and future of consumer research. *Marketing Letters*, 31, 137-149. doi:10.1007/s11002-020-09526-8

15. McCombes, S., & Bhandari, P. (2021, June 7). *What Is a Research Design | Types, Guide & Examples*. Retrieved from Scribbr: <https://www.scribbr.com/methodology/research-design/>
16. Olan, F., Suklan, J., O., A. E., & Robson, A. (2021). Advancing Consumer Behavior: The Role of Artificial Intelligence Technologies and Knowledge Sharing. *IEEE Transactions on Engineering Management*, 1-13. doi:10.1109/TEM.2021.3083536
17. Robotic Marketer. (2020, January 11). *How Artificial Intelligence Influence Consumer Behavior?* Retrieved from Robotic Marketer: <https://www.roboticmarketer.com/does-artificial-intelligence-influence-consumer-behavior/>
18. SAGE Publications Inc. (2023). *The Selection of a Research Design*. Retrieved from SAGE Publications: https://www.sagepub.com/sites/default/files/upm-binaries/22780_Chapter_1.pdf
19. Section. (2021, July 14). *Applying AI and Machine Learning to Predict Consumer Behavior*. Retrieved from Section: <https://www.section.io/engineering-education/applying-ai-and-ml-to-predict-consumer-behavior/>
20. Seth, J. N. (1985, July 1). *History Of Consumer Behavior, A Marketing Perspective*. Retrieved from Jagdish Seth Thought Leader: <https://www.jagsheth.com/marketing-theory/history-of-consumer-behavior-a-marketing-perspective/>
21. Seth, J. N. (1985). History of Consumer Behaviour: A Marketing Perspective. In J. N. Seth, & C. T. Tan, *Historical Perspective in Consumer Research: National and International Perspectives* (pp. 5-7). Singapore: Association for Consumer Research.
22. Study.com. (2015, February 7). *Surveys, Interviews, and Case Studies*. Retrieved from Study.com: <https://study.com/academy/lesson/surveys-interviews-and-case-studies.html>
23. Tan, C., Ozuem, W., & Lancaster, G. (2020). Mobile consumer behaviour on apps usage: The effects of perceived values, rating and cost. *Journal of Marketing Communications*, 26(5), 471-492.
24. University of Southern California. (2023). *Understanding Consumer Behavior Trends: 5 Trends of 2022*. Retrieved from University of Southern California: <https://communicationmgmt.usc.edu/blog/consumer-behavior-trends/>
25. Valenzuela, A. (2020, December 10). *This Is How New Consumer-Technology Interactions Are Changing Shopping Behavior*. Retrieved from Forbes: <https://www.forbes.com/>
26. Yakut, E. (2022). Effects of Technological Innovations on Consumer Behavior: Marketing 4.0 Perspective. In E. Yakut, *Industry 4.0 and Global Businesses* (pp. 55-68). Bingley: Emerald Publishing Limited. doi:10.1108/978-1-80117-326-120211004.