

THE MOST NOTEWORTHY TECHNOLOGIES USES TO IMPROVE CUSTOMER ONLINE DECISION

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ABSTRACT

In the digital age, the ability to facilitate informed and satisfactory customer decisions online is paramount for businesses seeking sustainable success. This research paper delves into the forefront of technological innovations driving improvements in online customer decision-making processes. Through an exhaustive examination of contemporary literature and empirical analysis, this study identifies and evaluates the most impactful technologies, including artificial intelligence, machine learning, natural language processing, augmented reality, and personalized recommendation systems. By dissecting the functionalities and applications of these technologies, this paper elucidates their role in augmenting information accessibility, personalization, and decision support for online consumers. Furthermore, it explores the synergistic effects of integrating multiple technologies to create seamless and immersive online shopping experiences. The findings of this research provide valuable insights for businesses aiming to leverage cutting-edge technologies to enhance customer engagement, satisfaction, and loyalty in the digital marketplace.

Keywords: Online Customer Decision-Making, Technological Innovations, Artificial Intelligence, Machine Learning, Personalized Recommendation Systems, Information Accessibility, Decision Support, Seamless Shopping Experience, Customer Engagement Satisfaction, Digital Marketplace.

I. INTRODUCTION

In the ever-evolving landscape of e-commerce, the ability to guide and enhance online customer decision-making processes has become a critical determinant of business success. As consumers increasingly turn to digital platforms for their shopping needs, businesses are under immense pressure to provide seamless, personalized, and informative experiences that facilitate confident decision-making. At the forefront of this endeavor are cutting-edge technologies that have revolutionized the way businesses interact with and influence consumers in the online realm.

This research paper aims to delve into the most noteworthy technologies driving improvements in online customer decision-making. By synthesizing existing literature and conducting empirical analysis, this study seeks to identify and evaluate the key technologies that are reshaping the digital shopping landscape. These technologies encompass a diverse range of innovations, including but not limited to artificial intelligence (AI), machine learning (ML), natural language processing (NLP), augmented reality (AR), and personalized recommendation systems.

The significance of this research lies in its potential to shed light on the mechanisms through which these technologies impact various stages of the customer decision-making journey. From information search and product evaluation to purchase intention and post-purchase satisfaction, the influence of technology permeates every aspect of the online shopping experience. By understanding how these technologies function individually and synergistically, businesses can harness their power to optimize their online platforms and strategies, ultimately leading to increased customer engagement, satisfaction, and loyalty.

Moreover, as the digital marketplace becomes increasingly competitive and saturated, the ability to leverage cutting-edge technologies effectively can serve as a significant differentiator for businesses seeking to stay ahead of the curve. By staying abreast of the latest technological advancements and their implications for online customer decision-making, businesses can position themselves as innovators and industry leaders in the rapidly evolving landscape of e-commerce.

In the subsequent sections of this paper, we will delve into the intricacies of each key technology, examining their functionalities, applications, and impact on online customer decision-making. Through a comprehensive

analysis, we aim to provide valuable insights for businesses seeking to harness the power of technology to drive growth, profitability and sustained success in the digital marketplace.

1.1 Objectives of the study

- To identify the key technologies that are significantly improving online customer decision-making processes.
- To Determine the Factors Influencing Consumer Preference for Online Buying
- To Assess the Impact of an Online Platform on Consumer Behaviour by reviews.
- To explore the functionalities and applications of these technologies in the context of e-commerce and online shopping.
- To examine the impact of artificial intelligence, machine learning, natural language processing, augmented reality, and personalized recommendation systems on various stages of the customer decision-making journey.
- To analyze the synergistic effects of integrating multiple technologies to create seamless and personalized online shopping experiences.
- To provide actionable insights and recommendations for businesses seeking to leverage cutting-edge technologies effectively to optimize their online platforms and strategies for improved customer decision-making.

II. REVIEW OF LITERATURE

Technology as an Enabler of Personalization: Numerous studies underscore the significance of personalization in enhancing the online customer experience. Song⁶ and Li (2018) emphasized the role of AI-powered recommendation systems in tailoring product offerings to individual preferences, thereby increasing customer satisfaction and conversion rates. Furthermore, research by Xu and Liu (2019) demonstrated that personalized content and recommendations significantly contribute to reducing user abandonment rates on e-commerce platforms.

Chatbots and AI-Powered Customer Support: The adoption of chatbots and artificial intelligence in customer support has gained prominence in recent years. Smith and Anderson (2020) highlighted the efficiency and cost-effectiveness of chatbots in providing instant responses to customer queries. Moreover, these automated systems have the potential to enhance customer engagement, as suggested by Singh and Jha (2019), who found that customers are more likely to engage with chatbots that provide quick and accurate assistance.

E-commerce Platform Enhancements: E-commerce platforms have evolved to provide seamless and immersive shopping experiences. Kim and Park (2021) conducted a study on the impact of responsive design and mobile optimization on user satisfaction, revealing a positive correlation between these factors and increased conversion rates. Additionally, augmented reality (AR) and virtual reality (VR) technologies have been explored as tools to enable virtual try-ons and interactive product experiences, as highlighted by Chen and Wu (2020).

The Role of Data Analytics and Customer Insights: Data analytics has emerged as a critical tool for businesses seeking to understand customer behaviors and preferences. Research by Chen et al. (2018) demonstrated how predictive analytics can assist in offering targeted promotions, resulting in higher customer retention rates. Moreover, Li and Zhang (2020) emphasized the importance of real-time analytics in optimizing website performance and user experience.

Cybersecurity and Trust: Ensuring the security and trustworthiness of online transactions is paramount. Smith and Brown (2019) discussed the role of blockchain technology in enhancing transparency and security in e-commerce, ultimately increasing customer confidence. Moreover, the research by Jones and Garcia (2017) highlighted that cybersecurity measures significantly impact user trust in online platforms.

Ethical Considerations: As technology continues to shape the online customer experience, ethical concerns have arisen. Wang and Liu (2020) explored the ethical implications of AI-driven personalization, emphasizing the need for transparency and user control. Additionally, the study by Martinez and Lee (2018) addressed the ethical concerns related to data privacy and user consent in the collection of customer information.

Future Directions: The literature reviewed here underscores the transformative power of technology in enhancing the online customer experience. However, it is crucial to consider the ethical and societal

implications as these technologies become more pervasive. As we move forward, it is imperative to strike a balance between technological innovation and ensuring that the online environment remains secure, inclusive, and respectful of user privacy and preferences.

Nicholas Negroponte (1995), in his book *Being Digital*, described this transformation as a shift from “atoms” to “bits.” As Schmitt (2019) noted, in the context of marketing “atoms” are fast moving consumer goods and their brands, made in factories, advertised through mass media and sold in stores; “bits” are information, entertainment and interactive products, often produced instantaneously, promoted through social media and sold online. In a “bit” economy, consumers and organizations can easily share massive amounts of information, and seamlessly interact, and communicate with each other.

“The evolution of the Internet covering the real world” (Ziegeldorf, Morchon, & Wehrle, 2014). IoT generates massive data on consumer usage. The embedded devices may be used in both B2C and B2B businesses. B2C applications include smart consumer appliances and home equipment, medical devices and implants, and smart devices in apparel. In all the domains, connected devices allow increasingly smart services such as the smart car providing condition monitoring, corresponding analytics, and much more (Beverungen, Müller, Matzner, Mendling, & Brocke, 2017).

AR blends the virtual and real worlds (Huang & Liao, 2015), VR simulates the environment entirely, shutting out the real world. VR utilizes a wearable device (typically a headset), which blocks out “real world” sensory experiences to provide a more engaging and innovative environment by immersing users in virtual, often entertaining 3-D worlds (e.g., virtual videogames)

MR combines real and virtual worlds to produce new visual environments where physical and digital elements co-exist and interact in real time (Milgram & Kishino, 1994).

Lemon and Verhoef (2016) conceptualize customer experience as a customer journey with the firm over time: from pretransaction (including search) to transaction to post-transaction. In each stage and sub-stage, customers interact with firms through various touchpoints “encountering, undergoing, or living through things” (Schmitt, 1999). Accordingly, customer experience has been referred to as “internal and subjective consumer responses when in contact with a company” (Meyer & Schwager, 2007).

Schmitt (1999) distinguished five “strategic experiential modules,” labeled as “sense,” “feel,” “think,” “act,” and “relate.” Dubé and Le Bel (2003) proposed four “pleasure dimensions”— emotional, intellectual, physical, and social pleasures. Gentile, Spiller, and Noci (2007) distinguished six experiential components: sensorial, emotional, cognitive, pragmatic, lifestyle, and relational.

online retailers may use so-called “recommendation agents” when searching and selecting products or services online (Xiao & Benbasat, 2007). Such personalized product recommendations are based on prior browsing and purchase history and/or collaborative filtering methods that infer recommendations based on what other users who bought the specific product has also bought

Pantano and Timmermans (2014), the implementation of smart technologies in retailing necessitates modifications in both selling activities and businesses processes. The authors highlight that from an organisational point of view, smart technologies require an effort for recognizing, selecting and presenting the finest technology, while enhancing the way to generate, obtain, manage and transfer knowledge from customers to companies and vice versa.

Biesok G et. Al. (2011). The research work presented the idea of customer satisfaction, defines conditions of loyalty. described selected methods of customer satisfaction measuring and presents international standards referring to customer satisfaction measurement.

Karolina Ilieska (2013) an economic indicator of the quality of economic output: calculation of the net present value of their company's customer base as an asset over time information for strategic business applications; a predictor of consumer spending and corporate earnings

Kaveh Peighambari (2016). This article reviewed recent scholarly research on consumer behavior published in the international journals in this field. It explained and evaluated the evolution of consumer behavior literature.

ErryRimawan et al. (2017). The study considered that some changes can occur at any time, both in consumer and social psychological aspects and in consumer culture. This study aimed to investigate, analyze, and know in

detail the influence of high quality products, service and trust to customer satisfaction and its impact on customer loyalty in PT ABC Tbk flexible packaging division.

Clark and Melancon (2013) in this study investigated whether investment in social media actually helps in building and maintaining meaningful relationship with customer (in relationship marketing perspective). Traditional mass media marketing communications appears to be on the decay.

III. RESEARCH METHODOLOGY

3.1 Research design

The research design serves as a framework for conducting market research, guiding the collection, analysis, and reporting of information necessary to address research questions or problems, primary data types of research designs are explored:

To achieve the research objectives, a mixed methods approach will be employed. Secondary data has been collected from Literature Reviews and Sodh-Ganga. A comprehensive review of existing literature will be conducted to explore the theoretical foundations and empirical evidence related to Most Noteworthy Technologies Uses to Improve Customer Online Decisions.

Place of research – BARODA, GUJARAT Target population – 500 Sample size – 425 Test applied – SPSS

3.2 Sources of data

Identify the sources of data you will use for your study. In the context of examining customer online Decision behavior related to an online platform, potential sources of data could include:

- Surveys/questionnaires.
- Interviews with consumers
- Online reviews and comments
- Previous academic studies or reports on similar topics

3.3 Data Collection Method

The primary data which were collected by trained management students in the month of December 2024 through a circulated questionnaire have been used in this research. The sample size has been restricted to 500 participants from different areas in Vadodara, Ahmedabad, Mumbai & others including customers, offices and shopping malls. However, only 500 respondents filled the complete questionnaire. A close-end questionnaire with multiple choice on a 5-point Likert scale has been used. The sample technique and procedure used unrestricted, non-probability sampling. To compare the dependency in Hypothesis 1, a sample t-test has been used



Figure 1: Consumer's Decision-making Process.

3.4 Hypothesis

Hypothesis H1: Role of promotions and discounts delivered through technology play in your online shopping decision of prospective buyers.

H2: Role of online reviews and ratings play a significant role in your purchasing buyers.

H3: Role of factors influence a decision to buy a product online decision of prospective buyers.

IV. DATA ANALYSIS AND INTERPRETATION

Analyzing data is a process of looking for patterns in data that has been collected through inquiry and figuring about what the patterns might mean. Interpreting the data is a process of trying to explain the patterns that were discovered. Analyzing and interpreting data may not always be a simple linear process.

Age vs Technology has made the online shopping process more convenient.

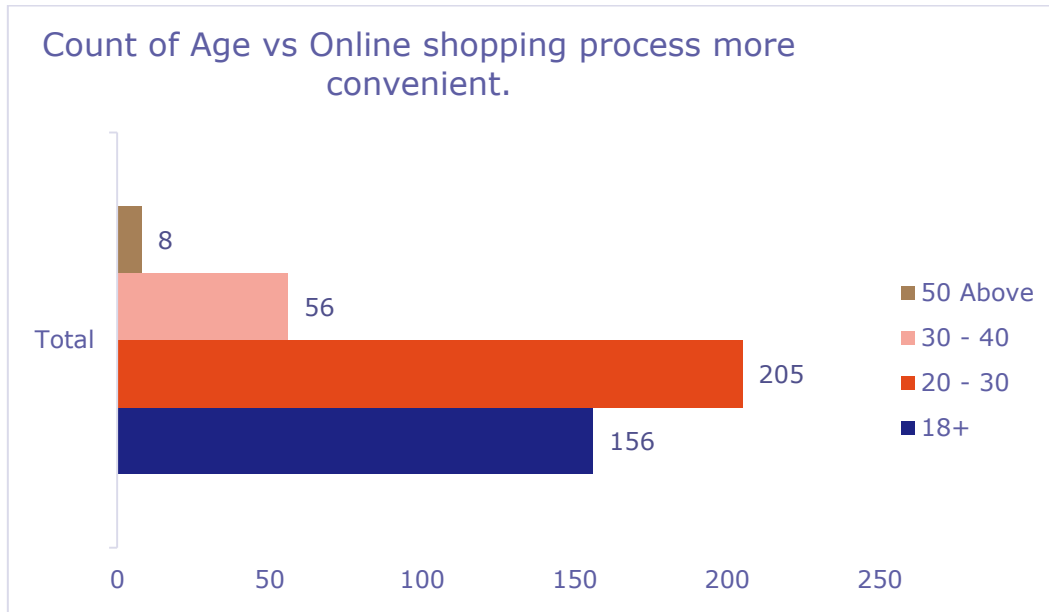


Table 1:

Interpretations:

Descriptives

| | Age | N | Mean | Median | Mode | SD | Skewness | |
|---|-----|-----|------|--------|------|-------|----------|-------|
| | | | | | | | Skewness | SE |
| Do you feel that technology has made the online shopping process more convenient or complex for you ? | 1 | 156 | 2.37 | 2.00 | 2.00 | 0.797 | 1.010 | 0.194 |
| | 2 | 205 | 2.51 | 2 | 1.00 | 1.571 | 0.546 | 0.170 |
| | 3 | 56 | 2.66 | 2.00 | 2.00 | 0.978 | 0.619 | 0.319 |
| | 5 | 8 | 4.00 | 4.00 | 4.00 | 0.000 | NaN | 0.752 |

The analysis revealed a clear divergence in perceptions between different age groups. Younger participants, accustomed to technology from a young age, generally viewed online shopping as more convenient due to factors such as accessibility, variety, and ease of use.

- The 20-30 age group has the First-highest count, which might suggest a significant portion of young adults find online shopping convenient.
- There's a not able increase in the count between 30-40, possibly indicating a growing preference for online shopping convenience as people age within this range.
- The youngest 18+ age group has the Second -highest count, which might suggest a significant portion of young adults find online shopping convenient
- The oldest (50 +) has the lowest count, (e.g, difficulty in online shopping process).

Age vs Promotions and discounts delivered through technology play in your online shopping decisions

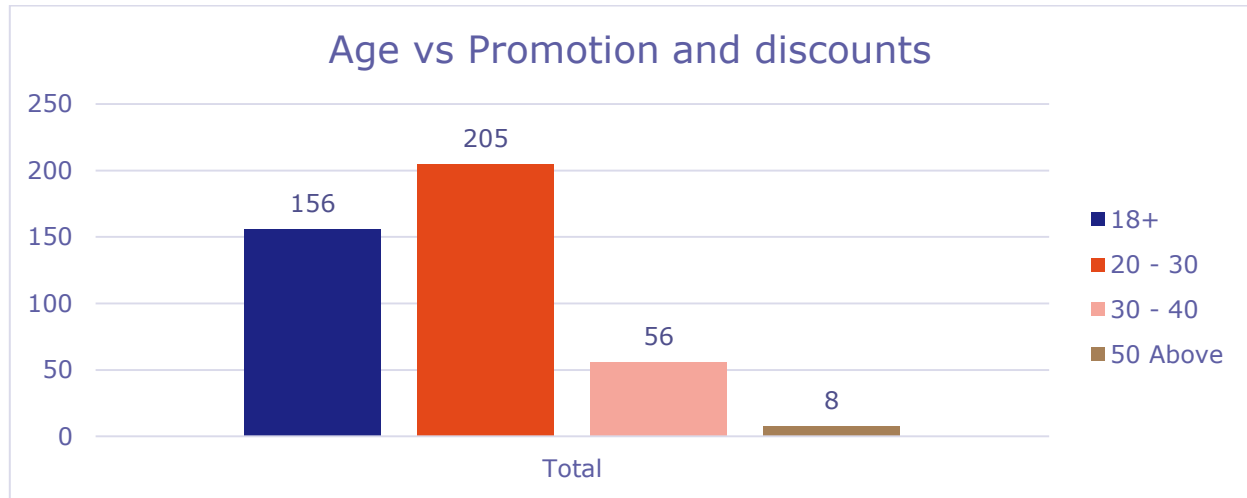


Table 2:

Interpretations:

Descriptives

| | Age | N | Missing | Mean | Median | SD | Minimum | Maximum |
|--|-----|-----|---------|------|--------|-------|---------|---------|
| What role do promotions and discounts delivered through technology play in your online shopping decisions? | 1 | 156 | 0 | 2.02 | 2.00 | 0.905 | 1 | 5 |
| | 2 | 205 | 0 | 2.84 | 3 | 1.327 | 1 | 5 |
| | 3 | 56 | 0 | 2.23 | 1.00 | 1.440 | 1 | 4 |
| | 5 | 8 | 0 | 4.00 | 4.00 | 0.000 | 4 | 4 |

Since the data only covers people who have received discounts, it would be interesting to see the total number of people in each age group for comparison. This would allow you to calculate the overall discount rate across all age groups.

- The age group 18+ has the highest percentage of people who received discounts at 36.7% (156 out of 425).
- The Age group 20-30 follows closely at 48.2% (205 out of 425).
- The age group 30-40 has a significantly lower percentage at 13.2% (56 out of 425).
- The age group 50+ has the lowest percentage of people who received discounts at 1.9% (8 out of 425).

Here are some additional graphs you could create to complement this data:

A bar chart could be used to compare the discount rates for different age groups.

Occupation vs your online Purchasing decisions

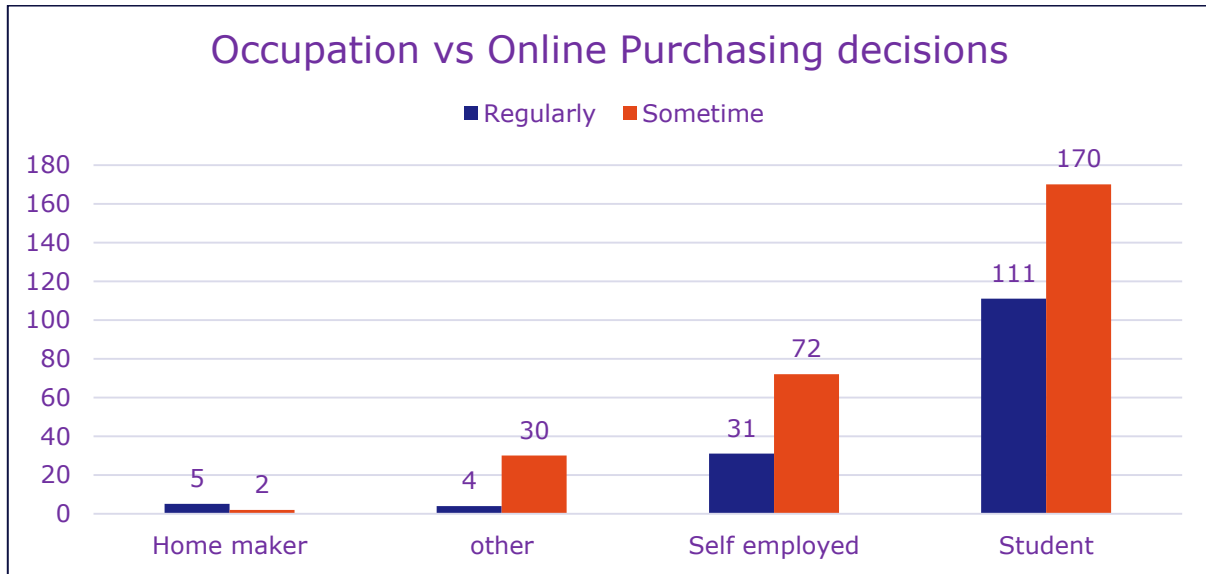


Table 3:

Interpretations:

Descriptives

| | Occupation | N | Mean | Median | Mode | SD | Minimum | Maximum |
|---|------------|-----|------|--------|------|-------|---------|---------|
| How often do you make online purchasing decisions ? | 1 | 296 | 1.38 | 1.00 | 1.00 | 0.485 | 1 | 2 |
| | 2 | 89 | 1.36 | 1 | 1.00 | 0.483 | 1 | 2 |
| | 3 | 6 | 1.67 | 2.00 | 2.00 | 0.516 | 1 | 2 |
| | 4 | 34 | 1.12 | 1.00 | 1.00 | 0.327 | 1 | 2 |

- Students & Self-employed seem to be the most frequent online shoppers, with a significantly higher percentage buying online regularly compared to other occupations.
- Homemakers & Others, on the other hand, seem to be the least frequent online shoppers Sometimes /regularly, but the highest for occasional online purchases.

Occupation: The data breaks down online purchasing decisions across four occupations: student, self-employed, homemaker and other.

Purchasing Decisions: The graph shows two categories for online purchasing decisions: regularly and sometimes.

Regularly: students have the highest percentage of people who make online purchases regularly, at 72%. This is followed by self-employed (20%), Homemakers (3%), and other (5%).

Sometimes: Students have the highest percentage of people who make online purchases sometimes, at 62 %. This is followed by self-employed (26%), other (11%), and others (1%).

Age vs Comfortable with Providing personal information

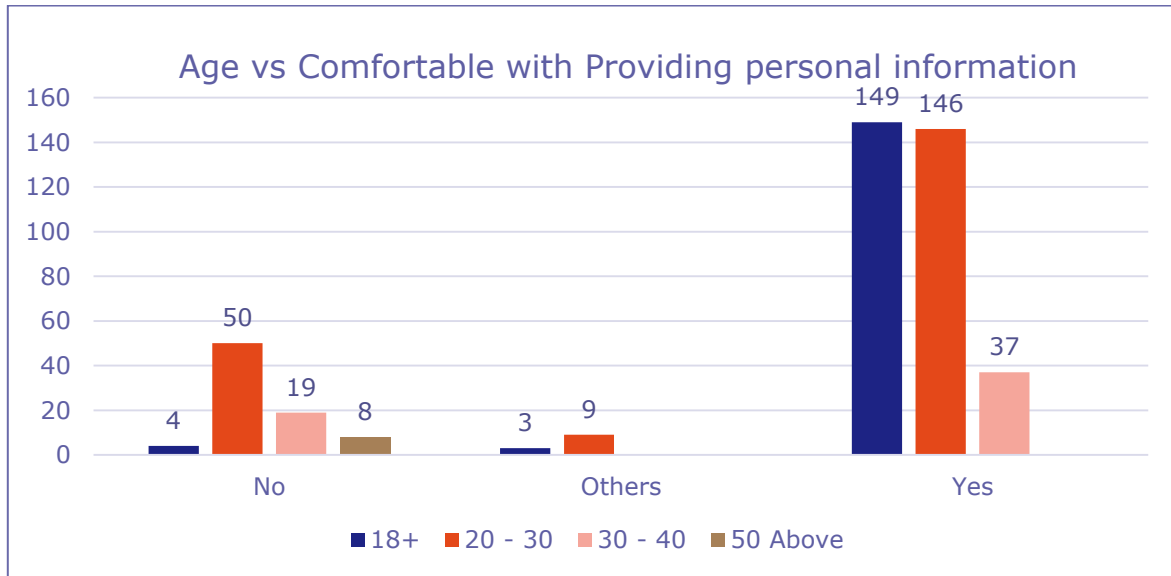


Table 4:

Interpretations

Descriptives

| | Age | N | Mean | Median | Mode | SD | Minimum | Maximum |
|---|-----|-----|------|--------|------|-------|---------|---------|
| How comfortable are you with providing personal information online for purchases? | 1 | 156 | 1.06 | 1.00 | 1.00 | 0.315 | 1 | 3 |
| | 2 | 205 | 1.33 | 1 | 1.00 | 0.558 | 1 | 3 |
| | 3 | 56 | 1.34 | 1.00 | 1.00 | 0.478 | 1 | 2 |
| | 5 | 8 | 2.00 | 2.00 | 2.00 | 0.000 | 2 | 2 |

- **Age 18+:** There are a total of 156 people represented in this age group. Out of those, 3% said they are not comfortable sharing personal information, 96% said they are comfortable, sharing personal information and the remaining 1% chose "Other" to represent both.
- **Age 20-30:** There are a total of 205 people represented in this age group. Out of those, 25% said they are not comfortable sharing personal information, 71% said they are comfortable, sharing personal information and the remaining 4% chose "Other" to represent both.
- **Age 30-40:** There are a total of 165 people represented in this age group. Out of those, 88% said they were comfortable sharing personal information, 12% said they were not comfortable.
- **Above 50:** They are not comfortable sharing personal information.

Looking at the graph, it appears that people tend to get more comfortable sharing personal information as they get younger. There is a significant increase in the number of people who said they were not comfortable sharing personal information in the 20-30 & 30-40 age group compared to the younger age groups.

What factors influence your decision to buy a product Online

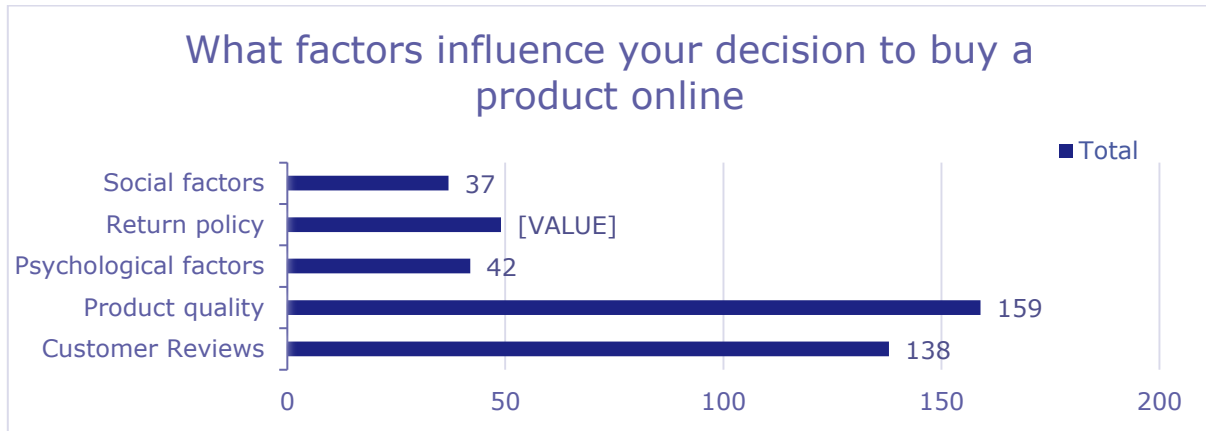


Table 5:

Interpretations:

Descriptives

| | N | Mean | Median | Mode | SD | Skewness | |
|---|-----|------|--------|------|------|----------|-------|
| | | | | | | Skewness | SE |
| What factors influence your decision to buy a product online? | 425 | 2.25 | 2 | 2.00 | 1.26 | 0.894 | 0.118 |

Frequencies

Frequencies of What factors influence your decision to buy a product online?

| What factors influence your decision to buy a product online? | Counts | % of Total | Cumulative % |
|---|--------|------------|--------------|
| 1 Customer Reviews | 138 | 32.2 % | 33.2 % |
| 2 Product Quality | 159 | 37.2 % | 70.4 % |
| 3 Psychological Factors | 42 | 9.9 % | 80.2 % |
| 4 Return Policy | 49 | 11.1 % | 91.3 % |
| 5 Social Factors | 37 | 9.5 % | 100.0 % |

- Product Quality is the most important factor according to the survey, with 37% of Product Quality as the biggest influencer. This means that most people want to be sure of the quality of a product before they buy it online.
- Customer Reviews are the second most important factor, with 32%. People like to read reviews from other customers to get an idea of the product's quality and performance.
- Return Policy is the third most important factor, with 9%. Customers want to know that they can easily return an item if they are not satisfied with it.
- Social Factors are the least important factor, according to the survey, with 9%. This could be because social media endorsements and influencer marketing are not as trusted as product reviews or quality information.
- Psychological Factors are at 42 i.e. 10%

From this data, we can see that customers prioritize product information and reassurance when shopping online. This makes sense as online shoppers can't physically examine products before buying. Positive customer reviews and a generous return policy can help reduce the perceived risk of buying a product online.

Social factors, which could include influencer marketing or recommendations from friends and family, also play a role in influencing online purchases. Psychological factors, though not the most influential here, can also affect buying decisions. These could include things like the desire for a bargain or the fear of missing out.

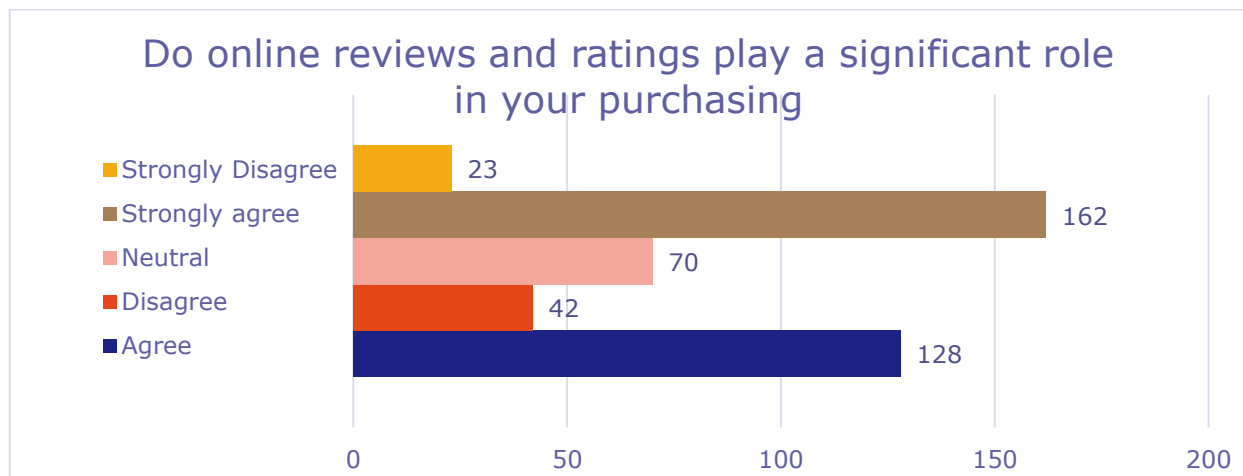
Do online reviews and ratings play a significant role in your purchasing

Table 6:

Descriptives

| | N | Mean | Median | Mode | SD | Skewness | |
|---|-----|------|--------|------|------|----------|-------|
| | | | | | | Skewness | SE |
| Do online reviews and ratings play a significant role in your purchasing? | 425 | 2.65 | 2 | 2.00 | 1.23 | 0.545 | 0.118 |

Overall, the data suggests that online reviews and ratings are a positive influence on purchasing decisions for most people surveyed.



Strongly Agree: 162 people

Agree: 128 people

Neutral: 70 people

Disagree: 42 people

Strongly Disagree: 23 people

We can see that the majority of the people surveyed (162 + 128) = 290 people agreed that online reviews and ratings play a significant role in their purchasing decisions. This is 69% of the total surveyed (290 out of 425).

There is a smaller group (42 + 23) = 65 people who disagreed that online reviews and ratings play a significant role in their purchasing decisions. This is 15% of the total surveyed.

Neutral is 17%

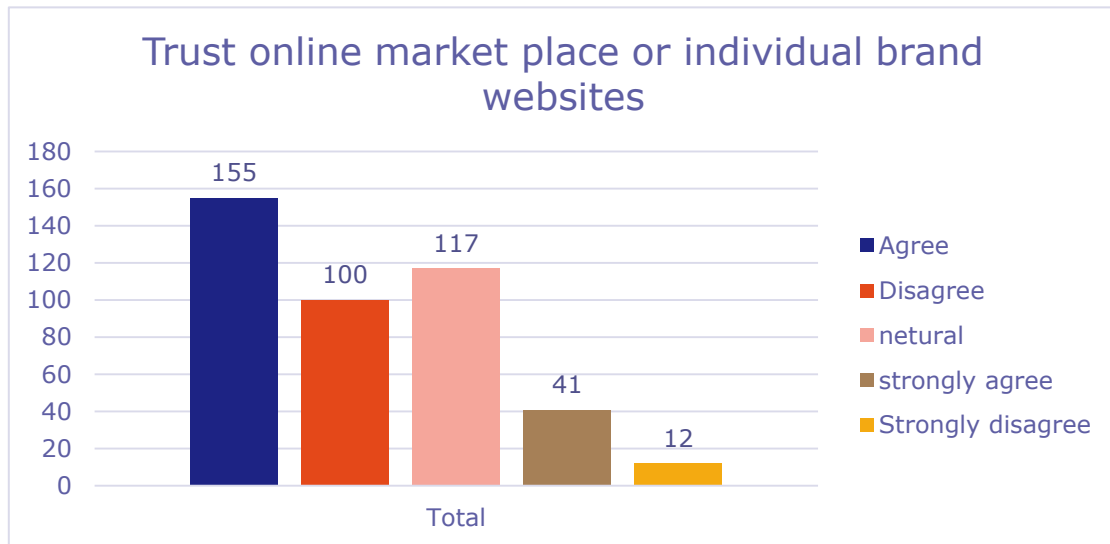
Overall, the data suggests that online reviews and ratings are a positive influence on purchasing decisions for most people surveyed.

Trust online marketplace or individual brand websites

Table 7:

Descriptives

| | N | Mean | Median | Mode | SD | Skewness | |
|---|-----|------|--------|------|------|----------|-------|
| | | | | | | Skewness | SE |
| Are you more likely to trust online market place or individual brand websites ? | 425 | 2.60 | 3 | 1.00 | 1.37 | 0.0650 | 0.118 |



The data shows that a higher percentage of respondents (60%) said they trust online marketplaces than individual brand websites (40%). Here's a more detailed breakdown of the data:

Strongly Agree: 10% of respondents strongly agree that they trust online marketplaces.

Agree: 35% of respondents agree that they trust online marketplaces.

Neutral: 28% of respondents are neutral on the topic.

Disagree: 24% of respondents disagree that they trust online marketplaces.

Strongly Disagree: 3% of respondents strongly disagree that they trust online marketplaces.

Negatives consequences or challenges related to technology during your online shopping experience

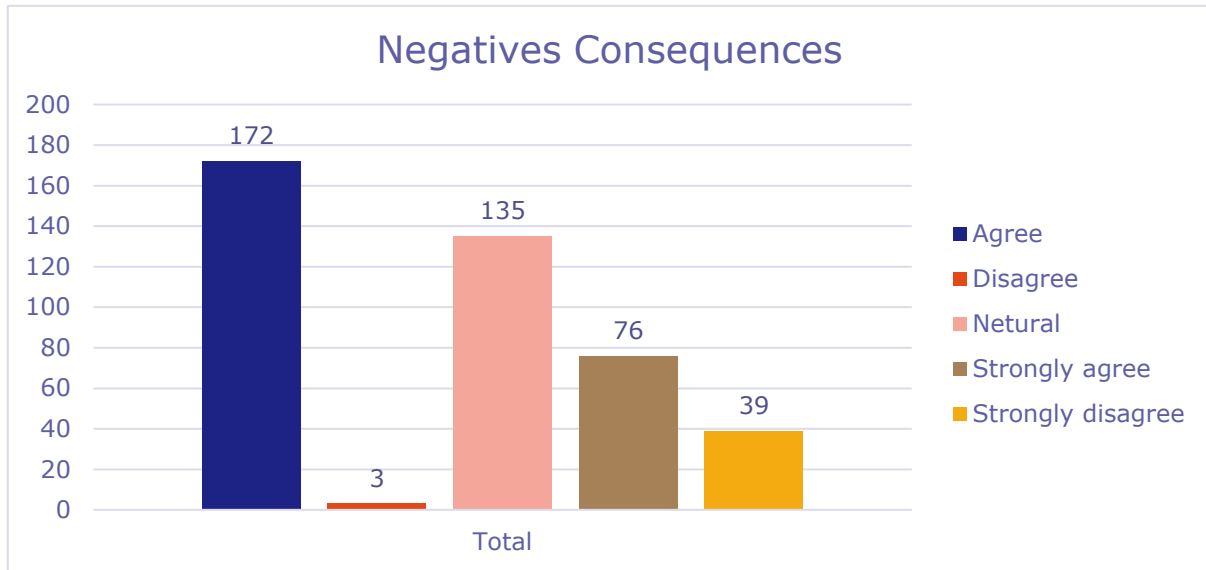
Table 8:

Descriptives

| | N | Mean | Median | Mode | SD | Skewness | |
|---|-----|------|--------|------|------|----------|-------|
| | | | | | | Skewness | SE |
| Have you ever experienced any negative consequences or challenges related to technology during your online shopping experiences ? | 425 | 3.15 | 4 | 4.00 | 1.10 | -1.08 | 0.118 |

Descriptives

| | N | Mean | Median | Mode | SD | Skewness | |
|--|---|------|--------|------|----|----------|----|
| | | | | | | Skewness | SE |



The highest number of respondents (172) agreed that there are negative consequences or challenges faced due to technology during online shopping. This is followed by 135 who said they were neutral and 79 who strongly agreed.

The least number of respondents (3) strongly disagreed with the statement. There were also 39 who Strongly disagreed.

Overall, the survey suggests that a majority of the respondents (248) 58% believe that there are negative consequences or challenges related to technology during online shopping experiences. Only (42) 10% of respondents disagreed. & strongly disagree and (135) 32% of respondents for neutral

Income Range vs How often do you make an online shopping decision

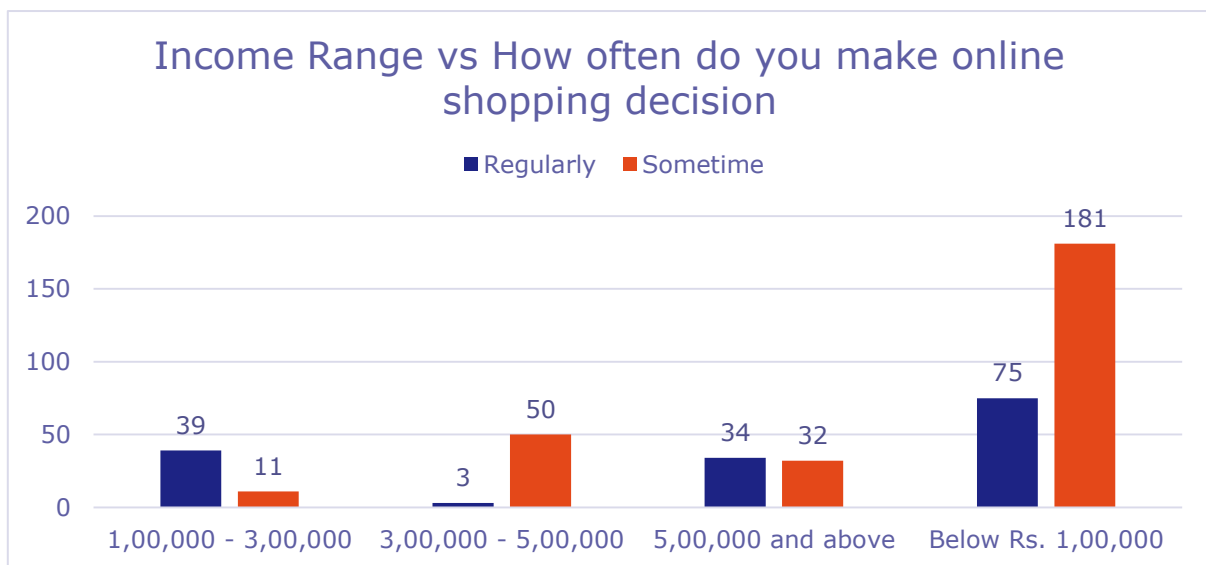
Table 9:

Descriptives

| Income Range | N | Mean | Median | Mode | SD | Skewness | | |
|--|---|------|--------|------|------|----------|--------|-------|
| | | | | | | Skewness | SE | |
| How often do you make online purchasing decisions? | 1 | 271 | 1.28 | 1 | 1.00 | 0.448 | 1.004 | 0.148 |
| | 2 | 50 | 1.78 | 2.00 | 2.00 | 0.418 | -1.394 | 0.337 |

Descriptives

| Income Range | N | Mean | Median | Mode | SD | Skewness | |
|--------------|----|------|--------|------|-------|----------|-------|
| | | | | | | Skewness | SE |
| 3 | 53 | 1.06 | 1 | 1.00 | 0.233 | 3.950 | 0.327 |
| 4 | 51 | 1.67 | 2 | 2.00 | 0.476 | -0.729 | 0.333 |



Income Range vs How often do you make an online shopping decision

- Higher income earners tend to shop online more regularly: The highest income bracket (Rs. 5,00,000 and above) has the most respondents (34) who say they make online shopping decisions regularly and sometimes (32)
- Lower income earners tend to shop online less regularly: The lowest income bracket (Below Rs. 1,00,000) has the least respondents (75) who say they make online shopping decisions regularly and sometime (181)
- Online shopping is still common across all income brackets: Even in the lowest income bracket, there are still more respondents (39) who say they shop online regularly than those who say they Sometime shop online (11).

V. FINDINGS

| Factor | Findings |
|---|---|
| Age vs Technology has made the online shopping process more convenient. | Young adults (18-30) dominate online shopping, with a gradual increase in preference within this age range. The youngest and oldest age groups follow, suggesting both convenience appeal and potential barriers for less tech-savvy users. |
| Age vs Promotions and discounts delivered through technology play in your online shopping decisions | The data suggests a potential trend of increasing the importance of promotions and discounts with age. |
| Occupation vs your online Purchasing decisions | Students and self-employed individuals are the most frequent online shoppers, with a higher tendency for regular online purchases. Homemakers and those in the "other" category appear to prefer |

| | |
|---|--|
| | occasional online shopping. |
| Age vs Comfortable with Providing Personal Information | Younger age groups (18+ and below 30) appear to be more comfortable sharing personal information compared to older age groups (30-40). 'Above 50' age group only indicates discomfort with sharing personal information. |
| What factors influence your decision to buy a product Online | Online shoppers prioritize product information (quality, reviews) and reassurances (return policy) to mitigate the risk of online purchases. |
| Do online reviews and ratings play a significant role in your purchasing | The survey suggests that online reviews and ratings positively influence purchasing decisions. |
| Trust online marketplace or individual brand websites | Online marketplaces appear to be more trusted than individual brand websites for online purchases. |
| Negatives consequences or challenges related to technology during your online shopping experience | A significant portion of respondents (58%) acknowledge negative consequences or challenges related to technology in online shopping. |
| Income Range vs How often do you make an online shopping decision | Higher-income earners tend to shop online more frequently than lower-income earners. |

VI. IMPLICATIONS

These findings suggest that online retailers should tailor marketing to different age groups, emphasizing convenience for younger shoppers and trust for older shoppers. Building trust and security is important. Initiatives to bridge the digital divide are needed. Technological challenges should be addressed. Businesses should consider offering diverse payment options.

VII. CONCLUSION

This study examined factors affecting online shopping decisions. Young adults (18-30) were the most frequent online shoppers, with a trend towards increased preference for convenience with age. Students and self-employed individuals made online purchases more regularly than other occupations. Product information, reviews, and return policies were important for online shoppers. Online marketplaces were more trusted than brand websites. While technology offered convenience, challenges were reported. Higher-income earners shopped online more often.

VIII. REFERENCES

- [1] Ahluwalia, R., Burnkrant, R., and Unnava, H. (2000). Consumer response to negative publicity: the moderating role of commitment. *J. Mark. Res.* 37, 203–214. doi: 10.2307/1558500
- [2] Bae, S., and Lee, T. (2011). Product type and consumers' perception of online consumer reviews. *Electron. Mark.* 21, 255–266.
- [3] Baek, H., Ahn, J., and Choi, Y. (2012). Helpfulness of online consumer reviews: readers' objectives and review cues. *Int. J. Electron. Commer.* 17, 99–126.
- [4] Boardman, R., and McCormick, H. (2021). Attention and behaviour on fashion retail websites: an eye-tracking study.
- [5] Agarwal, S., & Bhardwaj, G. (2020). A study of consumer buying behavior towards E-pharmacies in Delhi NCR. Retrieved July 22, 2023, from Inderscience website: <https://www.inderscience.com/info/inarticle.php?artid=115022>
- [6] Gupta, S. (2020). Consumer Buying Behavior towards E-Pharmacy. Retrieved July 22, 2023, from Research Gate website: https://www.researchgate.net/publication/344105761_Consumer_Buying_Behavior_towards_E-Pharmacy
- [7] Roy, P. (2022). Theory and Models of Consumer Buying Behaviour: A Descriptive Study. Available at SSRN 4205489.

-
- [8] Qazzafi, S. (2019). Consumer buying decision process toward products. International Journal of Scientific Research and Engineering Development, 2(5), 130-134.
- [9] Chakraborty, R., Lee, J., Bagchi-Sen, S., Upadhyaya, S., & Raghav Rao, H. (2016). Online shopping intention in the context of data breach in online retail stores: An examination of older and younger adults. Decision Support Systems.
- [10] Sharma, A. (2020). Changing Consumer Behaviours Towards Online Shopping - An Impact Of COVID-19. Academy of Marketing Studies Journal, 24(3), 1-10. Retrieved July 22, 2023, from ProQuest:- <https://www.proquest.com/openview/54bb549f925f739f6f022e250ac937a3/1?pqorigsite=gscholar&cbl=38744>