

Re-imagining Retail through Augmented Reality: A Study on Consumer Experience in the Digital Economy

Dr. S. Mythili

Assistant Professor, Department of Commerce with Accounting and Finance Vellalar College for Women Autonomous, Erode

Abstract—The rapid advancement of technologies is transforming retail experiences and consumer interactions in the modern marketing era. Augmented Reality (AR), a member of the XR spectrum, bridges the gap between physical and virtual shopping by providing immersive, interactive and personalised experiences. This paper examines the influence of augmented reality on consumers shopping experience. The study, conducted between December 2023 and September 2024, adopts a descriptive as well as analytical research design, using both primary as well as secondary data. Statistical tools such as Chi-square, Kruskal Wallis, and Friedman tests were used for testing the hypothesis using SPSS Version 27. The findings reveal that various aspects of AR have significantly influenced the shopping experience by enhancing visualization, interactivity, and purchase confidence. It also states that the overall consumer satisfaction and loyalty is also being improved. The study concludes by stating that the integration of AR in retail marketing is redefining the future of digital commerce.

Index Terms—Augmented Reality, Consumer Experience, Online Shopping, Digital Economy, Phygital Commerce, Virtual Try-On, Retail Innovation

I. INTRODUCTION

The global retail landscape has undergone a remarkable transformation over the past years, driven by digitalization (industry 4.0) and changing consumer expectation. Digitalization led to the advent of advanced technologies, that brings a drastic change in the retail landscape. Among such technologies, Augmented Reality (AR) is considered as the most disruptive one. AR integrates the virtual elements into real world to create interactive and immersive shopping experiences. The main concept of augmented reality lies in the fact that it allows marketers to combine digital information (e.g. text, images, videos) with objects and spaces in the physical

world (e.g. product packing, advertisements, street environments) to mediate a hybrid reality to consumers on the digital screens of smartphones or tablets or by using video projections (Scholz & Smith, 2016). A daily life example of AR is the use of filters on mobile applications like snapchat, instagram, whatsapp, etc. in which AR put a digital layer over the physical face to click selfies, pictures and video calls with makeup without actually wearing it. The same think is happening in the retail sector, but in different dimension. It offers “phygital” (physical + digital) experience that enhance consumer engagement by bridging sensory gaps and improving visualization prior to purchase (Dwivedi et al., 2022). Online shopping makes use of AR in webpages (Web AR), social medias (Social AR), and mobile application (AR on mobile app) for addressing consumer needs. While AR has gained wide global adoption in retail and e-commerce, its integration and consumer acceptance in semi-urban Indian markets remain underexplored. Digital economy – the result of the widespread usage of internet and digital technologies lead to the transformation of conventional business to new form. This economic activity altered the way how businesses create, deliver, and capture value. It ranges e-commerce selling platforms to digital payments interfaces. As the consumers needs and wants are changing, retailers have to find new ways to satisfy their needs. The integration of AR technologies on online shopping platforms has become a competitive requirement. Retail giants like IKEA, Sephora, and Nike have incorporated AR features that allow users to virtually try on products or visualize furniture in their own spaces, thereby reducing post-purchase dissatisfaction and enhance consumer confidence (Algharabat et al., 2023). Academic and industry research increasingly indicates that AR enhances the

experimental dimension of shopping by promoting cognitive absorption, emotional engagement, and perceived enjoyment (Javornik, 2016; McLean & Wilson, 2019).

Globally, AR is being integrated into marketing strategies to reduce post-purchase dissonance, improve engagement, and differentiate brand experiences (Pessoa de Amorim et al., 2022). In India, where smartphone penetration exceeds 700 million users and the dominance of online shopping sites and apps, AR has moved from novelty to necessity. Even if the adoption of AR in Indian retail is still in its early stages, but is expanding rapidly with the expansion of smartphones, high-speed internet, and tech savvy consumers. Major Indian retail online platforms are making use of AR to increase engagement and personalization. Lenskart, for instance, helps its consumers to virtually try on the spectacles through its mobile app, so that they can find the perfect shape suitable for them. Along with that a jewellery brand named Tanisq also make use of AR to preview ornaments. Similarly, Flipkart's "View in Your Room" lets the consumers to visualise furniture within their home space via its integrated AR system (The Indian Express, 2021).

Beyond retail apps, Web AR – which delivers AR experience through browsers are gaining popularity in India. Fashion and beauty brands have been using 8th Wall and Zappar platform to run browser-based AR campaigns, allowing customers to try lipstick shades or sneakers in 3D simply by scanning a QR code (Zappar Report, 2024). At the same time, Social AR is now getting popularity in Indian subcontinent. Brands like Nykaa, Lakmé, and Boat Lifestyle have used Instagram AR filters and Snapchat Lenses to let the consumers virtually try the product, participate in interactive challenges, and shared branded content (Meta Business Insights, 2023). This medium of AR makes it an entertainment source for brands along with product visualisation.

In this context, evaluating how Indian consumers understand and adopt AR technologies becomes crucial. Based on the Technology Acceptance Model (TAM), this study investigates how perceived usefulness and perceived ease of use influence the adoption of AR in shopping environment and how these perceptions shape consumer satisfaction. By exploring consumer experiences in the Kottayam district, the study expands TAM to a developing

market context where factors like technological literacy, device quality, and infrastructure play significant mediating roles. The study also identifies the AR techniques most valued by consumers – such as virtual try on, virtual fitting, product visualisation, interactive product catalogue, gamified shopping experience etc. – and their impact on satisfaction and loyalty.

This paper contributes to both theoretical and practical domains by:

1. Contextualising TAM in AR enabled Indian retail.
2. Identify the key AR features that enhance consumer satisfaction and loyalty.
3. Providing actionable insights for retailers seeking to integrate AR into their marketing and service strategies.

1.1 Objectives of the Study

The study aims to:

1. Evaluate the awareness level of consumers about augmented reality on retail purchase.
2. Measure the influence of augmented reality in consumers' shopping experience.
3. Identify the most popular augmented reality technique among consumers.
4. Measure the satisfaction level of consumers' shopping experience with the help of augmented reality.

1.2 Research Hypotheses

Based on the research objectives, the following hypothesis were formulated and tested:

H₁: There is no significant association between gender and awareness level of respondents about AR.

H₂: There is no significant association between age and awareness level of respondents about AR.

H₃: There is no significant association between education qualification and awareness level of respondents about AR.

H₄: Augmented reality does not have a significant influence on shopping experience of consumers.

H₅: There is significant difference between AR techniques.

H₆: Consumer satisfaction does not influence by AR techniques.

II. LITERATURE REVIEW

2.1 Augmented Reality in Retail

Augmented Reality (AR) allows consumers to see products in their actual environment or interact with virtual versions before making a purchase, which lessens perceived risk and boosts both hedonic and utilitarian benefits (Lavoye et al., 2021). For example, AR technologies in retail have been proven to enhance consumer decision-making by layering interactive and context-rich details onto the real world (Kumar et al., 2021). Research shows that when AR systems offer high degrees of interactivity, visual realism, and prompt feedback (media richness), they significantly amplify cognitive and emotional reactions, resulting in more favourable attitudes and behavioural intentions (Pessoa de Amorim et al., 2022). Additionally, AR has been demonstrated to connect online and offline retail by creating immersive experiences that replicate physical interactions, thereby fostering trust and decreasing product returns (Enyejo, Obani, Afolabi, Igba, & Ibokette, 2024).

2.2 Technology Acceptance Model and AR Adoption

The Technology Acceptance Model (TAM) accounts for how users embrace new technologies based mainly on perceived usefulness (PU) and perceived ease of use (PEOU) (Davis, 1989). In the realm of AR retail applications, recent research has expanded TAM by including factors such as immersion, interactivity, and flow experience. For instance, a study investigating AR use for purchasing cultural-heritage products found that immersion and interactivity had a positive impact on perceived usefulness, which subsequently influenced purchase intentions (Shah, Niwalikar, & Soundarapandian, 2022). Another research effort combined TAM with elements like self-efficacy and social identity to elucidate AR adoption in online shopping environments (Research-Modeling Consumers' Usage Intention of AR, 2023). These additions underscore the necessity of taking into account the distinctive technological features of AR (such as spatial presence and sensory richness) when applying TAM in new areas.

2.3 Consumer Experience in AR- Enabled Environments

The consumer experience is a comprehensive concept that includes sensory, cognitive, and emotional

reactions during interactions with a brand or technology. Augmented reality (AR) introduces a new aspect to this experience by allowing for immersive exploration of products and customization. Hoffmann & Mai (2022) stated that AR's ability to foster flow a condition of increased engagement and immersion boosts consumer satisfaction and intentions in AR shopping contexts. Similarly, studies have indicated that AR applications focusing on visual realism and interactive control greatly influence consumers' feelings of enjoyment, value, and satisfaction (Kaur, 2024). In developing markets, elements like digital literacy, accessibility, and infrastructure readiness impact consumer reactions to AR, highlighting the necessity for contextual research (Enyejo et al., 2024).

2.4 Empirical Evidence Linking AR and Consumer Behaviour

Recent empirical research offers strong evidence of the beneficial effects of AR on consumer behaviour. For instance, a systematic review conducted by Lavoye et al. (2021) compiled results from various studies and determined that AR's capability to create both utilitarian and hedonic value results in enhanced decision-making and purchasing outcomes. Research by Pessoa de Amorim et al. (2022) indicates that the richer AR interactions engage both the emotional and analytical sides of consumers, ultimately shaping how they decide to purchase. In the retail sector, Kaur (2024) noted that the application of AR significantly improved customer engagement, satisfaction, and purchase intentions within a store setting. However, research is still sparse regarding the context of developing economies and smaller cities, indicating a gap that the current study seeks to address.

2.5 Research Gap

Many prior studies have concentrated on the adoption of AR in developed nations and prominent retail industries, including furniture and clothing. Nevertheless, there has been scarce empirical research on the perceptions and adoption of AR applications among consumers in semi-urban areas of India. This gap underscores the importance of investigating the impact of AR on the shopping experience using established models such as the Technology Acceptance Model (TAM).

III. METHODOLOGY

3.1 Research Design

The study make use of descriptive as well as analytical research design to examine the influence of augmented reality on consumer's shopping experience. These designs were chosen because they allow for the organized collection and analysis of data. This helps to identify patterns, relationships, and views related to AR adoption. The study was based on the Technology Acceptance Model (TAM) (Davis, 1989). This model suggests that a person's intention to use technology depends on perceived usefulness (PU) and perceived ease of use (PEOU).

These ideas were modified for the AR context by looking at how they affect consumer satisfaction, engagement, and loyalty in retail shopping. The model was updated to include technological literacy, device quality, and infrastructure as mediating factors that influence consumer experience. This is based on previous research extensions of TAM in AR studies.

3.2 Study Area

The study was conducted within the Kottayam District of Kerala State, India. Kottayam represents a semi-urban consumer market where smartphone usage is rising, e-commerce access is growing, and shoppers mix traditional and digital behaviours. This area provides a relevant context to explore the transition from physical to augmented reality experiences, particularly as AR adoption is still new compared to India's metropolitan cities. he district's consumers are educated, with a literacy rate of 100%. They are tech-savvy but also value-driven. This makes it an ideal place to study how AR technologies can be applied in real life.

3.3 Sampling Design and Respondents

Non-probability convenience and purposive sampling methods were used due to the exploratory nature of the research and accessibility of respondents familiar with digital retail platforms. The sample comprised 126 respondents who are consumers of online shopping for understanding the awareness level of AR. Among them 100 respondents are selected who had prior exposure to AR features in online retail contexts – such as Lenskart's and Purple's virtual try on, Flipkart's "View in your room" or Tanishq's jewellery visualisation tool.

The sample included male and female respondents aged between 20 and 45 years, representing college students, professionals, and homemakers. This diverse sample enables a balanced understanding of consumer perceptions across age and occupation groups.

3.3 Data Collection

Both primary and secondary data were utilised for the study.

- Primary data were collected through a structured questionnaire, having reliability of 0.868 in Cronbach's Alpha, consists of five-point Likert scale. The questionnaire consisted of four parts – demographic profile of respondents, awareness level of respondents, influence level of respondents on AR techniques, and overall satisfaction of respondents on AR usage. Data collected from December 2023 to September 2024 using google forms.
- Secondary data were sourced from various journals, reports, digital marketing insights published between 2020 to 2025.

3.4 Tools for Analysis

Data were coded using excel sheet and analysed with the help of SPSS ver. 27 software. Descriptive statistics were used to summarise demographic data and overall trends in AR perception. The following non-parametric tests were conducted to test the hypothesis under study:

- Chi-square test: Used to test the association between demographic factors and awareness level of consumers about AR. Also utilised to understand the influence of AR techniques in consumer satisfaction.
- Kruskal-Walli's test: Used to test whether augmented reality have an influence on the consumers' shopping experience.
- Friedman test: Used to analyse the mean difference of various AR techniques like virtual try-on, virtual fitting, interactive product catalogue, etc.

The results of these tests were presented by using different charts and tables for highlighting them.

3.5 Ethical Standards

Ethical guidelines were upheld during the study. Participants were made aware of the research's objectives and guaranteed that their information would be kept anonymous and confidential. Involvement was

on a voluntary basis, and all participants agreed to the use of their responses for analysis.

3.6 Limitations of the Study

The sample of 126 respondents is quite limited, which could affect the ability to generalize the results to a broader population. Furthermore, the use of a non-probability sampling method might lead to bias. Nevertheless, the research offers valuable insights into the growing consumer trends related to AR adoption in small-town India and serves as a solid basis for future studies.

IV. RESULT

4.1 Demographic Profile of Respondents

The study is conducted by collecting data from 126 respondents belongs to Kottayam district, Kerala. Among them, majority of the respondents are female (56.3%). Majority of the respondents are aged between 21 and 30 years of age (45%), followed by those aged between 31 and 40 showing that the respondents are dominated by younger people. In terms of education, 34% of the respondents are post graduate degrees, followed by 30% as under-graduate degrees. These demographics shows that the respondents are dominated by young and educated consumer group.

4.2 Awareness and Usage of Augmented Reality

Out of 126 participants, 79.4% reports that they are aware about the augmented reality applications used

by retailers, among them 35.42% reports that they are aware to a great extent. While 20.6% of the people states that they are “not at all” aware about AR applications. Awareness arises mainly from social media AR filters, interactive display or screens- in store and through various mobile applications like Lenskart, Flipkart, Purplle.

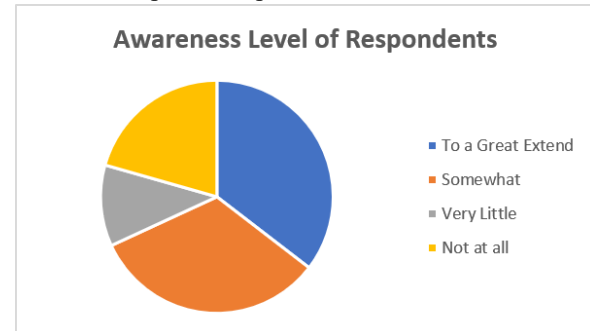


Figure 1. Awareness level of consumers regarding AR
(Source: Primary Data, 2024)

These results indicates that AR awareness in semi-urban regions is increasing with the growth of mobile-based retail engagement.

4.3 Association between Demographic Factors and AR Awareness

The association between augmented reality and demographic factors were determined using Chi-square tests.

Table 1. Summary of consumer awareness across demographic factors (Source: Primary Data (SPSS Output, 2024))

Demographic Factor	χ^2 Value	df	Sig. (p-value)	Result
Gender x Awareness	107.690	28	0.001	Significant. Reject the H ₁ . Alternative Hypothesis is Accepted
Age x Awareness	137.926	42	0.001	Significant. Reject the H ₂ . Alternative Hypothesis is Accepted
Education x Awareness	69.134	42	0.005	Significant. Reject the H ₃ . Alternative Hypothesis is Accepted

4.4 Influence of AR on Consumer Shopping Experience

The influence of AR on consumer shopping experience was tested using Kruskal Wallis test, which reveals that the p-value obtained is 0.017 which is lesser than the level of significance (0.05). It states that the AR does have a significant influence on consumers' shopping experience. The study reveals that the usage of AR helps the consumers in attaining user engagement, user satisfaction, product understanding, and decision making related to choice of purchase.

4.5 Preference of AR Techniques

The most popular AR techniques was identified with the help of Friedman test.

Table 2. Mean Rank of Consumer Preference for Various AR Techniques. (Source: Primary Data (SPSS Output, 2024))

AR Technique	Mean Rank	Rank
Virtual Try-On	2.13	I
Virtual Fitting Room	2.83	II
Personal Recommendation	3.01	III
Product Visualisation	4.66	IV
Gamified Shopping Experience	4.74	V

Visual Showroom	5.24	VI
Interactive Product Catalogue	5.40	VII

“Virtual Try-On” emerged as the most popular AR technique, followed by “Virtual Fitting Room”. The least popular AR technique is “Interactive Product Catalogue”.

4.6 Consumer Satisfaction and AR Techniques

Majority of the respondents (66.3%) reports that; they are satisfied with the shopping experience provided by

4.7 Summary of Hypothesis Testing

Table 3. Source: Primary Data (SPSS Output, 2024)

Code	Hypothesis	Test Statistics	p-value	Decision
H ₁	No association between gender and AR awareness	Chi-square	0.001	Reject
H ₂	No association between age and AR awareness	Chi-square	0.001	Reject
H ₃	No association between education and AR awareness	Chi-square	0.005	Reject
H ₄	AR does not influence shopping experience	Kruskal-Wallis	0.017	Reject
H ₅	No difference among AR techniques	Friedman	0.001	Reject
H ₆	AR techniques do not influence satisfaction	Chi-square	0.001	Reject

V. DISCUSSION

The results of the study offer important insights into the increasing significance of Augmented Reality (AR) in influencing contemporary consumer behaviour, especially in the context of Indian retail. The study found statistically significant correlations between demographic factors such as gender, age, and educational background and consumers' levels of awareness regarding AR applications. Additionally, it was determined that AR has a noteworthy positive effect on consumers' overall shopping experiences, satisfaction, and engagement, supporting the theoretical foundations of the Technology Acceptance Model (TAM) and its elements of perceived usefulness and perceived ease of use.

5.1 Influence of Demographic Factors

The significant association between demographic factors and awareness level shows that technology exposure and adoption are not evenly distributed among consumers. The findings highlight that:

- Gender plays a major role, that female respondents show higher awareness. This may be due to their constant usage of beauty and fashion platforms like Nykaa and Purppl.
- Age also plays an important role as the younger consumers are more familiar with AR, because

AR techniques. Only a few respondents are dissatisfied with the experience.

Chi-square test was used to evaluate the association between consumer satisfaction and AR techniques. Here also the p-value obtained was 0.001, which is lesser than level of significance of 0.05. So, the null hypothesis stated that consumer satisfaction is not influenced by AR is rejected. It states that consumer satisfaction is influenced by AR techniques.

they use mobile apps, gaming environments, and social media AR filters every day.

- Education also emerged as a critical factor, as individuals with higher educational qualifications tend to have greater access to information, digital literacy, and openness to technological innovations. These findings are consistent with the work of Lavoye et al. (2021) and Gupta & Jain (2022), which highlighted that demographic readiness influences users' perceptions and reactions to digital retail technologies. In semi-urban India, this indicates that improving digital literacy and consumer education may increase the inclusivity of augmented reality (AR) adoption.

5.2 The Role of AR in Shaping Consumer Experience

The findings demonstrated that augmented reality (AR) greatly improves the shopping experience by allowing consumers to engage with products in a virtual environment before making a purchase, which boosts both enjoyment and confidence in their buying decisions. Participants noted that AR tools create a realistic and tangible experience, helping them to visualize how a product would look or fit in actual surroundings.

Applications like Flipkart's "View in Your Room," IKEA Place, and Lenskart's Virtual Try-On are often mentioned as examples where consumers can visualize

furniture, eyewear, or beauty products in their own space. This helps to diminish perceived risk, enhances trust, and increase confidence in decision-making, consistent with the conclusions drawn by Pessoa de Amorim et al. (2022) and Hoffmann & Mai (2022). In the context of the Technology Acceptance Model (TAM), these results indicate that AR improves both perceived usefulness (aiding consumers in making informed choices) and perceived ease of use (providing user-friendly, straightforward interfaces). These impressions lead to increased satisfaction, supporting the idea that AR technology connects experiential marketing and consumer behaviour.

5.3 Preference for AR Techniques

The Friedman test results indicated that consumers preferred Virtual Try-On features the most, followed by Virtual Fitting Room and Personalized Recommendation. This ranking shows that consumers prioritize AR applications that provide direct experiential value those that allow them to simulate ownership or usage before actual purchase.

The high preference for Virtual Try-On aligns with global findings from Seck & Haug (2024), which reported that personalization, interactivity, and self-engagement significantly influence user satisfaction and purchase intention. Virtual Fitting Room as implemented by Flipkart, Amazon, and IKEA also satisfies the consumer's need for realistic evaluation and reassurance.

These findings states that social AR are helpful in creating awareness while web AR and mobile AR directly influence the purchase decisions.

5.4 AR Techniques and Consumer Satisfaction

The Chi-square test results revealed that the various AR techniques play a prominent role in attaining consumer satisfaction levels, shows that satisfaction varies based on the type and intensity of the AR features experienced. Respondents who used the virtual try-on and virtual fitting room techniques of AR are more satisfied as its application increases engagement compared to other techniques.

This finding is consistent with the propositions of Technology Acceptance Model (TAM), where perceived ease of use and perceived usefulness shape user satisfaction and behavioural intention. It also aligns with the findings of Pessoa de Amorim et al. (2022), who note that interactive digital features

generate both functional and hedonic value in online retail environments.

5.5 Integration with TAM

The Technology Acceptance Model (TAM), introduced by Davis in 1989, provides a valuable framework for comprehending the behaviour associated with AR adoption. According to TAM, two main beliefs perceived usefulness and perceived ease of use impact users' attitudes toward technology and their likelihood of adopting it.

In this research, AR was regarded as beneficial for assisting in product assessment, minimizing uncertainty, and enhancing the shopping experience. Its user-friendliness emerged from an intuitive design and visual interactivity, which enabled even those who are not tech-savvy to feel at ease when using AR-based tools.

Additionally, the results build on the TAM framework by demonstrating how hedonic value (enjoyment and fun) and trust serve as extra mediators in the adoption of AR. This reinforces the notion that contemporary consumers desire both practical and emotional satisfaction in their digital shopping journeys.

These results align with those of Lavoye et al. (2021) and Hoffmann & Mai (2022), who likewise noted that interactivity and the perception of ease of use are significant factors influencing AR adoption and consumer satisfaction.

5.6 Managerial Implications

For marketers, the study offers clear evidence that incorporating AR into digital marketing strategies can greatly enhance consumer interaction and satisfaction. Companies should:

- Invest in customized AR functionalities that enable customers to virtually engage with products.
- Simplify AR interfaces to guarantee usability for various age groups and education levels.
- Market AR experiences via social media initiatives, merging entertainment with practicality.
- Utilize AR data analytics to gain deeper insights into consumer behaviours and preferences.

For brands operating in semi-urban areas like Kottayam, these insights underscore the need for awareness initiatives and consumer education, ensuring that technology adoption is accessible and fair.

5.7 Academic and Social Implications

From an academic point of view, the study contributes to the limited Indian literature on consumer-technology interaction by demonstrating that AR adoption is influenced by both socio-demographic and psychological factors. It connects technology acceptance theory with consumer experience models, laying a groundwork for future empirical studies in experiential commerce.

Socially, the study underlines the need for improved digital literacy and accessibility, ensuring that all consumer groups regardless of age, gender, or education can benefit from technological advancements. AR should not remain an elite or youth-centric phenomenon but evolve into a universal shopping facilitator.

5.8 Summary of Discussion

Essentially, the study validates that Augmented Reality has evolved from being a mere novelty to an essential component in modern retail experiences. It enables shoppers to make well-informed choices, fosters emotional trust, and improves satisfaction after purchase. While demographic factors affect the level of awareness and rate of adoption, once consumers engage with AR, individuals from all segments view it as beneficial, enjoyable, and confidence-boosting.

Therefore, AR represents not just a technological innovation but a transformative tool for human-centered commerce, aligning digital functionality with emotional engagement a hallmark of next-generation retailing.

VI. CONCLUSION AND FUTURE SCOPE

Conclusion

The current research examined how Augmented Reality (AR) impacts consumers' shopping experiences, particularly in relation to demographic variables, levels of awareness, and engaging AR methods affecting satisfaction and confidence in purchasing. Empirical analysis revealed that factors such as gender, age, and educational background have a significant impact on consumers' awareness of AR. These results suggest that demographic readiness characterized by technological exposure, digital literacy, and a willingness to embrace innovation plays a vital role in shaping how consumers view and adopt AR technologies.

Additionally, the research demonstrated that augmented reality (AR) greatly improves the depth and quality of the shopping experience. Participants indicated that AR applications offered an interactive and lifelike way to engage with products virtually prior to making buying choices. Features like Lenskart's Virtual Try-On and Flipkart's "View in Your Room" were identified as factors that boost consumer confidence and lessen the perceived risks linked to online shopping.

The Chi-square analysis additionally revealed a notable link between AR techniques and consumer satisfaction, indicating that consumers who often engage with interactive and visual AR tools tend to have greater satisfaction and trust in brands. This reinforces the principles of the Technology Acceptance Model (TAM), which asserts that perceived usefulness and ease of use affect consumers' acceptance and ongoing interaction with technology.

From a wider viewpoint, the research indicates that augmented reality is shifting retail from mere transactions to experiences, allowing brands to integrate both emotional and practical elements of shopping. By combining realistic visuals with interactivity, AR enhances consumer empowerment, trust, and enduring brand loyalty. This shift exemplifies the progression of contemporary retailing from conventional information-driven transactions to engaging, experience-focused interactions that emphasize consumer autonomy and pleasure.

The study adds to the knowledge of how emerging technologies, such as augmented reality, can connect technology with human behaviour. It highlights that the future of marketing is not just about digital advertising but about crafting significant, interactive experiences for consumers that connect emotionally and intellectually with them.

Future Scope

While the study provides important insights, it also highlights numerous opportunities for additional research. Future investigations could broaden this analysis by incorporating a larger and more geographically varied sample from different states or urban-rural areas in India. This would enable an exploration of how socio-economic and cultural differences affect the adoption of AR and shopping habits.

Additionally, upcoming studies could investigate the implementation of AR in particular industries like clothing, furniture, automobiles, cosmetics, or grocery retail, as varying experiences might result in different behavioural responses. By conducting comparative analyses among these sectors, researchers could uncover the effectiveness of AR and the motivations of consumers specific to each industry.

From a methodological perspective, future researchers could utilize sophisticated methods such as Structural Equation Modeling (SEM) or Partial Least Squares (PLS) to examine intricate connections between trust, perceived risk, hedonic value, and purchase intention. These analytical frameworks can offer more insights into how augmented reality affects consumer choices and brand involvement.

As augmented reality progresses with Web AR, social media filters, and personalized AI features, future research should focus on how these advancements affect lasting consumer loyalty, the perception of authenticity, and satisfaction with purchases. Scholars should also explore the possibilities of augmented reality in brick-and-mortar retail environments, where AR mirrors or in-store applications connect the online and offline experiences, thereby improving omnichannel retail strategies.

Moreover, upcoming research can explore psychological and cultural elements, including consumer innovativeness, anxiety related to digital technology, and concerns about privacy, which could influence the connection between augmented reality usage and user satisfaction. By incorporating these viewpoints, scholars can develop a comprehensive framework that links technology design, consumer behaviour, and marketing strategies.

Ultimately, as India undergoes a swift digital evolution, those in policymaking and education can significantly contribute by fostering digital literacy initiatives that make cutting-edge technologies like augmented reality available to diverse demographic segments. These efforts will guarantee fair involvement in digital trade and encourage the expansion of a technology-oriented consumer economy.

Closing Remarks

To sum up, this research highlights that Augmented Reality is more than merely a technological advancement; it serves as a strategic facilitator of consumer-focused retail experiences. It allows

shoppers to make knowledgeable, self-assured, and pleasurable buying choices while allowing brands to stand out through interactive and personalized experiences.

The study confirms that AR technologies enhance both the logical and emotional aspects of consumer behaviour improving decision-making, fostering trust, and nurturing brand loyalty. As the realms of technology and retail continue to merge, AR leads this transformation, reshaping the core of the shopping experience within the digital economy.

REFERENCES

- [1] Davis, F. D., "Perceived usefulness, perceived ease of use, and user acceptance of information technology," *MIS Quarterly*, vol. 13, no. 3, pp. 319–340, 1989.
- [2] Venkatesh, V., and H. Bala, "Technology acceptance model 3 and a research agenda on interventions," *Decision Sciences*, vol. 39, no. 2, pp. 273–315, 2008.
- [3] 8th Wall, "How McDonald's created a Lunar New Year Web AR experience to engage Gen Z consumers," 8th Wall, Inc., 2023.
- [4] Butt, A., H. Ahmad, F. Ali, A. Muzaffar, and M. N. Shafique, "Engaging the customer with augmented reality and employee services to enhance equity and loyalty," *International Journal of Retail & Distribution Management*, vol. 51, no. 5, pp. 629–652, 2023.
- [5] Chylinski, M., J. Heller, T. Hilken, D. I. Keeling, D. Mahr, and K. De Ruyter, "Augmented Reality Marketing: A Technology-Enabled Approach to Situated Customer Experience," *Australasian Marketing Journal*, vol. 28, no. 4, pp. 374–384, 2020.
- [6] Cruz, E., S. Orts-Escolano, F. Gomez-Donoso, C. Rizo, J. C. Rangel, H. Mora, and M. Cazorla, "An augmented reality application for improving shopping experience in large retail stores," *Virtual Reality*, vol. 23, no. 3, pp. 281–291, 2019.
- [7] DataQuest, "An overview of the retail revolution with AR, VR and AI," DataQuest, 2023.
- [8] The Economic Times / ETCIO, "Breaking down Purple's strategy for increased customer affinity," Apr. 27, 2023.
- [9] Jelínková, E., and M. Nosková, *Augmented Reality in Marketing*, 2023.

- [10] Khrais, L. T., "Role of Artificial Intelligence in Shaping Consumer Demand in E-Commerce," *Future Internet*, vol. 12, no. 12, Art. no. 226, 2020.
- [11] Lavoye, J., X. Chen, and S. Pradhan, "Age-based differences in consumer adoption of augmented reality: A cross-generational analysis," *International Journal of Information Management*, vol. 61, Art. no. 102438, 2021.
- [12] Park, M., and J. Yoo, "Effects of perceived interactivity of augmented reality on consumer responses: A mental imagery perspective," *Journal of Retailing and Consumer Services*, vol. 52, Art. no. 101912, 2020.
- [13] Pessoa de Amorim, A., F. A. F. Ferreira, and J. M. Lopes, "Augmented reality as an experiential marketing tool: An analysis of consumer engagement and hedonic value," *Computers in Human Behavior*, vol. 135, Art. no. 107384, 2022.
- [14] Seck, A., and A. Haug, "Personalization and realism in augmented reality shopping: The role of visual interactivity in purchase intention," *Technological Forecasting and Social Change*, vol. 197, Art. no. 122874, 2024.
- [15] The Indian Express, "Flipkart's new 3D camera kicks off a new vision for AR in retail," Aug. 6, 2021.
- [16] Yim, M. Y. C., S. C. Chu, and P. L. Sauer, "Is augmented reality technology an effective tool for e-commerce? An interactivity and vividness perspective," *Journal of Interactive Marketing*, vol. 39, pp. 89–103, 2017.
- [17] YourStory, "How Lenskart is using technology and AR to disrupt India's eyewear industry," Jul. 23, 2021.
- [18] Zappar, "Zappar and Unilever: Bringing interactive storytelling to product packaging through Web AR," Zappar Ltd., 2023.
- [19] Meta Business Insights, *The Rise of Augmented Reality in Social Media Advertising: Global Consumer Trends Report*. Meta Platforms, Inc., 2021.
- [20] Indian Brand Equity Foundation (IBEF), "India's AR/VR Market," May 18, 2022.
- [21] Statista, "Adoption rate of augmented reality applications among Indian consumers 2020–2023," 2023.