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Analysing the Synergy Between High-Tech Augmented Services and Long-Term Consumer Retention

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Abstract
The rapid growth and proliferation of high-tech augmented service features, which comprise AI, AR, IoT, ML, and other similar technologies, have revolutionized the customer service experience and how service providers service their consumers. The main purpose and objective of this paper are to examine and determine the relationship that exists between the deployment of high-tech augmented service features and how it creates customer loyalty. The study used various data collection techniques to achieve its objectives, including survey research involving 150 consumers in different service industries in India and reviewing existing literature to support the research study. The researcher used Structural Equation Modelling to validate its research hypotheses.
The study found there was a positive and statistically significant relationship between the extent to which service providers used high-tech augmented service features and the consequent consumer retention outcomes. The researcher found that value co-creation and trust were key facilitators in this relationship.

Keywords: High-Tech Augmented Service, Consumer Retention, Artificial Intelligence, Customer Experience, Personalisation, Structural Equation Modelling, Digital Marketing, Service Innovation, Trust, Value Co-Creation.

1. Introduction:

The beginning of a new era in the 21st century has witnessed a technological revolution in terms of service delivery systems, customer behaviour, and market competition. Traditional service systems based on personal interactions and physical contact points are rapidly being replaced by technology-based systems in which technology is not just a support tool but a key differentiator for business success. In all service industries, businesses are investing heavily in high-tech augmented service systems in a bid to enhance customer experience, increase business efficiency, and sustain business competitiveness.
Retention is traditionally recognized as a foundation for business profitability and brand equity. It is a critical area of interest for both strategists and marketers. Research indicates that acquiring a new customer is between five and seven times more expensive for businesses compared to retaining an existing customer. Moreover, even small improvements in customer retention can lead to substantial improvements in business profitability (Reichheld, 1996; Gupta et al., 2004). In this context, high-tech augmented service systems for developing customer relationships and fostering long-term customer loyalty have generated considerable interest among both scholars and practitioners

Emergence of High-Tech Augmented Services

High-tech augmented service systems are a description of the concept of using high-tech tools like AI, ML, AR, VR, IoT-based smart environments, chatbots, predictive analytics, robotic process automation, and many more to augment and enrich the service delivery process. The idea is to increase the level of service quality with higher personalization and faster responses to customer interactions. Unlike previous technology-based service systems, these are undeniably customer-centric.
The enthusiasm for the adoption of these technologies has seen a significant acceleration in the past few years. The spending on AI technologies is anticipated to reach over $500 billion by 2027 globally (IDC, 2023). The consumer AR/VR market is also anticipated to grow at a CAGR of over 40% through 2030. In India, the business sector is witnessing a rapid digital transformation wave driven by factors such as a growing population of youth in the country, a tech-savvy youth population, and government initiatives such as Digital India and Start up India.

The Retention Imperative

Retention is a multifaceted construct that reflects various behavioural and attitudinal responses that indicate long-term customer involvement. Retention is demonstrated in repurchase behaviour, brand loyalty, willingness to pay higher prices, positive word-of-mouth, and brand advocacy, as well as resistance to competitors. Retention is not an isolated concept; it is a composite of various retention-related concepts such as repurchase, brand loyalty, paying higher prices, praising the brand, word-of-mouth, and resisting competitors. We are aware of the importance of retention in business strategies, yet the ways in which technology-based service experiences contribute to long-term retention are not yet fully understood. This

current study seeks to explore this issue by examining how high-tech service experiences contribute to long-term retention.

Research Significance

The research has a number of significant contributions to the field.

Firstly, it would contribute to the existing body of knowledge concerning the relationship between technology and retention by proposing an integrated model of the phenomenon.

Secondly, it would contribute to the literature by offering new empirical evidence concerning the Indian service industry, which is not yet extensively explored in the global digital service innovation literature.

Thirdly, it would offer practitioners and policymakers new insights into how technology investments relate to customer-focused retention strategies.

Finally, it would help elucidate the mechanisms that underlie and moderate the relationship between technology and retention.

2. Review and Literature

A thorough literature review is the backbone of conducting research on the impact of augmented services on consumer buying behaviour in the durable goods industry. It is a process of searching, analysing, and synthesizing literature on this topic to create a sound foundation for conducting this research. This chapter is a detailed account of what is already known about this topic.

Dacko (2017) and Poushneh & Vasquez-Parraga (2017) proved that augmented reality in retail businesses can increase customer satisfaction, value, and purchase intention in a more efficient way compared to other technologies in the shopping experience.

Følstad & Skjuve, 2019; Chung et al., 2020: The engaging nature of augmented reality has been found to enhance the hedonic value judgments that influence post-purchase attitudes. Similarly, the application of chatbots has been found to enhance the provision of personalized services that lead to higher satisfaction levels.

Research into consumer retention has been conducted in the fields of marketing, organizational behaviour, and psychology.

Oliver (1999) developed a four-component model of loyalty that has been the guiding force behind many studies into consumer retention.

Morgan & Hunt (1994) found that trust and commitment were the primary factors in relational consumer relationships.

Verhoef et al., 2010; Lemon & Verhoef, 2016; Bilgihan, 2016: Now a days role of technology has been found to contribute to consumer retention through factors such as usability, the quality of personalization, data privacy, algorithmic transparency, and consistency of the omnichannel service.

Other studies have found that consumer has emotional connections (Thomson et al., 2005), and perceived switching costs (Burnham et al., 2003) also contribute to consumer retention.

The current study extends technology understanding in the context of augmented services.

Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) - The Technology Acceptance Model has its roots in Davis (1989), who first proposed it as a tool to help understand why a person would choose to engage in a new technology. At its heart, it argues that there are two key drivers of technology acceptance - perceived usefulness and perceived ease of use. Over time, extensions to this include TAM2 (Venkatesh & Davis, 2000) and TAM3 (Venkatesh & Bala, 2008), which introduce social factors, cognitive instrumental processes, and personal factors into the mix. For this current study, it provides a tool to help understand how consumers engage with a technology-driven augmented service interface.

Service-Dominant Logic (SDL)

Vargo (2004) have challenged traditional economic theories of exchange that focus on goods-based exchanges in favour of a service-based model of exchange. SDL suggests that value is always co-created in a collaborative relationship between service providers and consumers. SDL suggests that consumers are active contributors to value creation. High-tech augmented service interfaces are designed to facilitate consumer interaction and co-creation of value in a manner that is personalized and provides a richer experience. SDL provides a theoretical foundation for understanding how technology-based interaction can facilitate value creation and, in turn, consumer loyalty.

Customer Experience Theory

Pine (1998) presented the notion of an 'experience economy,' suggesting that customers derive value from experiences that can be defined as a unique type of economic value beyond products & services. This led to the development of a multi-dimensional model of customer experience, including cognitive, emotional, sensory, social, and behavioural dimensions (Gentile et al., 2007; Lemon & Verhoef, 2016). High-tech augmented services, which have the potential to create immersive, personalized, and emotionally engaging experiences, can be a powerful vehicle for value creation in an experience economy.

3. Research gap

While research has been emerging to support the argument that high-tech augmented service has a positive effect on customer retention, research gaps have been identified in the following areas:

Firstly, research has been focusing on the effect of one technology application at a time in service contexts,

rather than examining how combinations of high-tech service elements interact to produce positive outcomes in service contexts. **Secondly**, research has been limited in establishing how technology-driven service experiences lead to long-term customer retention outcomes rather than satisfaction outcomes in service contexts.
Thirdly, research has been limited in examining high-tech service in India, given India's emerging position as a global hub for technology innovation.

4. Statement of the Problem, Objectives & Hypothesis

The following hypothesis are based on the basis of the theoretical framework and literature review:

Problem Statement

The literature is followed with studies on how individual technologies drive service technology adoption and increase customer satisfaction. However, little is known about how a high-tech, AI-based, augmented service system drives long-term customer loyalty when all components of service technology are working. Similarly, little is known about how a high-tech augmented service system impacts long-term customer relationships through trust and value co-creation in India's service sector.
Therefore, the overall question that this paper seeks to answer is, how much does a high-tech augmented service system across all its various dimensions increase long-term customer retention in India's service sector, and how much do trust and value co-creation contribute to that relationship as a mediator between high-tech augmented service systems and long-term customer retention in India's service sector.

Research Objectives

- Determine and define all key dimensions of high-tech augmented service systems as they relate to India's service sector.
- Investigate how individual and combined high-tech augmented service systems drive long-term customer retention.
- Investigate how trust and value co-creation contribute to the relationship between high-tech augmented service systems and long-term customer retention.
- Investigate how demographic factors contribute to the relationship between high-tech augmented service systems and long-term customer retention.
- Develop an integrated conceptual model that can link technology to long-term customer retention in India's service sector.
- Develop practical implications for service firms in India seeking to leverage technology for long-term customer retention.

Hypothesis and statements

Hypothesis	Statement
H1	When high-tech augmented services are highly personalized, their use is associated with increased long-term consumer retention.
H2	The urgency of high-tech augmented service delivery is associated with increased consumer retention.
H3	High-tech augmented service integration across multiple channels is associated with increased consumer retention.
H4	Perceived value of co-creating experiences is a mediator for high-tech augmented service effects on consumer retention
H5	Consumer trust is a mediator for high-tech augmented service effects on consumer retention.
H6	Combining all high-tech augmented service dimensions yields a much stronger relationship to consumer retention than any single dimension.
H7	Demographic factor such as gender, age, income level, and technology readiness are associated with technology's relationship to consumer retention.

5. Research Design

Research Philosophy and Approach

The research philosophy adopted for this research is based on the positivistic philosophy, where the research views the world as measurable, quantifiable, and testable through scientific inquiry. The research design adopted is deductive research, where the hypotheses will be tested based on the data collected through research design. This is the most common approach adopted in the field of research in consumer behaviour.

Research Design

The research design used for this research is the cross-sectional research design, where the research will make use of a questionnaire as the main research tool for collecting the data from the population under study. The cross-sectional research design is the best design for this research since it is the most cost-effective way of conducting the research within the given constraints. The research design is appropriate for the research aims and objectives, and it is the most appropriate design for the research questions to be answered in this research.

Population and Sampling

The population for this research will comprise individuals within the age group of 18+ years who have experience with high-tech augmented services in at least one of the following sectors in the past year: retail and e-commerce, hospitality ,banking and financial services and travel, telecommunications, and healthcare. The research will focus only on the five major cities in India, namely Pune, Mumbai, Bangalore, Hyderabad, and Chennai.

The research will adopt the stratified random sampling approach, where the strata will be based on city, sector, and age group. The sample will comprise 150 respondents, based on the needs of the research design, namely the requirement for Structural Equation Modelling (SEM) to have at least 10 cases per model, and the recommended sample size for this research based on the literature.

The primary instrument for collecting the data is a structured questionnaire that is divided into six parts.

Part A will cover the demographic or background information of respondents.

Part B will cover the high-tech augmented service dimensions using 28 items.

Part C will cover the perceived value co-creation using 6 items.

Part D will cover the consumer trust using 8 items.

Part E will cover the long-term consumer retention with its sub-dimensions such as repeat purchase intention, brand loyalty, advocacy, emotional attachment, price tolerance, etc., using 10 items.

Part F will use the Technology Readiness Index 2.0 scale proposed by Parasuraman & Colby (2015).

All the constructs will employ a 5-point Likert scale ranging from 1 - Strongly Disagree to 5 - Strongly Agree.

Content validity is established with the help of experts and the support of the literature. Construct validity is established with the help of the reliability measures such as the use of the CFA method.

All the scales are reliable with high values of alpha (> 0.70).

Analytical Methods

A multi-stage analytical approach is adopted for the research study. Descriptive statistics are used to profile the sample and understand how the constructs are distributed.

Exploratory factor analysis (EFA) is used to understand the factor structure of the high-tech augmented service construct.

Confirmatory factor analysis (CFA) is used for validating the measurement model of the research study.

Structural equation modelling (SEM) using AMOS 26.0 is used for validating the structural model and the research hypotheses.

Mediation analysis is conducted using bootstrapping (5,000 resamples) for exploring whether mediation occurs for the variables of trust and co-creation of value.

Moderation is also explored using multi-group SEM for examining differences in demographics.

Analysis Type	Objective	Software
Descriptive Statistics	Sample & construct profiling	SPSS 26.0
Exploratory Factor Analysis	Uncover factor structure	SPSS 26.0
Confirmatory Factor Analysis	Validate measurement model	AMOS 26.0
Structural Equation Modelling	Test Hypothesis testing	AMOS 26.0
Mediation Analysis	Estimate indirect effects	PROCESS Macro
Multi-group SEM	Assess moderation & demographic differences	AMOS 26.0

6 Demographic Profile of Respondents

Demographic profile of the sample is presented below, showing wide representation in terms of gender, age, income, education, occupation, city, and the service sector.

Methodologies and techniques

Below are some research methodologies and techniques that can be considered for this study:

Surveys and Questionnaires:
Methodology: Quantitative research using structured surveys or questionnaires to consumers.
Techniques: Create a questionnaire to collect data from consumers who have purchased consumer durables in specific duration. Include questions related to their perceptions of augmented services, brand loyalty, and purchase intentions, etc

In-Depth Interviews:
Methodology: Qualitative research through in-depth interviews with some consumers.
Techniques: Conduct one-on-one interviews with consumers to gain deeper insights into their experiences with product and their augmented services

Secondary Data Analysis:
Methodology: Analyse many existing data regarding consumer behaviour study.
Techniques: Using publicly available data, such as industry reports, sales data, and customer reviews, to identify trends and correlations related to augmented services and consumer buying behaviour.
Below table are showing information related to respondent Gender Distribution, Age Distribution, Education Qualification, Occupation, Monthly Household income and City-wise Distribution:

Gender Distribution

Gender	Frequency	Percentage (%)
Male	84	56.0
Female	38	25.3
Prefer not to say	28	18.6
Total	150	100.0

Age Distribution

Age Group	Frequency	Percentage (%)
18 – 25 years	16	10.6
26 – 35 years	44	29.3
36 – 45 years	45	30.0
46 – 55 years	21	14
56 years and above	14	9.3
Total	150	100.0

Educational Qualification

Qualification	Frequency	Percentage (%)
Higher Secondary / Diploma	21	14.0
Graduate	82	54.6
Post-Graduate	15	10.0
Doctoral / Professional Degree	32	21.33
Total	150	100.0

Occupation

Occupation	Frequency	Percentage (%)
Student	14	9.3

Salaried Employee	70	46.6
Self-Employed / Business	18	12.0
Professional (Doctor/Lawyer/CA)	26	17.3
Retired / Homemaker	22	14.6
Total	150	100.0

Monthly Household Income

Income Bracket (INR)	Frequency	Percentage (%)
Below ₹25,000	22	14.6
₹25,001 – ₹50,000	28	18.6
₹50,001 – ₹1,00,000	56	37.3
Above ₹1,00,000	44	29.3
Total	150	100.0

City-wise Distribution

City	Frequency	Percentage (%)
Mumbai	34	22.6
Pune	41	27.3
Bengaluru	21	14.0
Hyderabad	33	22.0
Chennai	21	14.0
Total	150	100.0

6. Data Analysis & Model Development

Reliability and Validity Analysis

For reliability, Cronbach's alpha was used on all the constructs. All the scales were well above 0.70, ranging from 0.78 on real-time responsiveness to 0.91 on overall consumer retention. Furthermore, the **Composite Reliability** (CR) was between 0.82 and 0.93, implying the scales had internal consistency.

Construct	Cronbach's α	CR	AVE
Personalisation	0.87	0.89	0.62
Real-Time Responsiveness	0.78	0.82	0.54
Omnichannel Integration	0.84	0.86	0.58
Data-Driven Engagement	0.82	0.85	0.56
Interactivity	0.80	0.83	0.55
Perceived Value Co-Creation	0.86	0.88	0.60

Consumer Trust	0.89	0.91	0.64
Long-Term Consumer Retention	0.91	0.93	0.67

Moreover, convergent validity was achieved since the Average Variance Extracted (AVE) of all constructs was above 0.50. Similarly, discriminant validity was achieved using the Fornell-Larcker criterion, whereby the square root of all constructs' AVEs was above their respective correlations with other constructs.

Exploratory Factor Analysis

The study used Exploratory Factor Analysis using Principal Component Analysis with Varimax rotation to test the high-tech augmented service construct. The study found adequate sampling adequacy since the Kaiser-Meyer-Olkin value was high (0.87). Moreover, Bartlett's test of sphericity was significant since χ^2 = 3,482.6, df = 378, $p < 0.001$. Five factors with eigenvalues above 1.0 were extracted, which explained 68.4 percent of total variance. The five factors were labelled as follows: (1) Personalization and AI-driven customizations
(2) Real-time responsiveness and proactivity
(3) Immersive and interactive engagement
(4) Omni channel seamlessness
(5) Data-driven relationship management.

Confirmatory Factor Analysis

The five-factor model also showed a good fit in the confirmatory factor analysis (CFA). The results showed a good fit of the model to the data, indicated by a χ^2/df of 2.18, a CFI of 0.94, a TLI of 0.93, and a RMSEA of 0.061 (with a 90% confidence interval of 0.052 to 0.070). The SRMR value was 0.058. The factor loadings were all above 0.50 and significant at $p < 0.001$.

Structural Equation Model

The results of the SEM also showed a good fit of the model to the data, indicated by a χ^2/df of 2.34. The model fit indices were also good, indicated by a CFI of 0.93

Hypothesis	Path	β (Std.)	Supported?
H1	Personalisation → Consumer Retention	0.42***	Yes
H2	Real-Time Responsiveness → Consumer Retention	0.31***	Yes
H3	Omnichannel Integration → Consumer Retention	0.38***	Yes
H4	High-Tech Services → Value Co-Creation → Retention	0.29*** (indirect)	Yes
H5	High-Tech Services → Trust → Retention	0.34*** (indirect)	Yes
H6	Synergy Index → Retention	0.51***	Yes
H7	Age × Tech Readiness Moderation	Significant (p<0.05)	Partial

Note: *** $p < 0.001$; all standardised path coefficients reported.

Mediation Analysis

A bootstrap analysis for mediation was conducted with 5,000 resamples. The analysis examined if trust and co-creation of perceived value acted as indirect effects between high-tech augmented services and customer retention. Both variables had significant indirect effects. There is partial mediation, as the direct effect between high-tech augmented services and customer retention remained significant after controlling for the indirect effects, β = 0.27, $p < 0.001$.

Moderation Analysis

A multi-group SEM analysis was conducted to determine if technology readiness moderated the

relationship between high-tech augmented services and customer retention. Results indicated that the interaction between high-tech augmented services and technology readiness was significant for high vs. low technology readiness groups. That is, the positive effect of high-tech augmented services on customer retention was stronger for high technology readiness than for low technology readiness. Specifically, for high technology readiness, the effect was β = 0.58, whereas for low technology readiness, the effect was β = 0.31. Age also moderated the results. For the 18-35-year-old group, the effects of personalization and interactivity on customer retention were particularly strong, whereas for the 46+ years old group, the effects of trust and reliability dimensions on customer retention were stronger.

7. Findings

Key Findings

Our study, while theoretically informed, has a strong practical focus. Here are our key findings:

Finding 1: Personalisation has the strongest effect on long-term loyalty

Among the five dimensions of high-tech augmented services, personalisation has the strongest impact on customer retention (\(\beta\) = 0.42, p < 0.001). When customers experience a level of personalisation, facilitated by AI-powered profiling, recommendation, and message tailoring, this has a impact on customer loyalty, purchase intention, and emotional attachment. This is in line with prior research on consumer-brand relationship outcomes, reinforcing the importance of personalisation in high-tech augmented services.

Finding 2: The overall synergy effect has the strongest impact

The overall synergy index, which measures the collective impact of all five dimensions, has the strongest impact on customer retention (\(\beta\) = 0.51, p < 0.001), surpassing all other dimensions. This supports our proposed hypothesis of synergy (H6), showing that the overall retention effect of high-tech augmented services is greater when all five dimensions are used together, rather than any single dimension in isolation. This shows that a multi-dimensional, multi-tech capability-based approach to customer retention has a significantly greater impact than any single dimension.

Finding 3: Trust is a stronger mediator than perceived value

As a mediator, trust has a stronger indirect effect (\(\beta\) = 0.34) than perceived value (\(\beta\) = 0.29). This shows that trust is one of the factor in determining the overall impact of high-tech augmented services on customer retention, since it encompasses a firm's competence, reliability, and data ethics, all of which are critical in the use of AI-powered services.

Finding 4: Omnichannel integration has the second-highest impact

Finally, omnichannel integration, which measures the smooth delivery of high-tech services across physical and digital channels, has the second-highest impact on customer retention (\(\beta\) = 0.38). When customers experience a seamless, integrated, omnichannel experience, facilitated by integrated data and high-tech channels, this has a significant impact on customer retention.

Finding 5: Technology Readiness as a Key Moderator

How tech-ready people are can literally change everything. If the customer is more tech-ready, they reap significantly more value for the investment in high-tech, augmented services. This means that if you are a business that serves a wide range of customers, one of the key things to understand is the tech-readiness gaps that exist for your customers as you create high-tech service options.

Finding 6: Demographic Variations

There are also demographic differences in terms of how the customer responds to the retention value of technology. For instance, the 18-35-year-old customer responds more favourably to fun, experiential, interactive elements. For the older customer, they respond more favourably to reliable, trustworthy elements. There is little difference between genders, which is insignificant once controlled for the other variables. Income differences appear to be related to the premium high-tech offerings rather than the acceptance of technology.

8. Managerial Implications

Strategic Technology Investment

The recognition of the synergy between the investments in technology also suggests a new way forward for leaders in the service sector. Rather than the piecemeal approach of investing in new technology one at a time, in response to the actions of the competitor, the firm should invest in a technology strategy that is fully integrated and focuses on customer retention. This includes investments in personalization, responsiveness, interactivity, omnichannel integration, and data analytics. The synergy between the investments in technology suggests that the law of diminishing returns will eventually set in, where the overall benefit gained from the investment in the new technology will eventually plateau and become difficult for the competitor to replicate, given the synergy between the investments.

Personalisation as a Core Capability: As the study also suggests that the synergy between the investments in technology will yield diminishing returns, the AI-powered personalization strategy should also be considered a core rather than a

supplementary strategy to customer retention. This means that the firm needs to invest in the best talent in the field of customer data, machine learning, and also ensure that the firm is able to provide a high level of personalization throughout the customer journey from first touch to customer service, issue resolution, and renewal. The success of the personalization strategy will depend heavily on the quality of the data available to the firm; hence, firms that invest in the creation of a unified customer data platform will also be able to achieve the high level of personalization that will result in customer retention.

Trust as a Strategic Asset

As trust is at the heart of the relationship between technology investments and customer retention, the investments in technology should also be evaluated based on their ability to influence trust levels within the firm and the overall success of the high-tech strategy. The firm should invest in data transparency, accountable algorithms, data security, and disclosure of data practices as the core components of the high-tech strategy for the firm.

Omnichannel Integration

The significance of omnichannel integration in customer retention is obvious, as it eliminates silos, organizational and technological, to provide a seamless customer experience across the entire gamut of customer engagements. Thus, customer retention managers should invest in integrated CRM systems, a single view of the customer, and cross-channel service delivery that ensures the customer experience is seamless and uninterrupted, irrespective of the channels used by the customer. In fact, the entire customer journey should be understood in its entirety, and investments in technology should be evaluated based on the extent to which the customer journey is made seamless.

Consumer Segmentation by Technology Readiness

The results of the moderation also indicate that organizations that seek to serve diverse customer segments should segment the deployment of high-tech services. In this context, the complexity, interactivity, and autonomy of high-tech services should vary based on the technology readiness of the consumers. While high-readiness consumers would have access to advanced AI-based self-service and immersive AR, low-readiness consumers would have access to simple, interactive, and less autonomous high-tech services with higher levels of human support. In this context, digital literacy programs and onboarding help would also expand the market for high-tech augmented services and accelerate the conversion of low-readiness consumers to high-retention consumers.

Implications for Service Design

From a service design perspective, the findings suggest that there is a strong case for a human-centred approach to the integration of high-tech services, focusing on the emotional and value co-creation dimensions in addition to the efficiency and productivity benefits. Thus, service designers should integrate the principles of empathy, co-design, and user testing in the design of high-tech augmented services, ensuring that the capabilities of the technology are used to enrich the lives of consumers, not just organizations. Retention's emotional attachment and advocacy are best achieved through experiences that create moments of delight, surprise, and value co-creation.

9. Scope of Further Research

This study also suggests several avenues for future research, which I will outline in the following paragraphs.

Longitudinal Research Design

As the current study based on a cross-sectional study, it is not possible to infer the cause and effect or the dynamics of the relationship between retention and technology over time. Future studies could follow a longitudinal study design to assess the dynamics of the relationship between technology and retention over time. For instance, it would be interesting to know if the effects of initial experiences with high-tech services translate to later loyalty or if the effects of retention increase or decrease over time.

Cross-Cultural Comparative Studies

Since the study is based on a single cultural context, the Indian service sector, it would be possible to conduct cross-cultural studies in different markets with different cultural backgrounds, e.g., the US, UK, Germany, and emerging markets in China, Brazil, Indonesia, and other countries in the context of the developed and developing world. Several cultural factors, e.g., uncertainty avoidance, individualism & collectivism, and power distance, could play a critical role in the relationship between technology and retention.

Sector-Specific Studies

While the research has been conducted across various sectors within the service industry, there is room for future research to study deeper into the various ways in which technology retention is experienced in various sectors, e.g., healthcare, finance, hospitality, etc.

Role of Emerging Technologies

As mentioned earlier, technology is evolving at a breakneck pace, and therefore, future research should also delve into the ways in which emerging technologies will influence customer retention in the service industry. This includes the likes of generative AI, Web3, blockchain-based services, extended reality,

etc., and their influence on customer retention in the service specific industry.

Negative Consequences and Technology Fatigue
While the research has been conducted from the positive perspective of the influence of high-tech augmented services on customer retention, there is room for future research to study deeper into the negative aspects of high-tech augmented services, e.g., customer anxiety, customer aversion to technology, customer aversion to algorithms, customer fatigue, etc., and the influence of high-tech augmented services on customer retention in the service industry.

Employee Perspective
While the research has been conducted from the customer angle, there is room for future research to in deeper into the ways in which the employee perspective influences the relationship between high-tech augmented services and customer retention in the service industry, especially since technology is evolving at a breakneck pace and is increasingly being used to replace the human element within the service industry itself.

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