CINEFORUM
ISSN: 0009-7039
Vol. 66. No. S6, 2026 (Special Issue 6)

Consumer Behaviour and Augmented Services: A Bibliometric and Thematic Systematic Literature Review.

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Abstract
Augmented services, which embed augmented reality (AR), virtual reality (VR), artificial intelligence (AI), service robots, conversational agents, and live-streaming technologies into service encounters, has become one of the fastest-growing fields of consumer behaviour research. This paper presents a bibliometric and thematic systematic literature review of research at the intersection of consumer behaviour and augmented services. A corpus of 998 peer-reviewed documents indexed in Scopus and related bibliographic databases between 2022 and 2026 and retrieved via the keywords "consumer behaviour" and "augmented services" and analysed using the bibliometrix/Biblioshiny toolkit were screened to identify 124 documents that directly investigated technology-augmented service encounters. The bibliometric indicators (source concentration, citation structure, co-word thematic mapping, institutional productivity, and annual growth) were combined with thematic coding to synthesise findings across six recurring clusters:
(1) AI-driven personalisation and conversational agents,
(2) live-streaming, digital humans and virtual influencers,
(3) AR/VR-enabled retail and shopping experiences,
(4) smart and gamified retail environments,
(5) service robots and human–robot interaction, and
(6) voice assistants and wearables
Results showed that publication volume within this domain nearly quintupled between 2022 and 2026 and was concentrated in International Journal of Human-Computer Interaction, Technological Forecasting and Social Change, and Electronic Commerce Research and Applications. Across clusters, perceived control, trust, anthropomorphism, presence, and perceived risk consistently emerged as the psychological mechanisms linking augmented-service design to consumer attitudes, purchase intention, and continuance, echoing the patterns documented in the parallel literature on generative AI and creative self-efficacy. The review offers an integrative framework, highlights domain-specific boundary conditions across retail consumers and proposes a research agenda focusing on longitudinal designs, cross-cultural validation, and ethical/dark-pattern considerations in augmented consumer environments...

Keywords : Consumer behaviour; Augmented services, Augmented reality, Virtual reality, Artificial intelligence, Service robots, Bibliometric analysis, Systematic literature review.

Introduction

Consumer behaviour research has long followed how technology changes the way people search for, evaluate, buy and experience goods and services. The current wave of this transformation is characterized by augmented services. These are service encounters in which a physical or digital layer of intelligence – augmented reality (AR) overlays, virtual reality (VR) environments, artificial intelligence (AI) recommendation and conversational systems, service robots, live-streaming hosts, and voice assistants – is added on top of, or substituted for, traditional human-delivered service (Kumar et al., 2024; Hermann & Puntoni, 2024). Unlike prior generations of e-commerce and self-service technology, augmented services are often built to feel co-present, personalized and socially responsive which changes not only what consumers can do, but how they feel about doing it.
Augmented services offer marketers, retailers and service providers reduced friction, more product information and differentiated experiences. For consumers, they raise new questions about trust, autonomy, privacy and the authenticity of interactions that increasingly involve non-human or semi-human agents (Rasheed et al., 2023; Pitardi et al., 2023). The link between these technologies and consumer attitudes, purchase intention, engagement and post-purchase behaviour has thus become a key and rapidly growing concern in marketing, information systems, hospitality and human–computer interaction scholarship.

The present review tackles this concern through a bibliometric and thematic systematic review. Following recent bibliometric syntheses in this space (Aria & Cuccurullo, 2017; Donthu et al., 2021), we take a quantitative science-mapping approach of a large multi-database corpus with qualitative thematic coding of the subset of documents most closely investigating augmented, technology-mediated service encounters. The result is a structured report of what is known about consumer behaviour and augmented services, how the field's attention has shifted over the period 2022–2026, and where the empirical and theoretical gaps are.

2. Background

2.1 Defining augmented services

Augmented services are consumer-facing service offerings in which a layer of digital intelligence or immersive technology—AR/VR interfaces, AI-based personalization and conversational agents, physical or virtual service robots, live-streamed human or AI hosts, and voice or wearable interfaces—is embedded into the service encounter to extend, replace or reshape one or more stages of the consumer's search, evaluation, purchase or consumption experience. This definition deliberately includes several technology families that are often studied separately (AR marketing, service robotics, conversational AI, live commerce) as the bibliometric evidence gathered below shows they are part of a single, densely interconnected research conversation around a single question: how does augmenting the service encounter with non-human or hybrid agency alter consumer psychology and behaviour ?

2.2 Theoretical foundations

The corpus is based on a rather narrow set of theoretical lenses. The dominant explanations for why consumers initially use AR, AI and robotic service touchpoints are technology adoption models such as the Technology Acceptance Model and the Unified Theory of Acceptance and Use of Technology. The Stimulus–Organism–Response (S-O-R) paradigm is a popular approach to model the effect of augmented-service stimuli (visual richness, interactivity, anthropomorphic cues) on internal states (flow, presence, trust, perceived risk) that subsequently affect behaviour al responses such as purchase intention or continuance use.

Presence and flow theory explain why immersive AR/VR retail environments can create more engaging experiences than static digital storefronts (Chen et al., 2023; Xu et al., 2025). Anthropomorphism and social-presence theory explain the mixed effects of humanlike design in service robots, chatbots, and virtual influencers: humanlike cues can make the experience feel warmer and more trustworthy while also creating an uncanny valley effect or the perception of being manipulated (Shang et al., 2026; Pitardi et al., 2023).

As in the parallel literature on generative AI and creative self-efficacy, one recurring theoretical theme in these approaches is the question of perceived control and attribution: consumers are more likely to react positively to enhanced services if they feel that they have some control and can attribute outcomes to their own choices, and less favourably if they perceive the technology as non-deterministic or manipulative (Rasheed et al., 2023; Wang et al., 2024).

2.3 Consumer behaviour constructs examined

Across the corpus the dependent and mediating constructs mostly researched are: attitude toward the technology or brand, purchase and repurchase intention, trust and perceived risk, engagement, flow and telepresence, satisfaction and continuance intention, and more recently ethical and dark-pattern concerns such as manipulation, herd behaviour and consumer autonomy erosion (Du et al. 2025; Chen et al. 2025). This range of outcomes is broadly analogous, at the level of consumer behaviour, to the same enhancement/erosion duality documented in adjacent psychological literatures on human–AI collaboration, where the preservation or displacement of human agency is the pivotal moderator of whether a technology is experienced as empowering or as threatening.

3. Objectives

Three research questions had to be developed for this review:

- RQ1: What bibliometric features (i.e., growth trends, sources, institutes, and impact) characterize the research field of consumer behaviour and augmented service from 2022 to 2026?
- RQ2: What thematic clusters structure this field, and which psychological mechanisms do they highlight as a basis for establishing consumer attitudes and behaviour toward augmented-service design?
- RQ3: How do the effects of augmented services on consumer responses manifest themselves in retail and e-commerce contexts, and what do they say about the relevance of this topic?

4. Methodology

4.1 Data source and search strategy

A large set of bibliographic resources was retrieved from Scopus and other databases by searching for consumer behaviour and augmented services (as well as related technology terms found in the records, e.g. augmented reality, artificial intelligence, virtual reality, robots, chatbots, live streaming) published between January 2022 and mid-2026. After removing duplicates, this corpus included 998 articles retrieved from peer-viewed journals.

Bibliometric analysis was conducted using the bibliometrix package and its Biblioshiny interface (Aria & Cuccurullo, 2017) following the recommended practice for bibliometric research and analysis (Donthu et al., 2021).

4.2 Bibliometric and thematic screening approach

Two levels of analysis were applied to the corpus.

First, a bibliometric level characterized the complete 998-document corpus: annual production, source concentration (Bradford's Law), most globally cited documents, most productive institutions, co-word thematics (Louvain clustering of the top 250 author keywords), and keyword trends.

Second, a thematic screening level identified the documents in the corpus whose titles explicitly identify a technology-enhanced service encounter (AR, VR, AI-driven personalization or conversational agents, service robots, live-streaming/virtual-influencer commerce, voice assistants, and gamified or smart retail environments). This keyword-based title screening, analogous to but narrower than a standard PRISMA-style abstract/full-text screening, identified 124 documents (12.4% of the corpus), which were thematically coded into six clusters via successive reading and categorization, consistent with the six-phase thematic analysis approach used in related reviews of technology and consumer/creative self-beliefs (Braun & Clarke, 2006).

We report this methodological boundary explicitly in Section 8: because screening was conducted at the level of titles rather than full texts, some borderline studies may have been excluded or, conversely, some included studies may have treated the technology only nominally.

Table 1. Overview of the bibliometric dataset.

Parameter	Value
Databases	Scopus and related bibliographic databases (compiled via Biblioshiny export)
Search keywords	"Consumer behaviour" AND "Augmented services" (plus associated technology terms within records)
Timespan	January 2022 – mid-2026
Documents retrieved (full corpus)	998
Documents on augmented/technology-mediated services (thematic subset)	124 (12.4% of corpus)
Analytical tool	bibliometrix / Biblioshiny (R)
Thematic clusters identified	6

5. Results

5.1 Descriptive bibliometric profile (RQ1)

Annual output on consumer behaviour and augmented-service-related topics grew steadily and sharply across the review window, rising from 211 keyword occurrences of "consumer behaviour " in 2022 to 998 by 2026, with the technology-augmented subset rising from 9 documents in 2022 to 44 in the current (partial) year — an almost fivefold rise outpacing the parent corpus. Table 2 reports the ten most relevant sources for the full corpus; Table 3 reports the sources most concentrated in the augmented-services subset, which cluster far more heavily in human–computer interaction and technology-forecasting outlets than the parent literature.

Table 2. Most relevant sources, full corpus (N = 998).

Source	Articles (full corpus)
Sustainability (Switzerland)	178
Journal of Cleaner Production	137
International Journal of Human-Computer Interaction	61
Foods	56
Technological Forecasting and Social Change	55
Electronic Commerce Research and Applications	47
IEEE Transactions on Engineering Management	41
International Journal of Consumer Studies	41
Cogent Business and Management	38
Journal of Retailing and Consumer Services	36

Table 3. Most relevant sources, augmented-services subset (n = 124).

Source	Articles (augmented-services subset)
International Journal of Human-Computer Interaction	34
Technological Forecasting and Social Change	12
Electronic Commerce Research and Applications	10
Sustainability (Switzerland)	9
International Journal of Consumer Studies	7
Journal of Retailing and Consumer Services	6
International Journal of Information Management	6
Information & Management	5
Industrial Management and Data Systems	5
IEEE Transactions on Engineering Management	4

The citation analysis of the augmented-services subset reveals a few highly cited documents that ground the field in a tight cluster. Kumar et al. (2024), an agenda-setting review of AI-powered marketing, is the most cited in the subset, followed by Hermann and Puntoni's (2024) treatment of generative AI in consumer behaviour, Zhang et al.'s (2022) study of smart tourism technologies, and Oncioiu and Priescu's (2022) study of VR in tourism destinations. In terms of institutional productivity across the full corpus, The Hong Kong Polytechnic University, UCSI University, the University of Science and Technology of China, and Tongji University are the most prolific affiliations, with East Asian and Southeast Asian institutions particularly prominent in the augmented-services subset — consistent with the concentration of live-streaming- and metaverse-commerce research emerging from Chinese-language markets.

The theoretical and methodological backbone of the corpus is dominated by structural-equation and technology-adoption traditions: the most locally cited authors are Hair (PLS-SEM), Ajzen (Theory of Planned Behaviour), Fornell (construct validity), Henseler (PLS-SEM), and Venkatesh (UTAUT), underscoring that survey-based, variance-based modelling remains the default empirical strategy in this literature

5.2 Thematic structure of the augmented-services literature (RQ2)

Thematic coding of the 124-document subset produced six overlapping but analytically distinct clusters, summarised in Table 4.

Table 4. Thematic clusters within the augmented-services subset (n = 124).

Thematic cluster	n	Representative studies
AI-driven personalisation, chatbots & algorithmic recommendation	46	Hermann & Puntoni (2024); Rasheed et al. (2023); Olan et al. (2024); Hoffmann et al. (2024)
Live streaming, digital humans & virtual influencers	31	Laszkiewicz & Kalinska-Kula (2023); Gu et al. (2025); Bai et al. (2024); Wang et al. (2025)
AR/VR-enabled retail & shopping experiences	28	Oncioiu & Priescu (2022); Chen et al. (2023); Kumar et al. (2024); Chakraborty et al. (2024)
Smart & gamified retail environments	12	Zhang et al. (2022); Chang et al. (2023); Che et al. (2023)
Service robots & human–robot interaction	7	Huang & Liu (2022); Moriuchi & Murdy (2024); Pitardi et al. (2023); Jia et al. (2025)
Voice assistants & wearables	4	Kang et al. (2024); Liu & Han (2022); Chahal & Mahajan (2025)

5.2.1 AI-driven personalisation, chatbots and algorithmic recommendation

The largest group (46 documents, 37% of the subset) relates to the role of artificial intelligence in personalising and mediating the consumer decision journey – through recommender systems, algorithmic pricing, generative-AI shopping assistants and text-based chatbots.

Hermann and Puntoni (2024) document the shift from predictive to generative AI, and suggest that consumers increasingly interact with AI as a co-creative agent rather than passive tool – a shift that has analogous implications for the enhancement/erosion pattern seen in the context of generative AI and

creative self-efficacy. Kumar et al. (2024) synthesise findings on where and how AI is used within the marketing funnel, while Rasheed et al. (2023) demonstrate that hospitality consumers' adoption of AI is conditional upon whether the technology is perceived as enhancing human staff, or replacing them. Studies on recommender-system design (Zhou et al., 2022; Mousavi et al., 2023; Bi et al., 2024) converge on the finding that transparency around algorithmic suggestions and perceived autonomy over them increase trust and purchase intention, while opaque or overly aggressive personalisation ("personalised or pressurised", Du et al., 2025) can trigger reactance and discontinuance.

5.2.2 Live streaming, digital humans and virtual influencers

The second-biggest group (31 documents) was devoted to the explosive rise of live-commerce and synthetic-media marketing. The livestream shopping was conceptualized as a "shopper-tainment" mix of social, entertainment, and persuasive functions (Gu et al., 2025; Xin et al., 2024) where the herd behaviour , streamer credibility, and parasocial interaction were found as key mechanisms (Chen et al., 2025; Kim et al., 2025). Another stream within this group explored the use of AI-generated hosts and virtual influencers, revealing that their perceived authenticity and disclosure of their artificial nature were partial mediators of consumer trust and purchase intentions while the credibility of virtual influencers may drive consumer unethical behaviours via disengagement with a non-human agent (Laszkiewicz & Kalinska-Kula, 2023; Vo et al., 2025).

5.2.3 AR/VR-enabled retail and shopping experiences

Twenty-eight studies explore how Augmented and Virtual Reality affect the process of shopping and the experience of the destination from the perspective of augmented retail fitting applications, immersive retail experiences, and fully-fledged virtual reality retail spaces and tourism destinations. Oncioiu and Priescu (2022) and Chen et al. (2023) report that the sense of immersion and interactivity foster flow and impulsive buying, while Kumar et al. (2024) suggest a means-end-chain approach and identify value-based perceptual associations between augmented reality affordances and retail value. Virtual reality-based experiences in the metaverse offer extended immersive experiences as persistent virtual spaces where social presence and interactive possibilities drive continuance intentions through presence, social interactivity, and trust (Chakraborty et al., 2024; Yin & Do, 2025).

5.2.4 Smart and gamified retail environments

A smaller but coherent cluster (12 documents) relates smart-store technologies, gamification and destination-level 'smart tourism' ecosystems incorporating sensors, mobile applications and location-based services. Zhang et al. (2022) report that smart-tourism-technology attributes influence tourist experiences predominantly via perceived use value and enjoyment, resonating with dual utilitarian/hedonic pathways found in smart-store studies (Chang et al., 2023) and gamification research (Che et al., 2023) in which enjoyment and achievement motives appear to be more predictive of purchase behaviour than efficiency motives.

5.2.5 Service robots and human–robot interaction

The smallest group by number of articles (7), service-robot studies demonstrate the most coherent trends in terms of effects. Physical anthropomorphism and gender congruity each moderate consumer comfort with robot service providers (Huang & Liu, 2022; Pitardi et al., 2023), while a meta-analysis of robot service studies reports that robot service quality is evaluated more positively as the task becomes more utilitarian, and more negatively for tasks with strong emotional content (Jia et al., 2025). Moriuchi and Murdy (2024) identified key moderators which differentiate robotic tasks where robots improve on human service quality from those where they decrease it.

5.2.6 Voice assistants and wearables

The smallest cluster (4 documents) relates to voice-based and wearable augmented services. Kang et al. (2024) find that attachment to voice assistants, rather than technological accuracy, drives positive evaluations whereas Chahal and Mahajan's (2025) thematic comparative case methodological review calls for deeper theoretical understanding of digital voice assistants, beyond mere adoption/intention frameworks, representing an emerging (under-theorized) area for wearable device consumer research (Liu & Han, 2022).

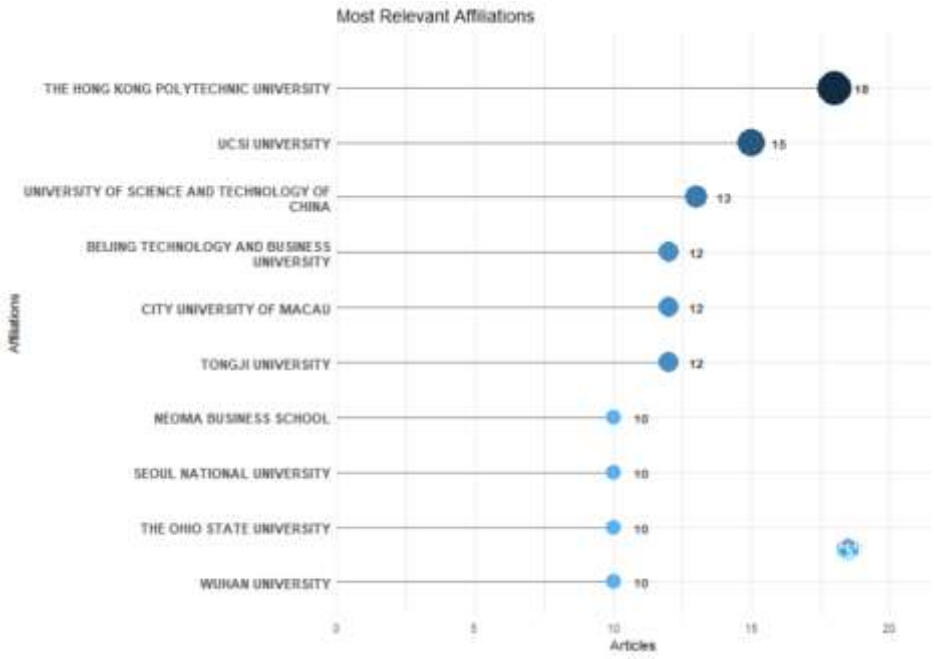
5.3 Cross-domain variation and psychological mechanisms (RQ3)

Across all six clusters, three mechanisms are revealed as the primary explanatory pathways linking augmented-service design to consumer outcomes are: (1) perceived control and attribution: consumers respond more positively to augmented services where they retain a clear sense of agency over the augmented interaction (directing an AR try-on session, querying a chatbot, or intervening in a robot's task) and less positively where the technology's operation is opaque or autonomous (Rasheed et al., 2023; Wang et al., 2024); (2) trust and anthropomorphism: humanlike or socially responsive design cues increase warmth and engagement up to a threshold, beyond which they can trigger discomfort, scepticism, or perceived manipulation (particularly for AI chatbots and virtual influencers) (Shang et al., 2026; Greilich et al., 2025); and (3) presence and immersion: in AR/VR and metaverse contexts specifically, the sense of "being there" is the strongest predictor of flow, engagement, and downstream purchase intention (Chen et al., 2023; Xu et al., 2025).

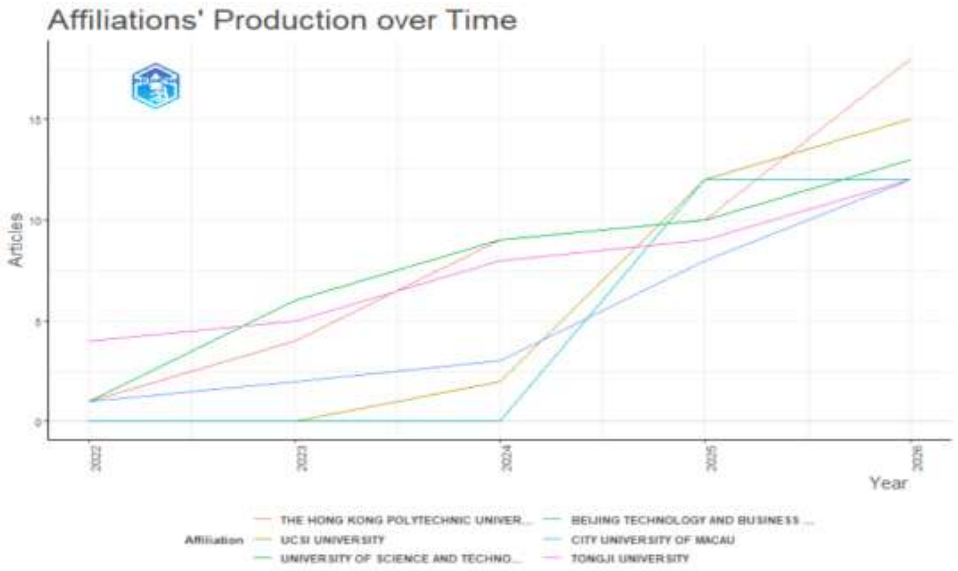
These mechanisms function differently across domains: in hospitality and tourism, augmented services are most often evaluated against the benchmark of authentic human service, so robot and AI adoption hinges on task type and perceived warmth (Rasheed et al., 2023; Jia et al., 2025); in retail and e-commerce, augmented services are evaluated primarily against convenience and risk-reduction benchmarks, so AR/VR and AI personalisation succeed when they reduce uncertainty about fit, quality, or price without introducing new privacy or manipulation concerns (Kumar et al., 2024; Du et al., 2025); in live-commerce and social-media-adjacent contexts, parasocial and herd dynamics dominate, making streamer/host credibility and platform-level trust as important as the underlying technology itself (Gu et al., 2025; Chen et al., 2025); and in food and grocery contexts, augmented services (AI recommendation, AR try-before-you-buy, drone/autonomous delivery) are evaluated heavily against sustainability, health, and reliability concerns, layering the mechanisms above onto pre-existing consumer values (Wang et al., 2025; Mishra et al., 2023).

6. Biblioshiny Report Diagrams

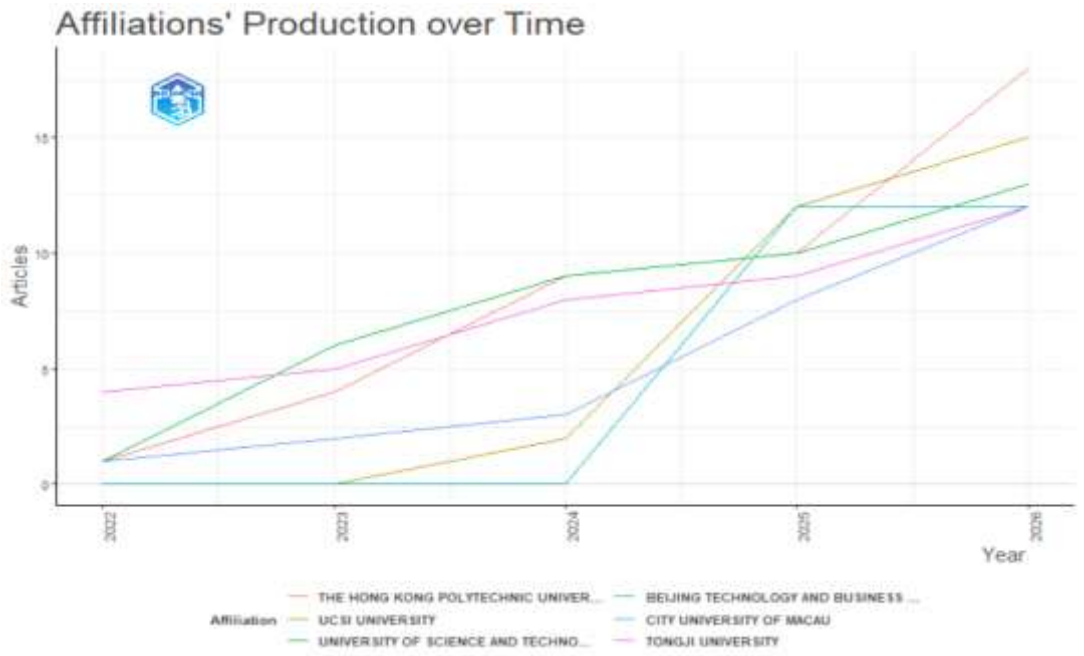
Most Relevant Affiliations:



Affiliations Production over Time:

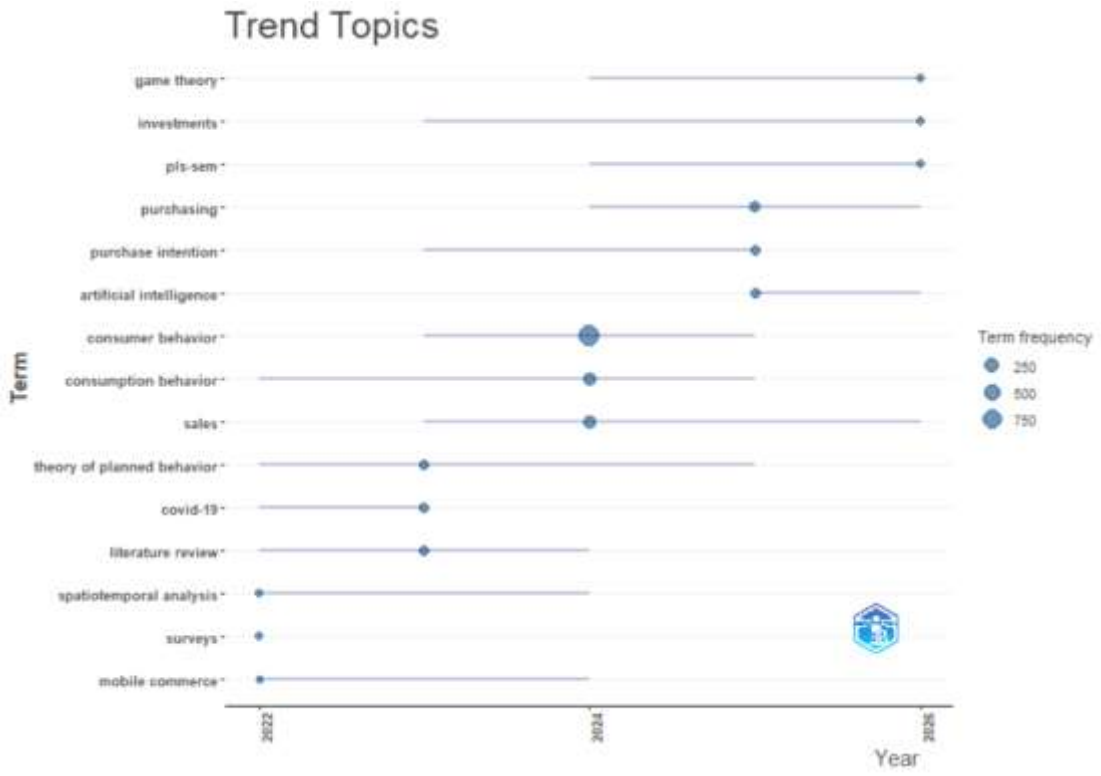


Most Relevant Words:

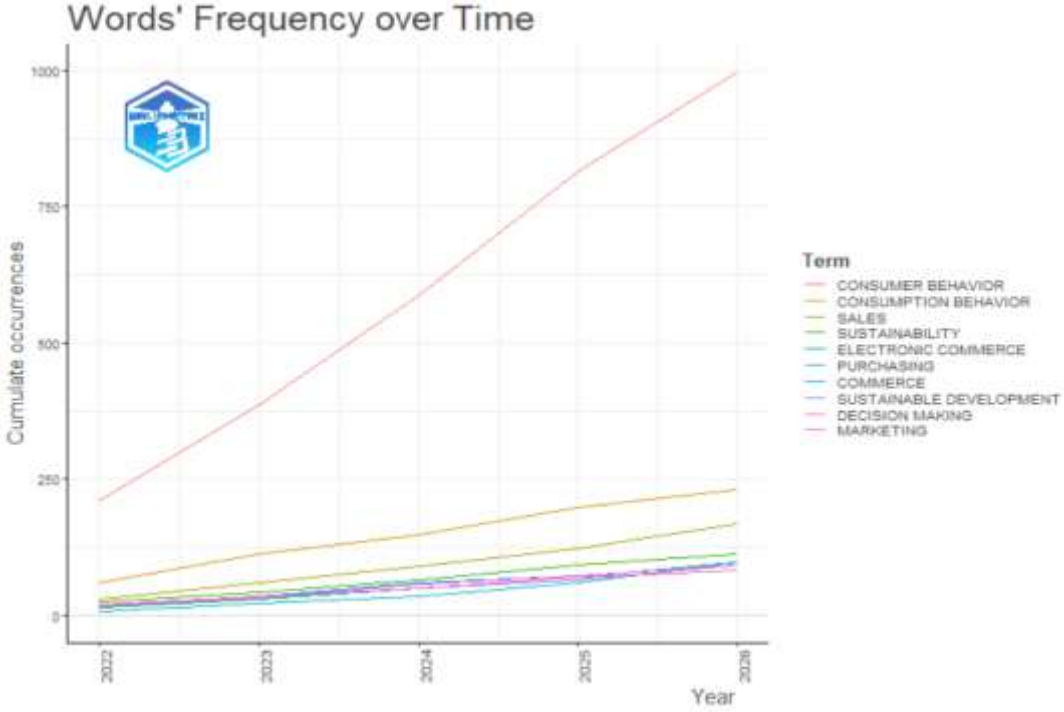


Tree Map:

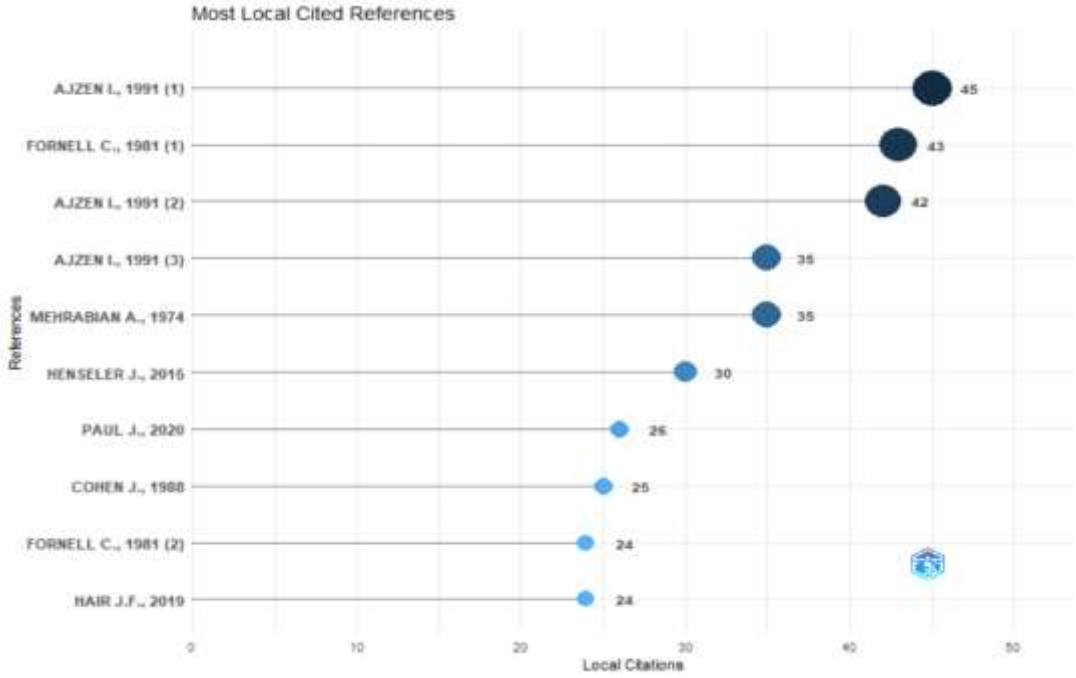
Trend Topics:



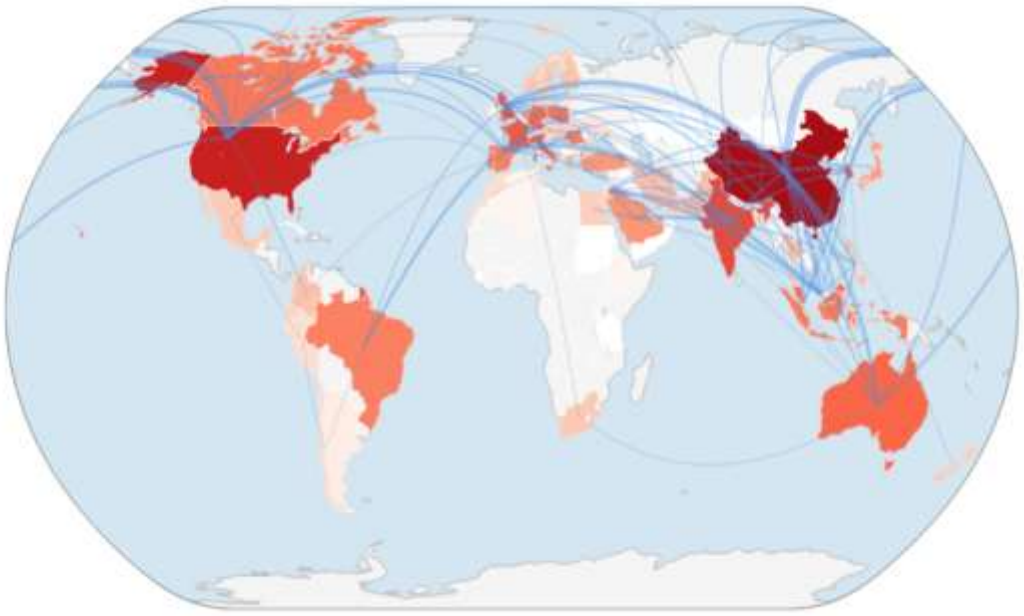
Word's Frequency over Time:



Most Local Cited References:



Collaborated World Map:



6. Discussion

Taken together, the bibliometric and thematic evidence demonstrates that the consumer behaviour research on augmented services is not only rapidly expanding but is also consolidating around a shared theoretical core, despite also being studied through the vocabularies of several adjacent subfields (AR marketing, service robotics, conversational AI, live commerce, and HCI). The prevalence of certain sources (International Journal of Human-Computer Interaction, Technological Forecasting and Social Change, Electronic Commerce Research and Applications) demonstrates that this is currently an applied, technology-forward literature more than a purely psychological one, with survey-based PLS-SEM studies the modal empirical approach.

The recurrence of control, trust/anthropomorphism, and presence as cross-cutting mechanisms demonstrates that for all their variety, the augmented services do not have a uniform effect on consumer behaviour — their effect depends on design choices that preserves or displaces consumer agency, and on the fit of the technology's social presence to the emotional stakes of the service encounter. This convergence with findings from the generative-AI-and-creative-self-efficacy literature (similarly identifying perceived control and attribution clarity as the

pivotal moderators of whether AI collaboration builds or erodes confidence) demonstrates a broader psychological principle that could generalise across consumer, creative, and professional domains: technologies that visibly augment human agency tend to be embraced, while those that appear to displace or obscure it tend to generate resistance, scepticism, or ethical concern, regardless of the specific area the technology is used in.

The strong and accelerating growth of the live-streaming/virtual-influencer and AI-personalisation clusters, relative to the comparatively small and slow-growing service-robot and voice-assistant clusters, also demonstrates where the practitioner and consumer attention is currently concentrated — on screen-mediated, algorithmically personalised augmentation rather than on physically embodied robotic augmentation — at least within the window captured by this corpus.

7. Implications for theory and practice

For theory, the review's main implication is that future studies on the adoption of augmented service should go beyond TAM/UTAUT-based approaches, which assume that the same determinants drive technology adoption regardless of the technology's nature to embrace an integrated framework wherein control, trust/anthropomorphism, and presence act as a set of core mechanisms, with domain (retail, e-commerce, live-commerce) being a moderating variable, not a separate category, as previous literature implies.

For practice, the study's results suggest that designers of augmented service should aim to transparently disclose the nature and limitations of the technology while providing consumers with the illusion and control and the ability to intervene in the process (e.g., through interruptive options, customizable recommendations, robot task interruptions, and disclosure of AI or virtual influencers). Moreover, anthropomorphic and immersive elements should be used with consideration of emotional valence, not to the point of oversaturation.

8. Limitations and future research

This review has several limitations. Firstly, the study used keyword screening of titles within a large bibliometric export instead of PRISMA-standard abstract/full-text screening, meaning that relevant literature which touches upon augmented technologies only in abstracts, keywords, or body text, and not titles, is not represented in this analysis. In fact, the 124 included documents should be considered a sample of a much larger field, as indicated by the large size of the exported bibliometric database. Secondly, this corpus represents the specific combination of databases queried (which did not include all sources, notably the ACM DL, IEEE Xplore, and non-English publications) and search terms chosen for this particular study. Thirdly, the projection of research trends to 2030 is skewed because the underlying dataset only partially covers 2026.

Future work in this area should (a) perform a PRISMA screening of the augmented-services corpus at the full-text level to build upon the thematic clusters identified in this study; (b) take a longitudinal view of the relationship between design factors and control/trust presence mechanisms, potentially including experimental validation of these associations; (c) expand the cross-cultural understanding of the field, which is currently biased towards East Asian regional contexts; and (d) further investigate the ethical implications and "dark patterns" of augmented service designs, which are only beginning to appear in the literature (Du et al., 2025; Cheng, 2026).

9. Conclusion

This bibliometric and thematic analysis of 998 documents, including a concentrated subset of 124 studies of technology-augmented service encounters, reveals that consumer-behaviour research on augmented services has grown nearly fivefold since 2022 and has grouped itself around six recurring themes: AI-driven personalisation and conversational agents, live-streaming and virtual-influencer commerce, AR/VR-enabled retail, smart and gamified retail environments, service robots, and voice assistants/wearables. Across these themes, perceived control, trust and anthropomorphism, and presence, consistently determine whether augmenting a service encounter with intelligent or immersive technology enhances or undermines consumer attitudes and behaviour. These findings provide an integrative foundation for future theory-building and the design of augmented services that support, rather than displace, consumer agency..

References

1. Aiolfi, S., & Luceri, B. (2024). See you on the metaverse: a bibliometric expedition through the metaverse landscape. Technological Forecasting And Social Change. https://doi.org/10.1016/j.techfore.2024.123605
2. Alesanco-Llorente, M., Reinares-Lara, E., Pelegrín-Borondo, J., & Olarte-Pascual, C. (2023). Mobile-assisted showrooming behaviour and the (r)evolution of retail: the moderating effect of gender on the adoption of mobile augmented reality. Technological Forecasting And Social Change. https://doi.org/10.1016/j.techfore.2023.122514

3. Bai, X., Cheng-Xi, AW. E., Wei-Han, TAN. G., & Ooi, K-B. (2024). Livestreaming as the next frontier of e-commerce: a bibliometric analysis and future research agenda. Electronic Commerce Research And Applications. https://doi.org/10.1016/j.elerap.2024.101390
4. Chakraborty, D., Polisetty, A., & Rana, NP. (2024). Consumers' continuance intention towards metaverse-based virtual stores: a multi-study perspective. Technological Forecasting And Social Change. https://doi.org/10.1016/j.techfore.2024.123405
5. Chang, Y-W., Hsu, P-Y., Chen, J., Shiau, W-L., & Xu, N. (2023). Utilitarian and/or hedonic shopping – consumer motivation to purchase in smart stores. Industrial Management And Data Systems. https://doi.org/10.1108/IMDS-04-2022-0250
6. Che, T., Peng, Y., Zhou, Q., Dickey, A., & Lai, F. (2023). The impacts of gamification designs on consumer purchase: a use and gratification theory perspective. Electronic Commerce Research And Applications. https://doi.org/10.1016/j.elerap.2023.101268
7. Chen, JV., Ha, Q-A., & Vu, MT. (2023). The influences of virtual reality shopping characteristics on consumers' impulse buying behaviour . International Journal Of Human-Computer Interaction. https://doi.org/10.1080/10447318.2022.2098566
8. Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. Journal of Business Research, 133, 285-296. https://doi.org/10.1016/j.jbusres.2021.04.070
9. Fan, X., Xun, J., Dolega, L., & Xiong, L. (2025). The role of augmented and virtual reality in shaping retail marketing: a meta-analysis. Sustainability (Switzerland). https://doi.org/10.3390/su17020728
10. Feng, L., Yuan, H., Ye, Q., Qian, Y., & Ge, X. (2024). Exploring the impacts of a recommendation system on an e-platform based on consumers' online behaviour al data. Information And Management. https://doi.org/10.1016/j.im.2023.103905
11. Gao, G., Liu, H., & Zhao, K. (2023). Live streaming recommendations based on dynamic representation learning. Decision Support Systems. https://doi.org/10.1016/j.dss.2023.113957
12. Greilich, A., Bremser, K., & Wüst, K. (2025). Consumer response to anthropomorphism of text-based ai chatbots: a systematic literature review and future research directions. International Journal Of Consumer Studies. https://doi.org/10.1111/ijcs.70108
13. Gu, Z., Zhao, X., & Wu, DJ. (2025). A model of shoppertainment live streaming. Management Science. https://doi.org/10.1287/mnsc.2023.01724
14. Hermann, E., & Puntoni, S. (2024). Artificial intelligence and consumer behaviour : from predictive to generative ai. Journal Of Business Research. https://doi.org/10.1016/j.jbusres.2024.114720
15. Ho, C-I., Liu, Y., & Chen, M-C. (2022). Antecedents and consequences of consumers' attitudes toward live streaming shopping: an application of the stimulus–organism–response paradigm. Cogent Business And Management. https://doi.org/10.1080/23311975.2022.2145673
16. Hoffmann, S., Lasarov, W., & Dwivedi, YK. (2024). Ai-empowered scale development: testing the potential of chatgpt. Technological Forecasting And Social Change. https://doi.org/10.1016/j.techfore.2024.123488
17. Huang, H., & Liu, SQ. (2022). Are consumers more attracted to restaurants featuring humanoid or non-humanoid service robots?. International Journal Of Hospitality Management. https://doi.org/10.1016/j.ijhm.2022.103310
18. Huang, T-L., Tsiotsou, RH., & Liu, BS. (2023). Delineating the role of mood maintenance in augmenting reality (ar) service experiences: an application in tourism. Technological Forecasting And Social Change. https://doi.org/10.1016/j.techfore.2023.122385
19. Kang, W., Shao, B., Du, S., Chen, H., & Zhang, Y. (2024). How to improve voice assistant evaluations: understanding the role of attachment with a socio-technical systems perspective. Technological Forecasting And Social Change. https://doi.org/10.1016/j.techfore.2023.123171
20. Kim, J., Kim, M., & Lee, S-M. (2025). Unlocking trust dynamics: an exploration of playfulness, expertise, and consumer behaviour in virtual influencer marketing. International Journal Of Human-Computer Interaction. https://doi.org/10.1080/10447318.2023.2300018
21. Kim, N. (2025). Capturing initial gaze attraction in branded spaces through vr eye-tracking technology. International Journal Of Human-Computer Interaction. https://doi.org/10.1080/10447318.2024.2351717

22. Kumar, V., Ashraf, AR., & Nadeem, W. (2024). Ai-powered marketing: what, where, and how?. International Journal Of Information Management. https://doi.org/10.1016/j.ijinfomgt.2024.102783
23. Kumar, H., Rauschnabel, PA., Agarwal, MN., Singh, RK., & Srivastava, R. (2024). Towards a theoretical framework for augmented reality marketing: a means-end chain perspective on retailing. Information And Management. https://doi.org/10.1016/j.im.2023.103910
24. Laszkiewicz, A., & Kalinska-Kula, M. (2023). Virtual influencers as an emerging marketing theory: a systematic literature review. International Journal Of Consumer Studies. https://doi.org/10.1111/ijcs.12956
25. Liu, Y., & Han, M. (2022). Determining the key factors of wearable devices consumers' adoption behaviour based on an madm model for product improvement. Ieee Transactions On Engineering Management. https://doi.org/10.1109/TEM.2019.2960499
26. Mishra, S., Sharma, I., & Pani, A. (2023). Analyzing autonomous delivery acceptance in food deserts based on shopping travel patterns. Transportation Research Part A: Policy And Practice. https://doi.org/10.1016/j.tra.2023.103589
27. Vo, T-H., Wei-Han, TAN. G., Pham, NT., Truong, TH-D., & Ooi, K-B. (2025). Promoting customer engagement and brand loyalty on social media: the role of virtual influencers. International Journal Of Consumer Studies. https://doi.org/10.1111/ijcs.70028
28. Wang, Z., Luo, C., Luo, XR., & Xu, X. (2024). Understanding the effect of group emotions on consumer instant order cancellation behaviour in livestreaming e-commerce: empirical evidence from tiktok. Decision Support Systems. https://doi.org/10.1016/j.dss.2023.114147
29. Zhang, H., Li, B., Hu, B., & Ai, P. (2026). Exploring the role of personal innovativeness on purchase intention of artificial intelligence products: an investigation using social influence theory and value-based adoption model. International Journal Of Human-Computer Interaction. https://doi.org/10.1080/10447318.2025.2513037

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