Augmented Reality Marketing and Brand Performance for Future Research Agenda: A Systematic Review of Literature

Dr. Njeru Winnie

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[1*]Dr. Njeru Winnie

Senior Lecturer, Department of Business Administration, Faculty of Business and Management Sciences, University of Nairobi

Abstract

Purpose: This paper develops a future research agenda on augmented reality (AR) marketing and brand performance by synthesizing fragmented empirical evidence on how AR-enabled experiences translate into brand-related outcomes.

Methodology: Using a systematic literature review, 342 journal articles were screened through manual assessment of titles, keywords, abstracts, and full texts against explicit inclusion criteria emphasizing AR as the focal technology, relevance to marketing and brand performance, and empirical orientation. Following the exclusion of non-marketing, predominantly technical, and non-empirical studies, 99 articles were retained for in-depth analysis.

Findings: The review indicates that AR marketing most consistently influences brand performance through enhanced consumer engagement, improved decision confidence via contextualized product visualization, and the strengthening of brand equity mechanisms particularly brand awareness, brand associations, and brand loyalty supported by immersion, interactivity, and telepresence. At the same time, the literature reveals persistent limitations, including inconsistent conceptualization of brand performance, a strong concentration on developed-market retail contexts, and limited examination of boundary conditions such as usability quality, consumer innovativeness, privacy concerns, and cultural context.

Unique Contribution to Theory, Practice and Policy: The paper contributes theoretically by consolidating AR marketing research within a coherent experience-to-equity framework, practically by identifying design principles most closely associated with positive brand outcomes, and from a policy perspective by highlighting the need for clearer governance around transparency, data use, and consumer protection as AR becomes embedded in contemporary marketing practice, particularly in developing economies.

Keywords: *Augmented Realty Marketing, Brand Performance, Systematic Review of Literature*

JEL Codes of Classification: *M31, D12, B40*

INTRODUCTION

Conceptually, augmented reality (AR) refers to a class of immersive technologies that integrate computer-generated digital content—such as images, animations, text, and video—into the user's real-world environment in real time (Vieira et al., 2022). Unlike fully virtual environments, AR preserves the physical setting while enhancing it with interactive virtual elements, thereby creating a hybrid experience that blends the real and the digital (Smink et al., 2019). Within marketing, AR is increasingly understood as an experiential interface that enables consumers to interact with brands, products, and services in contextually rich and personalized ways (Vinci et al., 2020).

Closely linked to AR marketing is the notion of brand performance, which broadly captures the extent to which branding activities translate into favorable market outcomes. Prior literature conceptualizes brand performance through both intermediate and ultimate outcomes, including brand awareness, brand associations, brand attitudes, brand loyalty, and purchase-related behaviors (Chatterjee, 2020). From a brand equity perspective, these dimensions represent critical mechanisms through which marketing investments generate sustained competitive advantage and long-term firm value. Importantly, however, in the AR marketing literature, brand performance is frequently conflated with "app performance", where outcomes such as download rates, session duration, usability scores, or perceived enjoyment of the AR interface are treated as proxies for branding success. While such technical and user-experience (UX) metrics are relevant indicators of system effectiveness, they do not, on their own, capture whether AR experiences translate into enduring brand meaning, attachment, or loyalty. This conflation risks overstating the strategic branding value of AR by equating short-term interaction quality with long-term brand equity formation.

The theoretical appeal of AR marketing lies in its ability to enhance experiential value by increasing interactivity, vividness, immersion, and telepresence (Steuer, 1992; Javornik, 2016). By enabling consumers to visualize products in real-world settings, explore multiple configurations, and engage with branded content dynamically, AR can reduce uncertainty and increase perceived diagnosticity, particularly in product categories where pre-purchase evaluation is constrained (Xu et al., 2020). Empirical studies suggest that such experiential affordances stimulate both hedonic and utilitarian value, leading to higher engagement, more favorable brand attitudes, and stronger loyalty intentions (Vieira et al., 2022). Yet, many studies stop at interface-level responses, leaving open the question of whether positive AR experiences accumulate into durable brand equity rather than isolated moments of technological novelty.

Globally, firms across retail, fashion, cosmetics, food, and services have increasingly integrated AR into omnichannel marketing strategies through mobile applications, virtual try-ons, interactive packaging, and in-store experiences (Heller et al., 2019; Tan et al., 2022). These applications are often positioned as responses to rising consumer expectations for personalization, participation, and experiential richness in brand interactions. Consequently, scholarly interest in AR marketing has expanded rapidly, with studies documenting positive associations between AR-enabled experiences and outcomes such as brand awareness, brand engagement, brand loyalty, and purchase intention (Barhorst et al., 2021). However, the extent to which these outcomes reflect true brand performance, as opposed to favorable evaluations of the AR application itself, remains insufficiently theorized.

Despite this growing body of work, the literature remains fragmented in several important respects. First, there is considerable heterogeneity in how brand performance is conceptualized and measured, with many studies privileging proximate UX or attitudinal metrics over integrated brand equity frameworks (Haumer et al., 2020). Second, empirical evidence is heavily concentrated in developed-market contexts, raising questions about the generalizability of findings across regions with differing levels of technological infrastructure, consumer readiness, and institutional support (Almenara et al., 2019). Third, key boundary conditions—such as system usability, consumer innovativeness, privacy concerns, and cultural context—are frequently acknowledged but insufficiently theorized and empirically examined, particularly in terms of how they condition the translation of AR experiences into long-term brand outcomes (Sengupta & Cao, 2022).

These limitations are particularly salient for developing economies, including Kenya, where rapid growth in smartphone penetration and mobile internet use has created fertile ground for digital and mobile-based marketing innovations. In Kenya, mobile technologies already play a central role in commerce and everyday life, suggesting significant potential for AR-enabled marketing applications. However, contextual factors such as infrastructural constraints, cost sensitivity, regulatory frameworks, and socio-cultural dynamics may shape both the adoption and branding effectiveness of AR in ways that differ from developed markets. Critically, positive app-level performance does not necessarily imply sustained brand equity in contexts where technology adoption may be driven by novelty rather than long-term brand commitment.

Against this backdrop, this study undertakes a systematic review of empirical research on augmented reality marketing and brand performance to consolidate existing knowledge and articulate a future research agenda. By explicitly distinguishing technical app performance from long-term brand performance, integrating conceptual definitions, synthesizing global empirical evidence, and highlighting contextual gaps relevant to developing economies such as Kenya, the paper seeks to advance theoretical clarity, inform managerial decision-making, and support more rigorous evaluation of AR marketing as a strategic branding capability rather than merely a technological interface.

Research Problem

Despite the increasing adoption of augmented reality (AR) in marketing practice and the growing scholarly interest in its experiential and interactive potential, understanding of how AR marketing contributes to brand performance remains conceptually fragmented and empirically inconclusive. Existing studies widely acknowledge that AR enhances interactivity, immersion, and experiential value (Barhorst et al., 2021), yet there is limited clarity on the mechanisms through which these experiential affordances translate into sustained brand outcomes such as brand equity, loyalty, and long-term performance (Haumer et al., 2020).

A core challenge in the literature lies in the inconsistent conceptualization and operationalization of brand performance in AR marketing research. Many empirical studies prioritize proximate consumer responses including enjoyment, engagement, brand attitude, or purchase intention without embedding these outcomes within integrated brand equity or performance frameworks (Haumer et al., 2020; Rauschnabel et al., 2022). This emphasis on short-term, interface-level responses limits theoretical accumulation, weakens cross-study comparability, and obscures

whether positive AR experiences generate enduring brand value or merely transient attitudinal effects.

More critically, the existing empirical base is strongly Western-centric, with a pronounced concentration in developed-market, individualistic, and retail-oriented contexts (Heller et al., 2019; Tan et al., 2022). This bias is not merely a gap in geographic coverage but raises deeper concerns about the transferability of dominant AR marketing models. Many studies implicitly rely on consumer behavior assumptions grounded in low-context, individualistic cultures, where consumption is framed as a personal, utility-maximizing decision. Such assumptions may be ill-suited to communal, relational, or high-context cultures common in many developing economies where social norms, collective identity, shared device use, and community-based meaning-making play a stronger role in shaping consumer responses. As a result, AR effectiveness models derived from Western contexts may misrepresent how consumers in developing markets perceive, interpret, and respond to immersive brand experiences.

Although mobile and smartphone adoption is accelerating rapidly in regions such as Sub-Saharan Africa, including Kenya, systematic evidence on AR marketing effectiveness in these contexts remains scarce (Almenara et al., 2019). More importantly, the absence of context-sensitive theorization risks the uncritical application of Western AR engagement and brand performance metrics to markets where infrastructural constraints, cost sensitivity, digital literacy, and socio-cultural dynamics fundamentally alter both adoption and impact pathways. In such settings, positive interaction with an AR application does not necessarily translate into brand equity formation, loyalty, or long-term performance in the same way assumed in developed markets.

Theoretical integration within the AR marketing literature also remains limited. Much of the existing work examines isolated AR attributes such as vividness, novelty, or interactivity or isolated consumer outcomes without sufficiently theorizing the cognitive, affective, and social processes through which AR stimuli influence brand meaning and performance over time (Nikhashemi et al., 2021; Sengupta & Cao, 2022). While boundary conditions such as usability, consumer innovativeness, privacy concerns, and cultural context are frequently acknowledged, they are rarely incorporated systematically into empirical models, further reinforcing the dominance of context-neutral—and often Western-derived explanations.

Taken together, these limitations point to a fragmented and potentially biased understanding of AR marketing effectiveness. The problem is not simply the lack of evidence from Kenya or other developing economies, but the risk that prevailing AR marketing theories and metrics may be conceptually misaligned with non-Western consumption realities. This gap constrains theoretical advancement, limits actionable managerial guidance, and raises policy-relevant concerns regarding the responsible deployment of immersive and data-intensive marketing technologies across diverse cultural contexts. Addressing this research problem requires a systematic synthesis of existing empirical evidence that critically interrogates dominant assumptions, clarifies explanatory mechanisms, and articulates a future research agenda explicitly attentive to cultural, institutional, and developmental heterogeneity particularly in underexamined developing-market environments.

Theoretical Review

This study is theoretically anchored in the Technology Acceptance Model (TAM) and the Stimulus–Organism–Response (SOR) framework, and is further enriched by insights from UTAUT2 and the Pleasure–Arousal–Dominance (PAD) framework. Together, these perspectives provide a complementary and multi-level lens for explaining how augmented reality (AR) marketing influences consumer perceptions, experiential responses, and brand performance outcomes. Integrating these theories allows the study to capture both technology acceptance mechanisms and experiential emotional processes, which are central to immersive marketing environments.

The Technology Acceptance Model (TAM) (Davis, 1989) explains user acceptance of information technologies through two core beliefs: perceived usefulness and perceived ease of use. Perceived usefulness reflects the extent to which using a technology enhances task performance, while perceived ease of use captures the degree to which the technology is perceived as effortless to operate. These beliefs shape attitudes toward the technology and subsequently influence adoption intentions and usage behavior (Davis, 1989; Chen et al., 2011). TAM has been widely applied to digital and interactive systems, including mobile applications, online platforms, and self-service technologies (Moon & Kim, 2001; Lin et al., 2007; Stern et al., 2008).

In the context of AR marketing, TAM remains relevant because consumer engagement with AR applications is contingent on usability, functionality, and perceived value creation. AR experiences that improve product visualization, reduce decision uncertainty, or enhance shopping efficiency— and that are easy to navigate—are more likely to be adopted and positively evaluated (Kim & Forsythe, 2008; Arghashi, 2022). However, AR marketing extends beyond instrumental task performance, relying heavily on hedonic, affective, and immersive experiences. For this reason, TAM is supplemented in this study with UTAUT2, which extends technology acceptance theory by incorporating hedonic motivation, habit, and price value (Venkatesh et al., 2012). Hedonic motivation is particularly relevant in AR contexts, as enjoyment, playfulness, and experiential pleasure are often primary drivers of consumer interaction rather than purely utilitarian benefits.

To capture the experiential and emotional mechanisms underlying AR marketing effects, the study draws on the Stimulus–Organism–Response (SOR) framework (Mehrabian & Russell, 1974). Within this framework, AR applications function as environmental stimuli that elicit internal psychological states, which subsequently shape behavioral and brand-related responses. Importantly, this study explicitly maps specific AR attributes to the "Stimulus" component of the SOR model. These stimuli include interactivity**,** augmentation quality**,** vividness**,** immersion**,** and telepresence (Steuer, 1992; Javornik, 2016). Together, these attributes define the intensity and realism of the AR experience and determine how strongly consumers are cognitively and emotionally engaged.

The Organism component is conceptualized using both traditional attitudinal constructs and the Pleasure–Arousal–Dominance (PAD) framework, which offers a parsimonious yet powerful way of capturing affective responses in immersive environments. Pleasure reflects the degree of enjoyment and positive affect experienced during AR interaction; arousal captures the level of excitement or stimulation; and dominance reflects the extent to which consumers feel in control of the experience. Prior research suggests that AR experiences high in interactivity and augmentation

quality can simultaneously increase pleasure and arousal while enhancing dominance through perceived control and agency (Hsu et al., 2021; Wang et al., 2021). These affective states coexist with cognitive evaluations such as perceived value, trust, and brand attitude, forming a comprehensive organismic response.

The Response component encompasses behavioral and brand performance outcomes, including engagement, purchase intention, brand attitude, brand loyalty, and broader brand equity indicators. Empirical studies applying the SOR framework in AR contexts demonstrate that positive organismic states mediate the relationship between AR stimuli and these outcomes, reinforcing the suitability of SOR for immersive marketing research (Nikhashemi et al., 2021; Sengupta & Cao, 2022).

By integrating TAM/UTAUT2 with SOR and PAD, this study adopts a holistic theoretical perspective that explains not only whether consumers accept and use AR technologies, but also how and why AR experiences shape brand-related outcomes. TAM and UTAUT2 account for functional and hedonic acceptance drivers, while SOR and PAD elucidate the experiential pathways through which AR attributes influence cognition, emotion, and behavior. This integrated framework is particularly appropriate for AR marketing because it recognizes that immersive technologies operate simultaneously as technical systems and experiential environments.

Together, these theories provide a robust foundation for synthesizing existing empirical evidence and guiding future research on AR marketing and brand performance. By explicitly linking AR attributes to environmental stimuli, affective and cognitive organismic states, and brand-related responses, the framework advances theoretical clarity and supports more nuanced explanations of how AR marketing creates value across diverse market and cultural contexts.

Empirical Review

Empirical research on augmented reality (AR) marketing has expanded rapidly over the past decade, reflecting growing managerial adoption of immersive technologies and scholarly interest in experience-driven consumption. Existing studies largely converge on the view that AR-enabled interactions positively influence consumer responses and brand-related outcomes; however, the evidence remains fragmented across constructs, contexts, and methodological approaches. This section reviews empirical findings on the relationship between AR marketing and key brand performance dimensions, highlighting dominant patterns and unresolved gaps.

A substantial body of empirical work demonstrates that AR marketing enhances consumer engagement and experiential value, which serve as foundational mechanisms for brand performance. Studies consistently report that AR applications characterized by interactivity, vividness, and immersion generate higher levels of enjoyment, flow, and involvement compared to traditional digital interfaces (Hilken et al., 2017; Barhorst et al., 2021; Arghashi & Yuksel, 2022). These experiential responses have been shown to increase consumers' cognitive elaboration and emotional attachment, thereby strengthening brand evaluations and approach behaviors (Hsu et al., 2021; Vieira et al., 2022). Importantly, empirical evidence suggests that AR's capacity to situate products in real-world contexts reduces perceived risk and uncertainty, improving decision confidence and diagnosticity during the purchase process (Smink et al., 2019; Sengupta & Cao, 2022).

With respect to brand equity outcomes, multiple studies identify positive associations between AR experiences and brand awareness, brand associations, and brand loyalty. Haumer et al. (2020), for example, show that augmented reality experiential marketing positively influences brand equity dimensions, particularly brand awareness and brand loyalty, with involvement moderating these effects. Similarly, Wu and Dong (2022) demonstrate that AR characteristics such as environment embedding and simulated physical control enhance retail brand equity indirectly through stronger brand associations. These findings suggest that AR contributes to brand performance not only through immediate experiential appeal but also through longer-term equity-building mechanisms.

Empirical research has also examined AR's influence on brand attitude and purchase-related outcomes. Studies employing experimental and survey-based designs report that positive AR experiences lead to more favorable brand attitudes, higher purchase intention, and increased willingness to recommend the brand (Javornik, 2016; Sung et al., 2022; Eru, 2022). These effects are often mediated by perceived enjoyment, informativeness, and telepresence, indicating that both affective and cognitive pathways are central to AR effectiveness (Widyastuti, 2024; Steuer, 1992). However, findings also suggest that poorly designed or overly complex AR applications may generate frustration or novelty fatigue, potentially undermining brand evaluations (Rauschnabel et al., 2018).

Despite these largely positive findings, the empirical literature exhibits several limitations. First, measurement inconsistency remains a persistent issue. Brand performance is variously operationalized as brand attitude, engagement, loyalty, or purchase intention, often without explicit theoretical justification or alignment with integrated brand equity frameworks (Chaudhuri & Holbrook, 2001; Haumer et al., 2020). Second, contextual concentration is evident, as most empirical studies focus on retail and fashion sectors in developed economies, limiting insight into cross-industry and cross-cultural variability (Pantano, 2014; Tan et al., 2022). Third, boundary conditions and moderators—such as consumer innovativeness, system usability, privacy concerns, and cultural context—are acknowledged but rarely examined systematically in empirical models (Nikhashemi et al., 2021; Sengupta & Cao, 2022).

Overall, the empirical evidence supports the contention that AR marketing can positively influence brand-related outcomes through experiential and engagement-driven mechanisms. However, the literature remains fragmented in terms of conceptualization, context, and explanatory depth. This underscores the need for integrative empirical work that links AR features to brand performance through theoretically grounded mechanisms, employs consistent performance metrics, and extends analysis to underexamined contexts, particularly developing economies.

METHODOLOGY

To address the fragmented nature of prior research and to develop a coherent future research agenda on augmented reality (AR) marketing and brand performance, this study adopts a systematic literature review (SLR) methodology. The SLR approach is particularly appropriate for consolidating dispersed empirical evidence, enhancing methodological rigor, and enabling transparent and reproducible synthesis of knowledge in emerging research domains (Tranfield et al., 2003; Kitchenham et al., 2009). Unlike narrative or expert reviews, a systematic review minimizes selection bias and facilitates cumulative theory development by applying explicit and

replicable procedures for identifying, screening, and analyzing prior studies (Webster & Watson, 2002; Paul & Criado, 2020).

Search Strategy and Data Sources

The review process commenced with a comprehensive search of peer-reviewed journal articles focusing on augmented reality in marketing contexts. Multiple academic databases were consulted to ensure broad coverage of high-quality scholarly work, with particular emphasis on journals indexed in Scopus and related citation databases. Search strings combined keywords associated with augmented reality (e.g., "augmented reality," "AR applications," "immersive technology") and brand-related outcomes (e.g., "brand performance," "brand equity," "brand loyalty," "brand attitude," "consumer engagement"). Reference lists of relevant articles were also examined to identify additional studies that met the inclusion criteria.

Inclusion and Exclusion Criteria

To ensure conceptual and empirical relevance, explicit inclusion and exclusion criteria were applied. Articles were included if they: examined augmented reality as the focal technology, rather than as a peripheral or combined feature with other immersive technologies such as virtual reality (VR), extended reality (XR), or artificial intelligence; were situated within a marketing or branding context, with explicit relevance to brand-related outcomes; and employed an empirical research design, including quantitative, qualitative, or mixed-method approaches.

Articles were excluded if they: focused primarily on technical, engineering, or system design aspects of AR without marketing relevance; examined AR exclusively in non-marketing domains (e.g., education, medicine, industrial training); or were purely conceptual papers, editorials, or review articles. Applying these criteria, an initial pool of 342 journal articles was identified. Following systematic screening of titles, abstracts, keywords, and full texts, 218 articles were excluded. The final sample comprised 99 empirical studies, which formed the basis for in-depth analysis.

Data Analysis and Synthesis

The retained articles were subjected to structured content analysis. Each study was coded according to key dimensions, including research context, theoretical framework, methodological approach, AR characteristics examined, brand-related outcome variables, and key empirical findings. This coding enabled identification of dominant themes, recurring explanatory mechanisms, and methodological patterns across studies. Consistent with best practices in systematic reviews, the synthesis emphasized thematic integration rather than simple aggregation of findings, allowing for the identification of convergent evidence as well as areas of inconsistency and underexploration (Tranfield et al., 2003; Paul & Criado, 2020).

Methodological Rigor and Limitations

The use of an SLR enhances the rigor and credibility of the study by ensuring transparency, replicability, and comprehensive coverage of relevant empirical research. Nevertheless, certain limitations should be acknowledged. First, despite extensive database coverage, the review may not capture all relevant studies, particularly those published outside mainstream academic outlets. Second, the exclusion of conceptual and review articles, while necessary to maintain empirical

focus, may limit engagement with certain theoretical perspectives. These limitations are addressed by situating the findings within established theoretical frameworks and by proposing directions for future empirical inquiry.

Overall, the adopted methodology provides a robust foundation for synthesizing existing evidence on AR marketing and brand performance and for advancing a structured research agenda that addresses conceptual gaps, contextual limitations, and methodological opportunities in this evolving field.

FINDINGS

The systematic review reveals a growing and increasingly sophisticated body of empirical research examining the role of augmented reality (AR) in shaping consumer responses and brand-related outcomes. Across the 99 empirical studies analyzed, four dominant findings emerge that collectively illuminate how AR marketing contributes to brand performance, while also highlighting important inconsistencies and gaps within the literature.

Table 1: PRISMA Flow Diagram for the Systematic Review

PRISMA Stage	Description	Number (n)
Identification	Records identified through database searching	342
Screening	Records screened	342
	Records excluded	218
Eligibility	Reports assessed for eligibility	124
	Reports excluded	25
Included	Studies included in qualitative synthesis	99
	Studies included in quantitative (empirical) synthesis	99

Table 1 presents the PRISMA flow diagram summarizing the study selection process. An initial pool of 342 journal articles was identified through systematic database searching. Following title, abstract, and keyword screening, 218 articles were excluded due to lack of marketing focus, technical orientation, absence of augmented reality as the primary technology, or non-empirical design. The remaining 124 articles underwent full-text assessment for eligibility, resulting in the exclusion of 25 additional studies that did not sufficiently address brand-related outcomes or failed to isolate augmented reality effects. The final sample comprised 99 empirical studies, which formed the basis for the qualitative synthesis and analysis of augmented reality marketing and brand performance.

First, the findings consistently demonstrate that AR marketing enhances consumer engagement and experiential value. Studies across diverse product categories report that AR applications characterized by vividness, interactivity, immersion, and telepresence generate higher levels of enjoyment, involvement, and flow compared to non-AR or traditional digital interfaces (Barhorst et al., 2021; Arghashi & Yuksel, 2022). These experiential responses increase cognitive elaboration and emotional attachment, positioning engagement as a central mechanism through which AR influences brand-related outcomes. The evidence suggests that AR's experiential superiority is particularly pronounced when consumers are able to interact with products in realistic, contextually embedded environments.

Second, the review finds strong empirical support for AR's role in improving decision confidence and perceived diagnosticity. Numerous studies indicate that AR-enabled visualization reduces uncertainty and perceived risk by allowing consumers to evaluate products in situ and explore multiple configurations before purchase (Smink et al., 2019; Sengupta & Cao, 2022). This effect is especially salient for experience and credence goods, where physical trial is constrained or costly. Improved diagnosticity not only facilitates purchase intention but also enhances trust in the brand, suggesting that AR contributes to both transactional and relational dimensions of brand performance.

Third, the findings indicate that AR marketing positively influences brand equity dimensions, including brand awareness, brand associations, brand attitude, and brand loyalty. Empirical evidence shows that immersive AR experiences enhance brand recall and recognition by creating memorable and distinctive interactions (Sung et al., 2022). Studies further demonstrate that AR strengthens brand associations and attitudes through affective and cognitive pathways, with perceived enjoyment, informativeness, and telepresence frequently identified as mediators (Widyastuti, 2024; Steuer, 1992). Notably, Haumer et al. (2020) provide evidence that AR experiential marketing enhances brand loyalty and contributes indirectly to brand performance via strengthened brand equity.

Fourth, the review highlights that the effectiveness of AR marketing is contingent upon key moderating conditions. Consumer characteristics such as innovativeness, involvement, and technology readiness influence both adoption and outcome strength, with higher involvement amplifying the positive effects of AR on brand equity and purchase intention (Haumer et al., 2020; Nikhashemi et al., 2021). System-related factors, including usability, accuracy, and responsiveness, also play a critical role, as poorly designed AR experiences can generate frustration, diminish enjoyment, and weaken brand evaluations (Sengupta & Cao, 2022). Additionally, privacy concerns and data disclosure apprehensions emerge as salient constraints, particularly in highly immersive and personalized AR environments.

Despite these largely convergent findings, the review uncovers notable limitations and inconsistencies. Brand performance outcomes are operationalized heterogeneously across studies, ranging from attitudinal and intentional measures to engagement metrics, often without explicit alignment to comprehensive brand performance frameworks. Moreover, the empirical evidence is heavily skewed toward developed-market retail contexts, with limited examination of AR effectiveness in developing economies or non-retail sectors. As a result, the boundary conditions under which AR marketing enhances brand performance remain insufficiently specified.

Overall, the findings suggest that AR marketing holds substantial potential as a strategic tool for enhancing brand performance through experiential engagement, improved decision-making, and brand equity development. However, realizing this potential depends on careful design, contextual alignment, and theoretical integration. These insights provide the empirical basis for articulating a future research agenda that addresses conceptual fragmentation, contextual gaps, and methodological limitations in AR marketing research.

Conclusion

This study set out to consolidate empirical knowledge on augmented reality (AR) marketing and its implications for brand performance and to articulate a forward-looking research agenda for this rapidly evolving domain. Drawing on a systematic review of 99 empirical studies, the findings indicate that AR marketing represents a strategically significant capability that extends beyond technological novelty to meaningfully shape consumer experiences and brand-related outcomes.

The review demonstrates that AR marketing consistently enhances consumer engagement by increasing interactivity, immersion, and experiential richness. These experiential affordances improve decision confidence and perceived diagnosticity, particularly in contexts where pre-purchase evaluation is constrained. Importantly, the evidence suggests that AR contributes to brand performance primarily through brand equity mechanisms, notably brand awareness, brand associations, brand attitude, and brand loyalty. By enabling consumers to interact with products and brand narratives in contextually embedded and personalized ways, AR facilitates memorable brand encounters that support both transactional and relational outcomes.

At the same time, the conclusions underscore that the effectiveness of AR marketing is contingent rather than universal. Consumer characteristics such as involvement, innovativeness, and technology readiness, as well as system-related factors including usability, accuracy, and responsiveness, critically shape AR outcomes. Poorly designed AR experiences may attenuate or even undermine brand evaluations, highlighting the importance of strategic alignment and execution quality. Moreover, the literature reveals persistent conceptual and methodological fragmentation, particularly with respect to the definition and measurement of brand performance and the limited integration of theoretical perspectives explaining how AR experiences translate into sustained brand advantage.

From a broader perspective, the conclusions also reveal a pronounced contextual bias in existing research, with empirical evidence concentrated in developed-market retail settings. This raises important questions about the transferability of current insights to developing economies, where infrastructural conditions, cultural norms, and regulatory environments differ substantially. As AR adoption accelerates globally, addressing these contextual gaps is essential for both theory development and practical relevance.

Overall, this study contributes to the literature by synthesizing fragmented empirical evidence, clarifying dominant explanatory pathways linking AR marketing to brand performance, and highlighting critical boundary conditions. The conclusions emphasize the need to conceptualize AR marketing as an experiential and strategic capability embedded within broader brand equity and performance frameworks. In doing so, the paper provides a foundation for more rigorous, context-sensitive, and theory-driven research on the role of augmented reality in contemporary marketing.

Recommendations and Implications

Building on the findings of this systematic review, several implications emerge for theory development, managerial practice, and public policy, alongside recommendations to guide future research and the responsible deployment of augmented reality (AR) in marketing contexts.

Theoretical Implications

Future research should move beyond fragmented examinations of isolated AR features or proximate consumer outcomes and instead adopt integrated theoretical frameworks that link AR stimuli to experiential processes and brand performance outcomes. Scholars are encouraged to embed AR marketing within established brand equity and performance models, enabling clearer theorization of how experiential value translates into sustained competitive advantage. Greater conceptual consistency in defining and measuring brand performance is essential to facilitate comparability and cumulative knowledge building. Additionally, future studies should explicitly model boundary conditions—such as consumer innovativeness, technology readiness, product involvement, usability quality, and cultural context—to clarify when and for whom AR marketing is most effective. Longitudinal and field-based research designs are particularly needed to assess whether AR-induced effects persist over time and contribute to enduring brand value.

Managerial Implications

For practitioners, the findings highlight that AR marketing should be approached as a strategic brand-building capability rather than a short-term promotional novelty. Firms are advised to prioritize experiential quality, ensuring that AR applications are intuitive, reliable, and aligned with core brand values. Investments in usability, system accuracy, and seamless integration across omnichannel touchpoints are critical for translating AR experiences into positive brand outcomes. Managers should also leverage AR's personalization and storytelling potential to strengthen emotional connections and enhance brand distinctiveness, while carefully matching AR applications to product categories and consumer segments most likely to benefit from immersive evaluation and interaction. Importantly, the effectiveness of AR initiatives should be assessed using metrics that extend beyond immediate engagement or novelty effects to include brand equity and loyalty indicators.

Policy and Regulatory Implications

From a policy perspective, the increasing use of AR in marketing raises important governance considerations related to data privacy, transparency, and consumer protection. Given AR's capacity to collect and process visual, spatial, and behavioral data, regulators and industry bodies should develop clearer guidelines on responsible data use, informed consent, and ethical design of immersive marketing experiences. This is particularly salient in developing economies, where regulatory frameworks may lag behind technological adoption. Policymakers are encouraged to support digital innovation while simultaneously safeguarding consumer rights and promoting trust in emerging marketing technologies.

Contextual and Future Research Directions

Finally, the review underscores the need for context-sensitive research, particularly in developing and emerging markets such as Kenya, where mobile technology adoption is high but empirical evidence on AR marketing remains limited. Future studies should examine how infrastructural conditions, socio-cultural norms, and institutional environments shape AR adoption and effectiveness. Comparative cross-country research and interdisciplinary approaches integrating marketing, information systems, and public policy perspectives would further enrich understanding of AR marketing's broader economic and societal implications.

Collectively, these recommendations emphasize that realizing the full potential of augmented reality marketing requires theoretically grounded research, strategically informed managerial practice, and proactive policy engagement.

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