# The Impact of Virtual Reality on the Customer Experience in the Luxury Industry

Miao Wang*

Department of Materials, University of Manchester, Manchester, the United Kingdom

*Corresponding author: 3180200185@caa.edu.cn

**Abstract.** Luxury companies are renowned for offering exceptional customer service while maintaining value by being competitive and innovative in terms of customer experience. The luxury industry has traditionally resisted technology because it is seen as antithetical to luxury values. However, competition and market pressures coupled with global pandemics have forced luxury retailers to adopt a variety of technologies to engage customers, prompting luxury retailers to leverage significant technological innovations to improve the customer experience. Virtual reality (VR) is an innovative channel for marketing communications that can facilitate the luxury industry. Due to less research on technological innovation in the luxury industry, this paper focuses on the impact of virtual reality on the customer experience in the luxury industry. A critical analysis of the literature concluded that virtual reality's main impacts are improved communication with consumers, created an immersive experience, and enhanced customer loyalty. The paper made three recommendations for luxury retailers to use virtual reality to enhance the customer experience, which is customer-focused, prioritizing the physical and mental well-being of consumers, managing the customer experience, and aiding with personalized engagement marketing.

**Keywords:** Virtual reality; consumer experience; luxury industry.

## 1. Introduction

The way society functions and how customers connect have changed as a result of technological advancements. Virtual reality technology has become more prevalent over the last few years in several industries, including healthcare, education, and the military. Most clearly demonstrated are the developing real-world uses of VR in marketing communications in experience-heavy sectors like video games, tourism, and fashion [1]. With the use of virtual reality (VR), consumers can have a fully immersive, technologically enhanced hands-on experience with products and services. There is a growing volume of literature connecting VR to marketing-related issues, and a growing amount of scholarly interest in the application of VR technology in marketing, but there is still a gap in existing theory about how consumers interact with and influence VR communications. Since it dominates technology-mediated consumer experiences internationally, virtual reality (VR) is currently regarded as the most prominent consumer technology [2]. Existing VR research points to advantages for luxury businesses in terms of increased penetration, including better customer service, more cost-effective and efficient internal operations, and more engaging, even spectacular shopping experiences. Although luxury organizations are recognized for offering exceptional client experiences, there is a depressing lack of research on technological innovation in the luxury retail sector [3]. Luxury merchants are also known for offering exceptional customer experiences. According to the report, luxury stores are incorporating technological advancements into their operational procedures to improve the client experience [4]. The range of applications of VR immersive technologies continues to expand, but relatively little research has been done in the academic field on how they affect customer experience. In existing research, many scholars have stressed the importance of studying the customer experience of immersive technologies, especially in this era of rapid technological development and dynamic value changes.

The adoption of technology has fallen behind in the luxury industry. It frequently adheres to the traditional ideals of luxury, which include themes like knowledge, tradition, skill and craftsmanship, timeless design, and human capital [5]. Luxury products and luxury merchants have lagged due to widespread distrust. But more recently, pandemics around the world, competition, and market

pressures have forced luxury businesses to adopt considerable technological advancements to improve the client experience. The research that emphasized the features that distinguish luxury services with the exception of non-luxury services (for instance, luxury services are exclusive and give a singular aesthetic experience) and even proposed luxury services as a particular area of study supports the exclusivity of luxury [6]. Technology innovation is viewed as unproductive and less aligned with the premium positioning such corporations desire, despite the fact that luxury enterprises produce and offer luxury shopping experiences that immerse consumers in the historical complexity and authenticity of the brand. [7]. Given this perspective, it is not unexpected that many luxury businesses have chosen to actively resist online sales channels because they do not provide the same upscale environment as traditional stores do [7]. The findings of research from 2022, which are based on four examples of luxury businesses, support the notion that VR will improve the customer experience [4].

By evaluating the literature on the growth, modifications, and uses of VR in the luxury sector over the last five years as well as the significance and influence of VR on the consumer experience, this study examines the impact of VR on the consumer experience in the luxury industry. This essay compares the advancement and use of virtual reality in the luxury market, explores its effects on customer experiences, and makes suggestions on how to advance the development of virtual reality in the luxury market.

## 2. The Current State of Virtual Reality Marketing Use in the Luxury Industry

### 2.1 VR Definition

Virtual reality is a significant technological advancement that is anticipated to have a substantial impact on future marketing and advertising techniques (VR). Virtual reality is defined as the appearance of being there in a created environment and relies on binaural sound, hand/body tracking, three-dimensional (3D), stereoscopic, head-tracking displays, and head-tracking technology. A multisensory, immersive experience is virtual reality [8]. Although virtual reality has been discussed since the 1990s, it has only lately become a part of daily life thanks to technological and socioeconomic advancements [1]. Virtual reality was once a niche technology that was mostly used by the gaming community.

### 2.2 VR Characteristics in the Luxury Industry

Major brands are currently utilizing digital technologies to improve the in-store purchasing experience and imitate it on e-commerce platforms. As it improves the whole shopping experience and produces high-quality content for digital marketing to help firms reach a wider audience, the adoption of immersive technology like virtual reality (VR) is also rising. Although producers of luxury products have typically trailed behind in terms of technology, they are now incorporating cutting-edge digital technologies into their manufacturing processes, including additive manufacturing, analytics, virtual reality, materials science and artificial intelligence. Manufacturers of premium goods have growing prospects attributed to virtual reality technology. Luxury companies can now start to offer growth potential in new technologies while also upholding product quality control and brand exclusivity due in large part to specialized digital trading platforms and quickly evolving customer behaviour.

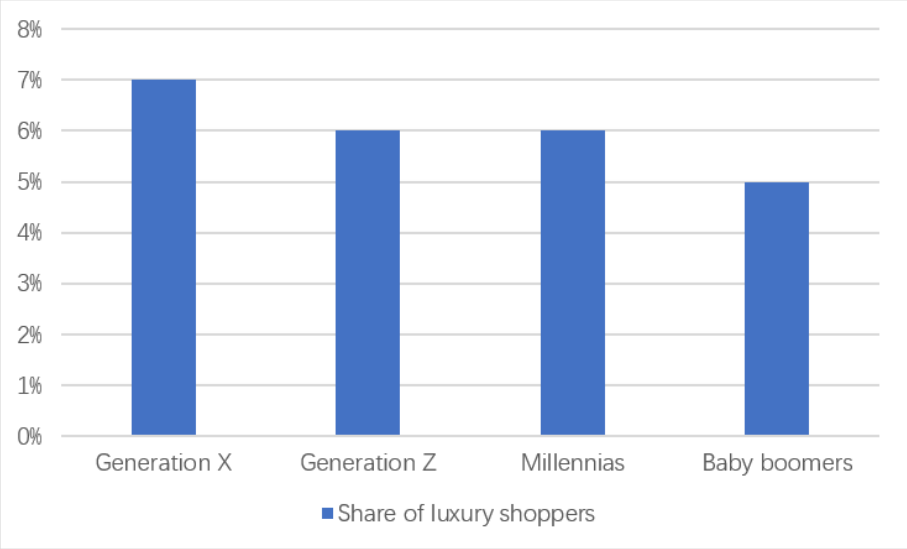



**Fig 1.** The impact of VR fitting rooms on online luxury sales in the UK by 2021 [9]

According to Fig.1 of a survey of luxury consumers in the United Kingdom, virtual reality dressing rooms had a significant impact on online luxury shopping in 2021. The age range of the respondents, which made up 7%, was 41 to 56. 6% of Gen Z and millennial luxury purchasers identified the utilise of VR in changing rooms as a driving factor.

Luxury merchants with technical breakthroughs that have significantly impacted the customer experience include Farfetch, Burberry, and Gucci, these brands are now widely considered best-practice models [10]. Gucci debuted the first virtual sneakers in 2021 and charged $12 for a pair of 3D animated shoes. A more immersive experience was created by Prada using VR technology. When attendees of the House of Paris Fall/Winter 2021 show in 2020, they were given eye headsets to view the show from the comfort of their homes. Customers can browse and purchase the Spring/Summer 2021 collection based on Burberry's creation of an interactive virtual facsimile of its Tokyo flagship store.

## 3. VR Technology and Consumer Experiences

Over the past ten years, virtual reality has seen a significant increase in usage. Several businesses, including retail, healthcare, education, tourism, and entertainment, are now recognizing its usefulness [11]. According to some predictions, the market for virtual and augmented reality might reach $2.5 billion by 2025. Through the examination and manipulation of visual pictures, features, and functionalities in a number of ways, virtual reality experiences in retail allow consumers to become immersed in realistic scenarios and virtually experience products, brands, and services [12]. In order to improve the customer experience, the retail sector has started integrating a variety of immersive technological applications as part of marketing and sales initiatives, such as virtual mirrors. The main purpose for employing these technologies is typically not thought to be an escape from the actual world, instead, the emphasis is mostly on improving the user experience [13].

### 3.1 Consumer Experience Definition

A substantial corpus of studies on the design, staging, and management of customer experience across industries in recent years has shown the significance and complexity of customer experience. The customer experience (CX) refers to a customer's emotional, sensory, cognitive, behavioural, and social responses to a retailer’s products while making a purchase [14]. Customers' expectations for a comprehensive and satisfying experience are consistently rising as businesses operate in an environment of increased competition. It is no longer sufficient to compete based on price, service

quality, or product quality. Businesses are now putting more emphasis on the total client experience. It is crucial to have a better grasp of how to build and manage the customer experience over time.

### 3.2 The Role of VR in the Consumer Experience

Immersive technology is defined as that which produces a sense of immersion while allowing for the separation of the real and virtual worlds. However, research on immersive technology and how people interact with them is still in its infancy [15]. Virtual reality is one of the most well-known examples of immersive technologies. A lot of studies have started to examine how these technologies might improve the customer experience [11]. The stages of experience and co-creation of value are being redefined and revolutionized by immersive technologies, which entail the management of the customer experience. With the use of narratives that let customers project themselves into the story via technical tools, virtual reality gives brands fresh perspectives on how they might promote their products. Instead, improving the customer experience is the main objective [13]. Through the examination and varied manipulation of visual pictures, features, and functionalities, virtual reality experiences enable consumers to immerse themselves in realistic environments and virtually experience goods, brands, and services [12].

As companies like Facebook and Apple declare and make sizable investments in this sector, virtual reality is gaining traction in the consumer sector and igniting discussions about the future of immersive technology. Virtual reality has a significant influence on the customer experience, which includes the emotional, cognitive, sensory, behavioural, and social reactions of customers to a company's products during the purchasing process. However, due to a lack of essential immersive technical components, virtual reality used just for marketing objectives is predicted to let down, fail, and produce undesirable experiences (e.g. immersion, immersion, social connectivity).

### 3.3 The Impact of Virtual Reality on the Customer Experience in the Luxury Industry

#### 3.3.1 Improve Communication with Consumer

Through the co-creation of value by consumers, immersive technology has the potential to influence the production and consumption of customer experiences. The creation of immersive technology applications is essential, taking into account all four facets of the experience economy, in order to enhance the customer experience. By connecting immersive technology experiences to social media and enabling sharing with friends and family, businesses can forge relationships with existing customers while also attracting new ones. Therefore, it is crucial to have a strong online presence that draws in clients, creates an emotional bond, and endures in a competitive market. Research on the Chinese market revealed that traditional content, such as photographs, is no longer sufficient to capture the attention of supporters of luxury brands on social media platforms like WeChat. Instead, dynamic and interactive content increases customers' likelihood of responding to marketing communications. Despite adopting technology far later than non-luxury merchants, technological advancements have recently been made in this typically conservative industry [13]. Through non-verbal cues that evoke real-world circumstances, luxury companies' visual experiences can effectively engage consumers and heighten the desire to purchase. Because of the way virtual reality works, customers can take part in the service co-creation process and contribute content that is then uploaded and shared with other users to create wholly original, enhanced, and customized experiences.

#### 3.3.2 Create an Immersive Experience

Virtual reality experiences have been classified as the immersive component of a system that blurs the distinction between the actual and virtual worlds [16]. The lifelikeness of the virtual environment, and in particular how closely the responses of the virtual reality system mimic those of the real world, determines how immersed feels. Higher levels of immersion can facilitate the ability for consumers to enter the virtual world and give individuals the opportunity to fully immerse themselves there, briefly abandoning the actual world and experiencing a sensation of presence [15]. Indeed, depending on the capabilities of the technology, immersion is a requirement for presence. Given the comparison

between exterior and internal devices, this distinction is appropriate. Nevertheless, since virtual reality (internal devices) can resemble real life, it is projected that identities created with avatars in virtual worlds would become viral and affect consumption in locations where real people are present. Virtual reality has the unique power to enhance existing media by producing new forms of experiences, claims a study from the Breda University of Applied Sciences [17]. For instance, immersion and presence are two crucial components that enable VR to create an immersive experience escape and differentiate it from other forms of media, increasing consumers' perceptions of the authenticity of virtual material. The study distinguished between participant-to-participant interactions in virtual reality and interactions with virtual features of the environment and discovered that immersion influences the user's interaction with the virtual world [16].

#### 3.3.3 Enhance Customer Loyalty

By providing experiencing measurements in a virtual setting, virtual reality enables maintain partners, particularly customers, engaged and motivated. It can be expressed at several stages along the customer management journey and thus has a big impact on how well brand relationships are built. Additionally, studies have indicated that consumers behave more similarly to those who shop in physical stores as a result of the increased realism of virtual stores. In research examining brand attitudes, product knowledge, purchase intentions, or (virtual) purchasing behaviour, consumers' reactions to VR experiences have been explored [18]. Since virtual reality enables consumers to experience fashion shows as VIP attendees, customers feel more equal within its boundary. Premium businesses are using virtual reality as a powerful tool for marketing and other business-related goals. It may help create unique shopping experiences that satisfy customers and increase the emotional experience, generating and boosting customer loyalty to luxury goods.

## 4. Suggestions

### 4.1 Customer-focused, Prioritizing the Physical and Mental Well-being of Consumers

As virtual reality experiences evolve from interaction to immersion and a greater sense of presence in the virtual environment, luxury stores must take into account the behavioural and potentially negative impacts that VR experiences may have on customers. Therefore, it is anticipated that the psychological impacts of VR experiences escaping would have a greater impact on customer engagement and well-being in experiences built for VR presence [17]. The design of virtual reality by high-end corporations should prioritize interaction and repeat customers, bettering consumers' lives must be the main focus of VR consumer experiences [19]. Virtual identities generated using avatars in virtual environments are anticipated to become well-known and have an impact on consumer behaviour in real-world situations given the potential of virtual reality to replicate real life [20]. Consumers should be aware of the information they are given as well as how to use it. They also need to be informed of any possible negative effects that using VR may have on their bodies, minds, or emotions [20]. Understanding the experience VR gives and how the VR experience affects the psychological dimension of the customer is becoming more and more important as VR marketing usage expands and influences the consumer experience [12]. According to the report, luxury retailers should create and employ virtual reality not just as a marketing gimmick but also as a useful tool to draw in, keep, and retain customers over the long run [20].

### 4.2 Managing the Customer Experience

Brand management, market research, promotions, and advertising are examples of marketing activities that are a component of improving the customer experience, which is essential for companies. Technology integration is crucial since this enables businesses to provide customers with a unique value proposition through a combination of virtual and physical touchpoints, resulting in the greatest possible customer experience. This allows users of virtual reality a more dynamic and independent part of the experience, increasing the overall feeling of value. Consequently, by utilizing

these cutting-edge reality virtual technologies, some consumer-side companies (such as retail, travel, fashion, entertainment, automobiles, and services) may give their customers a better experience. According to research from the Université Catholique de Louvain, virtual reality (VR) experiences may have a more favourable effect on consumers' opinions of service providers than on those of the product itself [21]. Therefore, the adoption of VR technology may be vital when luxury goods come with a substantial service component as it may be a great approach to augment the twin positive benefits of improved consumer management (i.e., attitudes towards the product and the service provider itself). As a result of such favourable attitudes, customers may be more likely to make subsequent purchases, which is essential for specialized service providers. Luxury retailers should therefore manage VR better for the benefit of their customers.

### 4.3 Aiding with Personalized Engagement Marketing

Virtual reality technology can cause consumers a stronger emotional response, which could have a more significant effect than earlier technologies. The use of immersive technology can speed up the customer experience so that they always have access to the most recent information and material. Additionally, according to studies, immersive technology's interactive, value-adding, and co-creative elements can support the personalization of experiences and consumer journeys. Customers are prepared for a new journey where virtual reality is used as a tool to manage and whittle down limitless options and information in a personalised way. Positive relationships play a role in influencing customer engagement (CE) behaviour and customer relationships with emotional attachments grow into a state of engagement. Personalization is a process that connects customers and marketers and solidifies their relationships. In order to compare or modify products/services more effectively and to obtain more precise and personalised information, users can access virtual reality [22]. Consumers now have favourable attitudes toward technological advancements that produce personalised experiences in addition to practical and interpersonal advantages. It can be difficult for luxury stores to choose the best options due to the diversity of available new solutions. To communicate and promote luxury, premium brands must offer fresh stimuli and creative sensory experiences.

## 5. Conclusion

This study investigates the impact of virtual reality technology on the luxury industry through a comprehensive and detailed analysis of the literature on the application and advancement of virtual reality in the luxury industry, the features of virtual reality in the luxury market, and the role of virtual reality in the customer experience. Virtual reality technology has a significant impact on the luxury market, with the major effects being improved communication with consumers, created immersive experience and enhanced consumer loyalty. Three recommendations are also made to luxury retailers: Customer-focused, prioritizing the physical and mental well-being of consumers, managing the customer experience and aiding with personalised engagement marketing.

On the one hand, a growing amount of scientific literature emphasises the increasing demands of the customer and the expectation of a compelling experience. Therefore, VR technology seems more effective with the intention of visiting the real. On the other hand, in most countries, luxury retailers face fierce market competition and in this difficult environment, any opportunity to differentiate themselves from competitors is of particular value and effective in enhancing the customer experience and attitude. Above all, since luxury companies can no longer view virtual reality as only a temporary way to improve the consumer experience, this study encourages an innovation culture within those businesses. Now that luxury retailers have embarked on technological innovation, the topic must now be approached more maturely and strategically. At a practical level, this study highlights the importance of providing consumers with a virtual reality-enhanced experience of luxury goods for practitioners to positively influence consumer attitudes and behavioural intentions. Furthermore, virtual reality experiences have a stronger positive impact on the perception of luxury goods offered to consumers (than the product itself) and may be an effective means of complementing the dual

positive outcomes of enhanced consumer experience (i.e., attitudes towards the product and the service provider itself).

An objective limitation of this study is not to examine the potential of various personality qualities, such as openness to experience and extroversion versus introversion. Future research can investigate the critical success factors of the virtual reality-supported customer experience in the luxury sector, including assessing the moderating effects of trust, immersion, personalization, and service quality, and modifying the VR experience and outcomes from the perspective of consumers. Secondly, the impact of virtual reality experiences on consumer purchase intentions and behaviour in the luxury sector can be investigated. Finally, future research can investigate the ethics and safety of VR technology from a consumer perspective providing additional opportunities.

## References

[1] Tussyadiah I P, Wang D, Jung T H, Dieck M C. Virtual reality, presence, and attitude change: Empirical evidence from tourism. Tourism Management, 2018, 66:140–154.

[2] Junga J, Yua K, Seob, Y. Consumer experiences of virtual reality: Insights from VR luxury brand fashion shows. Journal of Business Research, 2019, 10(38): 1-7.

[3] Klaus P. What matters most to ultra-high-net-worth individuals? Exploring the UHNWI luxury customer experience (ULCX). Journal of Product & Brand Management, 2021, 31(3): 368-376.

[4] Pantano E, Pedeliento G, Christodoulides, G. A strategic framework for technological innovations in support of the customer experience: A focus on luxury retailers. Journal of Retailing and Consumer Services, 2022, 66(2): 1-10.

[5] Holmqvist J, Wirtz J, Fritze M P. Luxury in the digital age: a multi-actor service encounter perspective. Journal of Business Research, 2020, 121:747–756.

[6] Wirtz J, Holmqvist J, Fritze M P. Luxury services. Journal of Service Management, 2020, 31 (4): 665–691.

[7] Pantano E, Passavanti R, Verteramo S, Priporas C V. To what extent luxury retailing can be smart? Journal of Retailing and Consumer Services, 2018, 43: 94–100.

[8] Gigante M A. Virtual reality: definitions, history and applications. In Virtual Reality Systems, 1993: 3-14.

[9] Sabanoglu T. AR/VR dressing rooms impact on online luxury sales in the UK 2021, by generation. Feb 7, 2022. Nov 16, 2022. https://www.statista.com/statistics/1288521/ar-vr-dressing-room-effect-on-online-luxury-sales-uk/.

[10] Silva S C, Duarte P, Sundetova A. Multichannel versus omnichannel: a price-segmented comparison from the fashion industry. Internation Journal of Retail Distribution Management, 2020, 48: 417–430.

[11] Farah M F, Ramadan Z B, Harb D H. The examination of virtual reality at the intersection of consumer experience, shopping journey and physical retailing. Journal of Retail Consumer Service, 2019, 48:136–143.

[12] Violante M G, Vezzetti E, Piazolla P. How to design a virtual reality experience that impacts consumer engagement: the case of the virtual supermarket. Internation Journal of Interactive Design and Manufacturing. 2019, 13(1):243–262.

[13] Lee H, Jung T H, Dieck M. C. T, Chung N. Experiencing immersive virtual reality in museums. Information & Management, 2020, 57(5):103229

[14] Lemon K N, Verhoef P C. Understanding customer experience throughout the customer journey. Journal of Marketing, 2016, 80(6): 69–96.

[15] Flavián C, Ibáñez-Sánchez S, Orús C. The impact of virtual, augmented and mixed reality technologies on the customer experience. Journal of Business Research, 2019, 100:547–560.

[16] Hudson S, Matson-Barkat S, Pallamin N, Jégou G. With or without you? Interaction and immersion in a virtual reality experience. Journal of Business Research, 2019, 100:459–468.

[17] Han DI D, Bergs Y, Moorhouse N. Virtual reality consumer experience escapes: preparing for the metaverse. Virtual Reality, 2022, 26: 1443–1458.

[18] De Gauquier L, Brengman M, Willems K, Van Kerrebroeck H. Leveraging advertising to a higher dimension: experimental research on the impact of virtual reality on brand personality impressions. Virtual Reality, 2019, 23(3): 235-253.

[19] Kheirandish S, Funk M, Wensveen S, Verkerk M, Rauterberg M. A comprehensive value framework for design. Technology in Society, 2020, 62:1-12.

[20] Lavoie R, King C. The virtual takeover: the influence of virtual reality on consumption. Canadian Journal of Administrative Science, 2019, 37(1): 9–12.

[21] Pleyers G, Poncin I. Non-immersive virtual reality technologies in real estate: How customer experience drives attitudes toward properties and the service provider. Journal of Retailing and Consumer Services, 2020, 57: 102175.

[22] Ramadan Z. The democratization of intangible luxury. Marketing Intelligence & Planning, 2019, 37: 660–673.