

Fashion Marketing in the Metaverse

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The metaverse is a shared virtual environment with significant implications for several aspects of businesses. This conceptual paper focuses on how fashion brands can benefit from the metaverse's vast opportunities. Reviewing the key publications in this field, it identifies the key stakeholders who shape fashion marketing in the metaverse: fashion brands, tech developers, and consumers. Furthermore, the paper outlines the opportunities and challenges of fashion marketing in the metaverse. The study presents a conceptual framework that shows the collaborative relationships between critical stakeholders involved in fashion marketing to take such opportunities and overcome potential challenges. The framework provides a theoretical foundation for research and practice in fashion marketing within the metaverse. The study contributes to the expanding body of research on the intersection of the metaverse and fashion marketing, offering valuable managerial insights for fashion brands and tech developers and a rich agenda for future research.

Keywords: metaverse, fashion marketing, conceptual framework, stakeholder collaboration; technological infrastructure, immersive time

1. Introduction

The metaverse is an emerging technology gathering momentum from academics and practitioners. Brands are exploring if and how they can enter the metaverse to engage with consumers (Joor, 2022; McKinsey, 2022; Tashjian, 2021), and a growing list of academic literature has initiated an investigation into the various aspects of a fully functional immersive metaverse (Dwivedi et al., 2022; Koohang et al., 2023; Joy et al., 2022), where individuals can effortlessly communicate and interact with each other in both the virtual and real worlds (Mogaji et al., 2023a). Fashion is one of those industries that has recognised the massive potential of a metaverse in their business operations (Joor, 2022; Kolk, 2023). Fashion brands like Balenciaga, Jimmy Choo and Dolce & Gabbana are offering digital-only rare garments; Gucci launched their virtual space called Gucci Garden, collaborating with Roblox, the gaming platform, while Nike launched their Non-fungible token (NFT) collectables dubbed the “Cryptokicks”. As the shift towards e-commerce and digital shopping becomes increasingly popular among consumers (McKinsey, 2022a), fashion and luxury brands are predicted to experience a surge in digital demand in the coming years, which could lead to additional sales worth \$50 billion by the year 2030 (Reuters, 2021).

Despite the anticipated growth of interest in the metaverse (Koohang et al., 2023), there are still significant gaps in our understanding of fashion marketing. First, previous studies in the metaverse have often provided a general overview rather than explicitly focused on fashion marketing. Dwivedi et al. (2023) and Koohang et al. (2023) offered a multidisciplinary perspective on emerging challenges, opportunities, and agenda for research in the metaverse. Likewise, Dwivedi et al. (2023) provided a general marketing perspective on the metaverse and how it will shape the future of consumer research and practice. Second, the few studies that have explored fashion in the metaverse have come

from a digital fashion design perspective rather than the marketing of these digital fashion. Joy et al. (2022) explored the digital future of luxury brands. They investigated how the fashion industry is impacted by newly developed technologies but limited insights into the marketing practicalities of fashion marketing in the metaverse. Sayem (2022) focused on digital design, e-prototyping, digital apparel, and smart e-technology. Based on this existing gap, this study offers a conceptual insight that encapsulates the prospect of fashion marketing.

This study is a conceptual paper which offers a theoretical overview of fashion marketing in the metaverse. This aim is achieved by first identifying three stakeholders that can shape the fashion marketing practice – the developers with the technical capabilities (Dwivedi et al., 2022; Koohang et al., 2023), the fashion brands keen on exploring digital versions and creating experiences for their consumers (Kaur et al., 2022; Sayem, 2022) and the consumers seeking immersive experiences in the metaverse (Park & Kim, 2023; Mogaji et al., 2023a). Second, given the growing adoption and integration of technological advancements into fashion brands' operations, this paper identifies emerging opportunities for the key stakeholders. Third, the study highlights significant research directions that can shape future discussions on fashion marketing. By achieving this aim, the study makes significant theoretical contributions to fashion marketing, marketing in the metaverse and digital transformation (Abdulquadri et al., 2021; Mogaji & Nguyen, 2022). Our conceptual framework highlighting the working relationship between these stakeholders contributes to the growing body of work on metaverse and explicitly focuses on fashion (Joy et al., 2022; Sayem, 2022) and offers managerial implications for managers and tech developers interested in fashion marketing, highlighting the strategic business decision in engaging with the stakeholders to start and manager fashion brands involvement in the metaverse.

The rest of the paper is organised as follows. Section 2 provides a general overview of marketing in the metaverse as an emerging area for practitioners and academics. This section is followed by a discussion of the three key stakeholders in Section 3. Section 4 identifies the opportunities for these stakeholders in the metaverse, followed by inherent challenges in Section 5. The Research agenda is discussed in Section 6, and the concluding remarks, including the limitation of the study, are discussed in Section 7.

2. Marketing in the Metaverse

Marketing in the metaverse is contextualised within the scope of consumer experience (Barrera & Shah, 2023). Therefore, the core objective of all marketing initiatives is to enhance the consumer experience. Marketers focus on immersiveness, sociability, and environmental fidelity as the key elements when designing marketing interventions in the metaverse (Dwivedi et al., 2022; Koohang et al., 2023). Immersiveness in the metaverse generally relies on embedded technologies, such as interactive technologies that combine virtual with real-world elements (Lamba & Malik, 2022). Telepresence is another vital element of immersiveness centred on the system configurations and specifications (Mogaji et al., 2023a). Sociability targets enhance the collective experience through augmented reality interventions that significantly affect the consumers' attitudes and intentions (Koohang et al., 2023). Environmental fidelity incorporates the similarity between the metaverse and the real-world environment in physical and functional aspects (Barrera & Shah, 2023). Marketing literature in this field emphasises the goal-related differences among consumers that influence their shopping behaviours in the metaverse (Dwivedi et al., 2022). Further analysis by Sarker (2019) also indicated that technological advancements such as the metaverse would challenge fashion marketers in their efforts to design and market their products.

Periyasami & Periyasamy (2022) contextualised the metaverse as a new platform business model whose major advantages are increased efficiency, economy, transparency, sustainability, security, and safety. Product platform business models are an emerging phenomenon comprising different layers of connections and interfaces culminating in digital products expressed through the digital twin. Brands and retailers are creating digital twins targeting next-generation (Generation Z) buyers and pro-consumers. Kalbaska & Cantoni (2019) further established that fashion marketing in the metaverse incorporates digital fashion competencies ranging from digital communication and online reputation to eCommerce. This domain will experience further changes that will combine with the technological changes in the metaverse and significantly impact marketing initiatives.

Fashion in the metaverse is anchored on the virtual transformation whereby virtual fashion items are sold through gaming platforms, digital photos, and augmented reality videos (Joy et al., 2022). According to Sayem (2022), fashion in the metaverse follows the digital fashion trend, whereby various innovations have transformed the industry both in the real world and the metaverse. According to Idrees et al. (2021), fashion in the metaverse generally involves using different AR and VR technologies. AR supports the projection of fashion items on the user's body on a digital screen. It encompasses augmented (3D) product view and virtual mirror technologies. Augmented 3D product view enhances the experiential value in online shopping, while virtual mirrors are a medium to minimise the deviation between online and offline environments (Joy et al., 2022). VR is deployed in the fashion industry through avatars in virtual fitting rooms. Avatars characterise the application of fashion in the metaverse by enhancing the entertainment qualities of tradable assets, while virtual fitting rooms enhance customer experience through innovation and curiosity. The enormous prospects of fashion

marketing in the metaverse have been recognised (Joy et al., 2022; Sayem, 2022), and it is imperative to expand on this theoretical contribution, especially in recognising the key stakeholders that will shape this fashion ecosystem.

3. The Stakeholders

This section highlights three key stakeholders essential for this business operation – 1. The Technical developers are capable of developing content for the metaverse. 2. The fashion brands are considering entering the metaverse to engage with consumers, and 3. Consumers are willing to enter the metaverse for an immersive time and engage with brands and other users. Acknowledging the presence of numerous stakeholders and the diverse roles of fashion designers in the fashion industry, we have emphasised these three stakeholders to provide a comprehensive perspective on fashion marketing. This approach focusing on the developer, brand and consumer as key stakeholders align with previous studies on digital transformation. Mogaji & Nguyen (2022) studied managers' understanding of artificial intelligence and recognised the AI tech developers, banks, and consumers as key stakeholders in digital transformation. Abdulquadri et al. (2021) adopted the same nomenclature in their digital transformation study in financial services. Likewise, Khalil et al. (2022) established the same nomenclature in the study on digital technologies influencing the relationship between the Covid-19 crisis and SMES' resilience.

3.1. The Tech Developers

These are the companies, organisations, and agencies with the technical knowledge to create content for the metaverse. While they can work for other brands, this paper focuses on recognising how they can use their expertise to enhance fashion marketing in the metaverse. Just like a Web Designer who helps companies to create a web presence, we

recognise the emerging roles of these tech developers as a bridge for fashion brands to access the metaverse. These developers can be video games' framework - Nike worked with Roblox to launch their Nikeland; Burberry collaborated with Mythical Games' Blankos Block Party; Balenciaga released their Fall 2021 collection via a video game and collaborated with Fortnite. The developers can also be an individual - In celebrating their 200th anniversary, Louis Vuitton showcased NFTs created by Mike Winkelmann, aka the digital artist Beeple (Show, 2021) or an agency like RNO1, Coinbound, Publicis Poke and Rumfoords adopting Web 3.0, metaverse and AI and assisting brands in establishing a strong presence in the metaverse. DAN (2023) presented a list of Best Metaverse Marketing Agencies in 2023, noting that there are enormous opportunities for brands to work with these agencies to create innovative initiatives in this novel realm.

3.2. Fashion Brands

In this paper, we refer to fashion brands as the group of fashion designers, brand managers, marketers and those working within the fashion industry. Fashion brands are eager to share their latest collections in the metaverse, invite consumers to fashion shows and form partnerships with other brands (Dwivedi et al., 2022). Mythical Games teamed up with Burberry to release Blankos Block Party. This fashion-focused open-world multiplayer metaverse video game incorporates NFT vinyl toys on a blockchain (Romagnoli, 2022). The metaverse is not just for luxury brands, as there are enormous opportunities for fashion brands to benefit from entering the metaverse. We have seen BoohooMAN, an affordable fashion label, launching a collection of NFTs featuring their latest apparel, such as t-shirts, hoodies, tracksuits, and outerwear, enabling consumers to transform their digital wardrobe. Fashion brands need to engage tech developers' services to have a place in the metaverse. The fashion brands, including their designers, marketers and creative directors, must work with these developers to achieve the metaverse

marketing objective. This collaboration often sets the difference between established fashion brands with the financial, technical, and human resources to do this and other brands (Dwivedi et al., 2022; Kohler et al., 2023).

3.3. Consumers

Consumers go on to the metaverse to engage with brands, escape into the virtual world, and seek alternative environments (Chylińska, 2022). Mogaji et al. (2023a) noted that consumers spend immersive time (ImT) in the metaverse using a headset and other accessories to continually engage in the metaverse, presumably at least partly to escape the real world. The desire to escape reality has been an integral part of the consumer experience literature (e.g., Abdulquadri et al., 2021; Chylińska, 2022; Cova et al., 2018), and it is a growing trend for consumers (Dwivedi et al., 2022; Koohang et al., 2023). While consumers can engage with different brands and other people in the metaverse, their growing interest has significant implications for fashion marketing. Consumers in the metaverse can buy Non-fungible tokens (NFTS), recognise the different degrees of uniqueness that the fashion brands can offer (Joor, 2022), they can attend fashion shows in the metaverse (Kolk, 2023), and they can even dress up their avatars using fashion brands well established in the real world (Romagnoli, 2022).

4. The opportunities and prospects

Irrespective of the type of fashion design, the brand size or the country of origin, fashion brands have tremendous opportunities and prospects to enter the metaverse and offer their unique design to various consumers. This section explores the opportunities and prospects for the three stakeholders as they explore fashion marketing in the metaverse.

4.1. The Tech Developers

4.1.1. Metaverse-as-a Service

With content management systems like WordPress and e-commerce websites like Shopify coming on board to assist brands with limited technological capabilities to develop their personal website or e-commerce websites, there are opportunities for Metaverse-as-a Service where brands can come unto the metaverse for a fraction of a fee. Instead of hiring a designer to develop a full fledged metaverse for their fashion brands, there could be opportunities to do a 'pay as you go' approach. Here is an opportunity for tech developers, metaverse designers, and agencies to help brands come into the metaverse, one parcel of land at a time. Fashion brands who may only be willing to go some of the ways can start small, balancing their physical stores with their metaverse presence.

4.1.2. Partnership opportunities

Early adopters of the metaverse are harnessing opportunities in digital experience, gamified experience, digital assets, and platforms. These opportunities mainly target millennial and Gen-Z consumers ((Koohang et al., 2023). There are opportunities for tech developers to partner with Fashion brands to attract them to the metaverse. Though these partnerships already exist among some luxury fashion brands. Fashion brands like Gucci have partnered with high-tech companies to create virtual worlds with personalised avatars (Kolk, 2023). Tech developers and agencies with the technical and creative capabilities to create content for the metaverse can reach out to fashion brands for partnerships. This partnership also offers additional business for these tech companies. An opportunity for business growth and a client base

4.1.3. Innovative solution

Some innovations have enabled fashion development in the metaverse. They include computer-aided design (CAD), three-dimensional design and development and 3D printing. These technologies have been extensively effective in designing and prototyping various fashion accessories that can be traded in the metaverse. As many players in the fashion industry are making efforts to maximise the usage of these technologies (Joor, 2022), there is a significant opportunity for tech developers to work on innovative solutions that can enhance the integration of metaverse into digital fashion and accelerate the adoption of digital designs in the metaverse (Chohan & Paschen, 2023).

4.2. Fashion Brands

4.2.1. Sales of NFTs

The main opportunities for fashion brands in the metaverse involve the sale of NFTs for products from specific designers (Dwivedi et al., 2022). The metaverse can break barriers and allows brands worldwide to reach a diverse audience (Koohang et al., 2023). Regardless of the specifics of a fashion brand, whether it be the type of design, the size of the brand, or the country it originates from, there are significant opportunities and potential for brands to enter the metaverse and showcase their unique designs to a diverse consumer base (Koohang et al., 2023; Park & Kim, 2023). Considering the benefits of Web 2.0 allowing brands to have their websites and social media platforms, sell to different customers worldwide, break the barriers of physical stores or attend fashion shows, metaverse offers an exponential opportunity for brands. The NFTs offer real-world fashion items as collectable digital assets that similarly hold value to physical assets.

4.2.2. Recognition of intellectual property

Fashion designs and digital product creators can obtain royalties on transactions between pro-consumers and post-consumers, as the business model in the metaverse is not a one-time-buy-and-sell kind of business (Joor, 2022). This meta-economy is an ecosystem supporting multiple business models with numerous benefits, including supporting a sustainable fashion supply chain. Its other benefits include decentralised financial transactions through blockchain systems and hyper-personalisation opportunities (Jain et al., 2020). Hyper-personalisation supports the development of product designs that fit the needs of each customer. Undoubtedly, blockchain technology can aid in safeguarding the legitimacy of luxury goods by offering two key advantages: preventing counterfeit products and assuring consumers of their purchase's accuracy. The blockchain's ability to create a monitoring and tracing system may also lower operational expenses in fashion retail by improving data management and supply chain management capabilities.

4.2.3. Brand awareness

According to Dwivedi et al. (2023), the metaverse will influence the future of marketing through its impacts on branding, value creation, and consumer well-being. The metaverse has various features and tools that will provide numerous opportunities to brands. Major opportunities include empowering the brands to deliver unique product offerings that are not feasible in the real world (Koohang et al., 2023). This opportunity leverages the high levels of imagination and creativity in the virtual world. It will also avail ample opportunities, such as digital billboards for promoting product offerings (Chohan & Paschen, 2023). Additionally, the metaverse allows brands to build loyal customer bases by capitalising on the brand communities in the metaverse (Joor, 2022).

4.2.4. Brand commercial value

The metaverse presents an excellent opportunity for fashion brands because the world is extremely digitised (Koohang et al., 2023). This great level of digitisation has culminated in increased online activity that presents many opportunities for the fashion industry (Brookswoth et al., 2023a). The metaverse will avail new opportunities in marketing fashion products by adding commercial value to luxury branded goods and services. The commercial value of fashion products in the metaverse is attributed to their nearness to the language of avatars, video game actions, and players that are not feasible in real life. Blockchain technologies provide many opportunities for the fashion industry in the metaverse because the items are unique, non-replicable, and cannot be stolen (Laeq, 2022). This technology is instrumental in trading art pieces such as fashion accessories as they are distinct and tradable goods. Blockchain adds value to real-world fashion designs using NFTs (Malik et al., 2023).

4.2.5. Sustainable fashion

Fashion marketing in the metaverse is perceived as a sustainable development initiative that will be achieved through changes in product design and production (Yan, 2022). Sustainability at the production stage is attained through virtual design and product release that significantly reduce the environmental impact posed by the traditional textile industry. Using blockchain technology and NFTs also enables the brands to guarantee ownership while preserving the consumers' interests and protecting the product's core value. Generally, fashion in the metaverse will promote the consumers' expression by suiting their artistic, material, and aesthetic preferences.

4.3. Consumers

4.3.1. Customisation

Fashion in the metaverse allows consumers to create unique avatars and personalise their virtual appearances to express their individuality. Consumers can choose from various clothing and accessories that reflect their style, taste, and personality, making their virtual selves represent who they are in real life. For example, in the popular game Roblox, users can create their avatars and choose from various clothing items and accessories, from streetwear to formal wear. Consumers can mix and match different items to create a unique look that reflects their personality and style. Fashion in the metaverse allows consumers to express their individuality and create unique avatars that reflect their style.

4.3.2. Income streams

Fashion marketing in the metaverse can be deployed as an extension of real-world e-commerce. The metaverse also offers immense opportunities because of the possibility of mass adoption that could upscale revenue projections. The metaverse has transformed fashion by creating new revenue streams through NFTs, enabling creative freedom and creating new opportunities in fashion retail (Dwivedi et al., 2022). Virtual fashion items can now be bought and sold as unique digital assets. (Barrera & Shah, 2023) For example, in the game Decentraland, users can buy virtual land and build their own experiences, including virtual fashion shows. Digital fashion items can be sold as NFTs, allowing users to own exclusive, one-of-a-kind items they can display on their avatars or sell to other users.

4.3.3. Socialisation

Fashion can also help consumers socialise in the metaverse. By wearing fashionable clothing and accessories, consumers can attract attention and start conversations with

other users. These socialisation prospects can help build relationships and foster community in the metaverse. Mogaji et al. (2023a) discussed the prospects of ImT as time spent in the metaverse, and consumers must engage with other people during their ImT in the metaverse. In this time of socialising and engaging with other users in the metaverse, fashion can help consumers feel more immersed (Barrera & Shah, 2023). By dressing their avatars in stylish and fashionable clothing, consumers can feel more connected to the virtual environment and other users. This socialisation can enhance the consumer's overall experience in the metaverse and make it more engaging and fun (Koohang et al., 2023).

5. The challenges

5.1. Technical Developers

5.1.1. Computing capabilities

Entering the metaverse is challenging; it requires considerable computing capabilities (Dwivedi et al., 2022). These infrastructural and computing capabilities can also challenge fashion in the metaverse. This challenge relates explicitly to the continuous technological changes in the metaverse alongside the need to match physical and virtual design aspects (Mogaji et al., 2023a). Metaverse is an emerging technology, and inherent computing limitations challenge its wide-scale adoption (Koohang et al., 2023).

5.1.2. The Adoption of Metaverse

There are growing concerns about how well the metaverse will be adopted and accepted (Mogaji et al., 2023; Wise, 2022). While there is a massive investment in infrastructure development, there are concerns about how and if consumers will come and stay in the metaverse. Though there are promises of growing adoption, it is understandable if consumers need clarification about coming on board. Many brands may want to avoid

investing in this, and there is a significant implication for the developers. The client base may continue to reduce as brands scale down their investment in the metaverse because only a few people are coming.

5.2. Fashion Designers

5.2.1 Resources

Access to technological infrastructures and human resources to develop fashion for the metaverse can also present a challenge, especially for smaller fashion brands and brands in emerging economies with limited resources and capabilities to distribute their fashion design through the metaverse. As seen with the era of Web 2.0, many people need a website, but they do not have the capabilities to design a website for themselves, and they may not be able to afford a website designer; these are issues that may present a challenge for smaller brands. While the metaverse is meant to break barriers, the ability to explore these broken barriers may only be available to some brands. As noted by Brooksworth et al. (2023a, b) and Nguyen & Mogaji (2023), fashion marketing in emerging countries is often a different challenge which is multilayered as they try to compete with brands in developed countries; it is, therefore, imperative to recognise these challenges while discussing fashion marketing in the metaverse. These challenges can be addressed by the concept of Metaverse-as-a-Service, which has been discussed as a considerable prospect. Brands with limited financial, human resources, creative or infrastructure capabilities can explore low entry level to the metaverse.

5.2.2. Differentiation

Many of the world's largest multinational fashion players are entering the metaverse with unique products and strategies. However, they face a major challenge in establishing a digital fashion experience that will enable them to gain market share in the emerging

market (Hackle, 2021). The challenge arises because creating a digital fashion experience extends beyond mere differentiation to exploring the possibilities in the vast worlds of the metaverse. It also encompasses engaging with different target groups or marketing tools with the main aim of driving sales. Major interventions that will help create a digital fashion experience in the metaverse include in-world and in-game collaboration, gaming experience, and using NFTs alongside AR filters. In-world collaborations majorly target to turn sport and play into a lifestyle (Cobben, 2022). In-game Skin collaborations are also created to reach wider audiences with fashion designs. This approach can enhance fascinating digital fashion experiences by creating skins for the game industry that generate new revenue streams. AR filters also enhance the online shopping experience by enabling consumers to project digital collections onto their bodies.

5.3. Consumers

5.3.1. The ease of use

The ease of use and accessing the metaverse will be a critical consideration for consumers (Dwivedi et al., 2022). Limited accessibility to virtual and augmented reality accessories may limit user participation and the quality of their experience. This technology also needs to improve the quality of experience that may have similar impacts on the marketing interventions in the metaverse. Aligning with the idea of "*digital poverty*", where people do not have the much-needed hardware to enter the metaverse, there are challenges in getting people to come into the metaverse and engage, and if people are not there, the fashion brands may also see reasons to move away from the metaverse. Fashion brands need consumers in the metaverse to buy things, dress up avatars, and attend fashion shows and other events; it becomes a challenge if people are not joining due to their inability to afford the gadgets. As Mogaji et al. (2023a) iterated, consumers' attitudes

also challenge how people are willing to accept the metaverse as an integral part of their lives.

5.3.2. The digital divide

The ease of use can also present a digital divide where many consumers need access to the metaverse. Socio-cultural challenges may also arise based on the uncertainty surrounding consumer behaviour and interactions in the metaverse (Mogaji et al., 2023a). Growing concerns exist about consumers' attitudes towards the metaverse (Wise, 2022). It is imperative to recognise the global metaverse divide, with reports suggesting that many consumers in China would take part in the metaverse compared to UK citizens, where one in ten have no interest at all and 20% do not expect it to become mainstream at any point (Morrison, 2022). Moreover, there needs to be more research about how those in African countries are adopting this type of technology. Recognising that the technological difference and social-cultural values and attitudes to technology may challenge brands exploring opportunities for the metaverse is essential.

5.3.3. Intangibility

Consumers must manage their expectations when engaging with fashion brands in the metaverse. A significant challenge for consumer brand engagement in the metaverse is those virtual fashion items are intangible. This intangibility means that consumers cannot physically touch, try on, or feel the quality of the items before buying them. This intangibility may lead to dissatisfaction with the purchased items, especially if they do not match the user's expectations (Koohang et al., 2023). In addition, while the metaverse offers a wide range of customisation options, some consumers may find that the options still need to be improved compared to what they can do in real life (Mogaji et al., 2023a).

For example, some virtual fashion items may not be available in the colour or style that the user prefers.

5.3.4. Security Risk and Fraud

The metaverse is still a relatively new concept. It is constantly evolving (Mogaji et al., 2023a) and, like any other online platform, comes with security risks such as cyber-attacks, hacking, and identity theft. Users must take precautions to protect their virtual fashion items and personal information from potential security breaches. Consumers also need to be mindful of the fluctuating values of their NFTs (Malik et al., 2023).

6. The Conceptual Framework

The study offers a conceptual framework for the working relationships between key stakeholders - the fashion designers anticipating getting into the metaverse to market their brand, the consumers entering the metaverse to explore fashion collectables and the tech developers creating the enabling environment in the metaverse. The framework summarises the theoretical positioning of the three stakeholders, the opportunities that abound for them in the metaverse and the inherent challenges to these opportunities are discussed. Figure 1 illustrates the conceptual framework and three forms of engagement between the stakeholders to enhance fashion marketing in the metaverse.

Figure 1 about here

First, we recognised the *fashion brand-consumer engagement*, highlighting fashion brands' responsibilities in creating experiences and relevant content for consumers entering the metaverse. This engagement allows fashion brands to market their fashion line, invite consumers to virtual fashion shows and offer digital-only garments and collectables. Second, we recognised the *Fashion brands - developer engagement* highlighting the working relationship between fashion brands and tech developers to enter

the metaverse (Sayem, 2022). Tech developers also can offer Metaverse-as-a-Services (MaaS) to fashion brands and provide infrastructure for co-creation between brands and consumers. This working relationship supports financial transactions through NFTs, blockchain and metaverse wallets (Barrera & Shah, 2023). Third, we recognise the *Consumer - developer engagement* in fashion marketing in the metaverse. The engagement between these two stakeholders is anticipated to support continued interest and access to the metaverse because this is also important for fashion brands (Joor, 2022; Joy et al., 2022). The digital divide as people consumers may not have access to headsets and accessories, security and privacy of consumers in the metaverse poses a significant challenge in enhancing fashion marketing (Dwivedi et al., 2022).

The conceptual framework summarises the opportunities and challenges for these stakeholders as they create the digital fashion ecosystem in the metaverse. The frameworks contribute to a better understanding of the metaverse as an emerging digital technology for brands (Dwivedi et al., 2022; Koohang et al., 2023) and especially for fashion marketing in the metaverse (Joy et al., 2022; Sayem, 2022), increasing out theoretical and practical understanding of the metaverse can be integrated into business operations. The framework also highlights practical implications for the stakeholders and what they can do to benefit from the huge opportunities of the metaverse.

7. Research agenda

Drawing upon the relationship between fashion stakeholders in the metaverse illustrated in Figure 1, this section highlights potential directions for future studies. First, from the fashion designer's perspective, future strands need to recognise and explore the type of brands entering the metaverse, their marketing strategies, their target consumers and their level of technology adoption in exploring digital marketing models. Understanding the marketing strategies of existing brands in the metaverse provides insights for brands

considering this emerging technology. Likewise, future research can shed light on the varying marketing approach for brands from different origins. With the notion of the continent of origin shaping buyers' perceptions (Mogaji et al., 2023b), it would be imperative to understand how different brands present their brand in the metaverse; perhaps if an African brand selling African prints in the metaverse can adopt the same marketing model like an established global brand selling to a global audience or remain focused with an African theme even though the metaverse offers unlimited access. In addition, Future studies are needed to understand the motivation and challenges of fashion brands entering the metaverse. This understanding will be needed for brands to reevaluate their options and develop strategic directions to manage risks and benefit from possible prospects. With Morrison (2022) highlighting the global metaverse divide, future research needs to understand the impact of this divide on fashion brands to go into the metaverse. Would Asian fashion brands be more willing to explore this option and go full fledged on metaverse, or the African brands will be more cautious?

Second, from the consumers' perspective, research needs to understand the effort made by consumers in getting into the metaverse and their experiences in it. As earlier indicated, getting people to stay in the metaverse is important (Koohang et al., 2023), it is imperative to understanding the consumers' immersive time and level of engagement in the metaverse is imperative. Research needs to explore opportunities for developing real-time audit systems to quantify user participation alongside robust data privacy policies to safeguard the security of user data. Understanding what consumers are doing in the metaverse, their challenges, confidence in the infrastructure and engagement with other stakeholders will be important in developing effective marketing strategies for fashion brands. Existing literature also indicates that further research should be conducted to establish how consumer experience can be integrated into fashion marketing in the

metaverse (Joy et al., 2022; Dwivedi et al., 2022; 2023). Customer experience has been extensively understood in the physical world but is still a new concept in the digital world. Creating compelling customer experiences in the metaverse will be integral to the success of the marketing efforts. Thus, further research should investigate its application in the metaverse and specific factors that will contribute to the successful deployment.

Third, from a technical point of view, research needs to explore the role of tech developers, metaverse agencies and virtual space designers in supporting fashion brands to enter the metaverse. As Figure 1 illustrates the working relationship between fashion designers and tech developers, future studies can offer significant managerial implications by exploring how the tech developers are providing the infrastructures and consumers engaging in the metaverse; as Mogaji & Nguyen (2022) explored the working relationship between tech managers and bank managers working on AI, future research is needed to empirically establish the working relationship with regards to the metaverse, to understand the fashion brands' reliance on the tech developers to create an enabling platform. Beyond fashion brands, future studies need to understand the role of tech developers in enabling the consumer-fashion brand relationship in the metaverse. Likewise, understanding the dark side within this working relationship will also be necessary, highlighting the prospects of fraud, impersonation, privacy invasion and financial crimes in the metaverse. The tech developers are expected to provide a safe metaverse infrastructure for all stakeholders.

8. Conclusion

With a specific focus on fashion amidst the huge opportunities for the metaverse, this conceptual paper conceptualises the working relationship between fashion brands, tech developers and consumers, identifies the opportunities and challenges of fashion marketing in the metaverse and presents agenda for future research. The conceptualised

framework, illustrated in Figure 1, offers a theoretical primer for fashion marketing research and practice. The study makes a significant theoretical contribution to the growing body of work on the metaverse and fashion marketing on the metaverse. By highlighting the working relationship between the stakeholders, the study offers opportunities for innovative product development to meet the needs of the consumers and prospects for fashion brands and consumers to co-create and enhance their experience and immersive time in the metaverse. Despite the significant contributions of this study, it is imperative to acknowledge that this is a conceptual paper. It is anticipated that future studies will collect qualitative and quantitative data to validate this framework, engage with the stakeholders via case study research, interviews and surveys and address the presented research agenda, as these research strands will be important in extending our understanding of fashion marketing in the metaverse.

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