



THE CLASSIFICATION OF USING OF DIGITAL MARKETING METAVERSE IN GARMENT AND KNITTING ENTERPRISES

Aliev Abdulaziz

Tashkent State University of Economics

ORCID: 0000-0002-1279-6689

a.aliev@tsue.uz

Abstract. The current article concentrates on the features of digital marketing technologies, digital marketing metaverse as well as it examines theoretical notions of digital marketing technologies, digital marketing metaverse use in garment, knitting, textile enterprises, At the same time, it studies the elements of digital marketing technologies, specifically metaverse used in garment, knitting and textile enterprises and the use of digital marketing metaverse in fashion field.

Keywords: digital marketing, metaverse, garment, textile, virtual reality, augmented reality, fashion.

ТИКУВ-ТРИКОТАЖ КОРХОНАЛАРИДА РАҚАМЛИ МАРКЕТИНГ МЕТАОЛАМИНИНГ ҚЎЛЛАНИЛИШИ ТАСНИФИ

Алиев Абдулазиз

Тошкент давлат иқтисодиёт университети

Аннотация. Ушбу мақола рақамли маркетинг технологияларининг хусусиятлари, хусусан рақамли маркетинг метаоламига қаратилган бўлиб, рақамли маркетинг технологияларининг назарий тушунчалари, тикув-трикотаж, тўқимачилик корхоналарида рақамли маркетинг метаоламининг қўлланилишига қаратилган. Шу билан бирга, рақамли маркетинг технологияларининг элементларини, хусусан, кийим-кечак, трикотаж ва тўқимачилик корхоналарида қўлланиладиган метаоламга эътибор қаратилади ва мода соҳасида рақамли маркетинг метаоламидан фойдаланишига эътибор қаратилади.

Калит сўзлар: рақамли маркетинг, метаолам, кийим-кечак, тўқимачилтк, виртуал реаллик, кенгайтирилган реаллик, мода.

КЛАССИФИКАЦИЯ ЦИФРОВОЙ МАРКЕТИНГОВОЙ МЕТАВСЕЛЕННОЙ НА ШВЕЙНО-ТРИКОТАЖНЫХ ПРЕДПРИЯТИЯХ

Алиев Абдулазиз

Ташкентский государственный экономический университет

Аннотация. Данная статья посвящена особенностям цифровых маркетинговых технологий, цифровой маркетинговой метавселенной, а также рассматривает теоретические понятия цифровых маркетинговых технологий, использование цифровой

маркетинговой метавселенной в швейно-трикотажных и текстильных предприятиях. В то же время изучаются элементы цифровых маркетинговых технологий, в частности, использование метавселенной в швейно-трикотажных и текстильных предприятиях, а также применение цифровой маркетинговой метавселенной в сфере моды.

Ключевые слова: цифровой маркетинг, метавселенная, одежда, текстиль, виртуальная реальность, дополненная реальность, мода.

Introduction.

In the era of digitalization while technology is greatly developing digital marketing technologies are widely adopted by marketers. At the same time, in the current method of marketing, the web serves as a platform where businesses including garment, textile, knitting and apparel ones present their offerings through the text, audio, and visual elements in digital manners. The shift towards digital marketing has now evolved into a crucial aspect of marketing. Digital marketing has become a cornerstone for all major brands due to its engaging means of interaction with stakeholders. Thereby, garment, fashion metaverse represent the collective virtual realm where virtual garments and adornments are available for avatars and digital personas within captivating, three-dimensional environments. The web based universe blends the tangible with virtual reality and online technologies. Metaverse garments are digital-only clothing and accessories designed for avatars and virtual environments.

Literature review.

Digital marketing technologies play quite crucial role in the development of business activities of enterprises including garment, knitting and textiles producing companies as key functions of digital marketing involve for the use of advertising products or offerings through the web, social platforms, search engines, websites, and digital resources to connect with customers effortlessly and persuade them to purchase or take a step towards different purchases of garment, knitting, textile products as well as the benefits and functionalities of virtual reality became widely acknowledged as the current awareness highlighted the necessity for virtual connectivity through social media platforms. Meanwhile, the element of 'Metaverse' in digital marketing is reshaping the digital space into an appearance of reality, prompting numerous businesses to incorporate the current concept into their operational frameworks and strategies. The Metaverse profoundly transforms the marketing landscape, bridging experiences between the physical and digital realms, thus establishing an innovative marketplace where consumers and marketers can engage and collaborate with each other. Moreover, the metaverse signifies so-called self-referential universe, a notion where, through the internet and sophisticated software, information can be conveyed from one location to another in a manner that appears authentic, enabling us to experience the surroundings and objects as if they were in the physical realm. The Metaverse presents an opportunity for consumers to engage in innovative communication methods and discover products with unique features unattainable in the tangible world. It has revolutionized the virtual landscape, allowing consumers to delve into the digital realm through virtual reality and augmented reality platforms, which create an opportunity to engage with a virtual marketplace, enabling them to touch, feel, and interact with brands in a live environment. The distinctive characteristic of the Metaverse offers consumers an unparalleled sensation of the market atmosphere, products, and services they wish to acquire. The power of the Metaverse possesses the potential to amplify the attributes of the natural environment within a 3D generated space. (Sharma and Bansal,2023).

The digital evolution journey of a company encompasses digital marketing as a crucial element. It consists of contemporary marketing methodologies that are relevant to the current market landscape and are built upon information and communication technologies. Through digital marketing, businesses can provide higher levels of customer satisfaction and utilize

more efficient tools for managing their interactions with clients. The interactive and mobile nature of these tools, combined with their familiarity among users, allows them to meet the demands for information search and comprehension. They uphold traditional marketing concepts aimed at boosting sales revenue and profits while simultaneously enhancing customer satisfaction. Furthermore, they assist enterprises in executing their marketing strategies more proficiently. (Veleva et al., 2023). The Digital Marketplace serves as the central hub where virtual avatars can partake in commercial activities akin to those in the physical realm. The advanced marketplace of the Metaverse, intended to facilitate the creation of products and authentic trade conducted within the Metaverse, must be separate from the existing digital marketplace (Yang, et al., 2022). Majority of people have a belief that blockchain represents a crucial foundational technology for the Metaverse due to its capacity to unify otherwise inaccessible small sectors and create a robust economic framework. As that assists in establishing transparent, open, efficient, and reliable guidelines for the Metaverse. In particular, utilizing hash functions and time stamping technologies as fundamental elements in the data layer of a blockchain can offer users the Metaverse's traceability and privacy concerning the information stored in the blockchain's underlying layer (Yang, et al, 2022), as cited in Nalbant and Aydın,. Several technological advancements have propelled fashion evolution within the metaverse. These advancements encompass computer-assisted design (CAD), three-dimensional modeling and development, and 3D printing. Such technologies have proven remarkably effective in crafting and prototyping various fashion items that can be exchanged in the metaverse. Numerous stakeholders in the garment, knitting enterprises and fashion sector are striving to optimize the utilization of these technologies (Joor, 2022 as cited in Mogaji et al., 2023). Meanwhile, fashion brands such as Balenciaga, Jimmy Choo and Dolce & Gabbana are offering known as 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, 2022 as cited in Mogaji et al., 2023), 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 USD by the year 2030 (Reuters, 2021), as cited in (Mogaji et al., 2023).

Nevertheless, garment, knitting, clothing represent the vital component of human life that remains essential throughout our existence. Thus, the idea of total digital transformation becomes unsustainable if viewed merely as a substitute for tangible clothing. However, on condition that if scholarly conceptualize digitalization as an enhancement that complements conventional apparel acting as a channel for interaction within the metaverse then dismissing such advancements indicates a considerable lapse in modern society. Depending exclusively on external smart devices for this function also seems unrealistic, as clothing itself could embody such a device. In this context, it is essential to recognize that while physical garments protect people from environmental factors, they concurrently limit peoples' engagements with them. That implies that introducing smart clothing capable of evaluating both environmental circumstances and bodily reactions could eliminate existing hindrances while augmenting protective elements and rendering them more known as 'intelligent.' By incorporating digital interfaces into such garments, wearers could link with the metaverse and tap into vast databases relating to health insights, leisure activities, safety issues and others. A prospective benefit of this form of garments, knitwear and clothes known its extensive surface area compared to mobile devices (Ruckdashel et al., 2021), as cited in(Diak, 2025).

The digital transformation has significantly reshaped the landscape of marketing and advertising, along with the methods employed to promote products and persuade prospective buyers. Consequently, major brands are continuously dealing with the challenge of effectively leveraging the internet and the digital landscape to engage with contemporary digital consumers. In today's world, a thriving brand is one that keeps up with constant advancements

and can adapt to the characteristics of this digital age, particularly in the realm of garment, knitting, fashion and apparel. The metaverse is viewed as a marketing platform tailored for the contemporary millennial demographic, which is the most adept at utilizing virtual technology, communication, and gaming. Consequently, the establishment of virtual shopping centers within the metaverse has allowed numerous global brands to stay aligned with technological advancements, enabling them to present their services and products in an innovative and imaginative manner within the current digital world (Fakhry and Nasr, 2023).

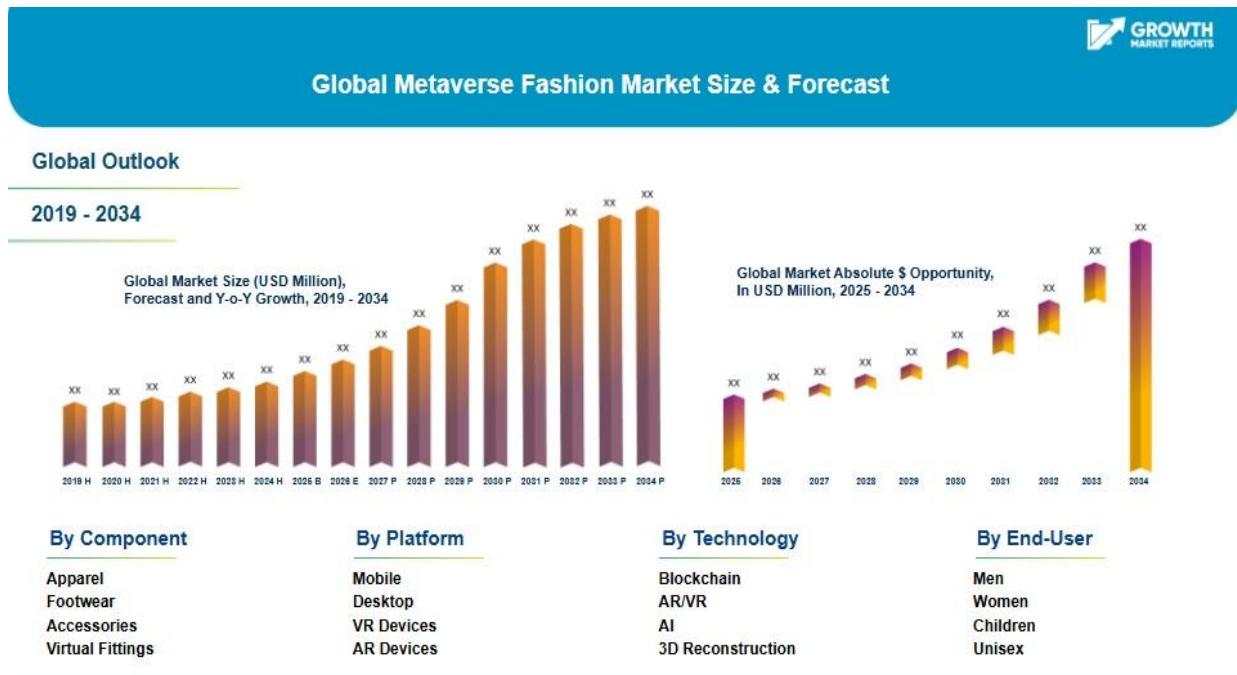
Research methodology.

The methodology that has been used in the current paper can be considered as the wider use of secondary data, published sources from academic, scholarly literature, as well as inductive approach method to describe a variety of data discussed in the current article. At the same time, digital marketing innovations play a vital role in the garment, knitting, apparel, textile sectors, and the fashion industry, especially within the swiftly evolving fashion world, with the garment sector holding a prominent position. Consequently, the garment, knitting, apparel, textile sectors, and fashion industry have begun to actively incorporate digital technologies in product delivery and customer communication processes, utilizing digital marketing innovations such as metaverse, website creation, virtual reality and augmented reality within garment, knitting, apparel, textile design to final sales, exposure to customers to provide real world experience.

Analysis and discussion of results.

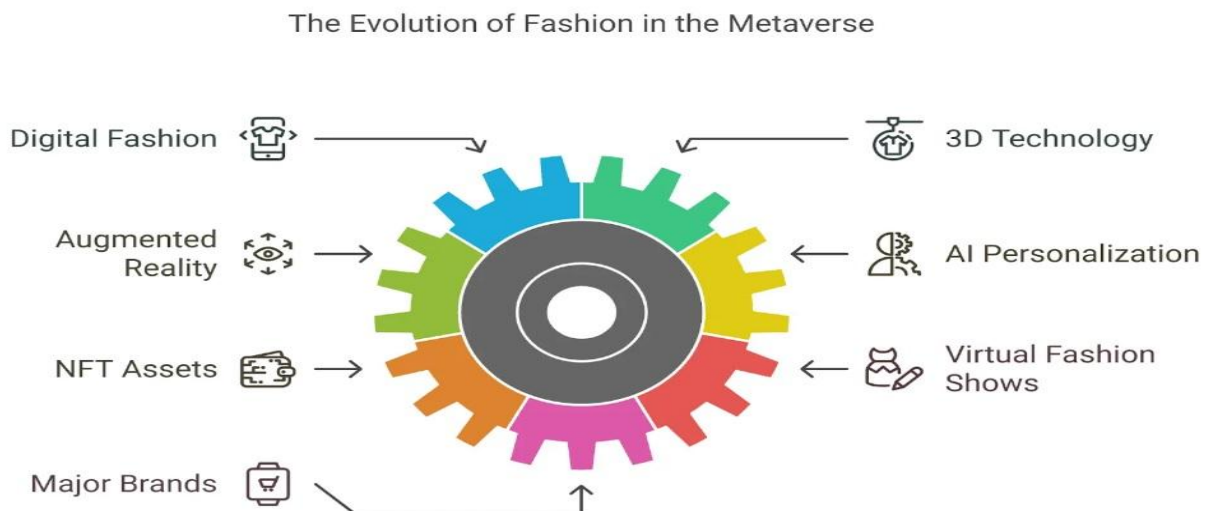
The worldwide Metaverse Fashion sector achieved as illustrated in Figure 1 a remarkable USD 1.92 billion in 2024, exhibiting strong growth and creativity within digital fashion domains. Projections suggest an extraordinary CAGR of 36.2% from 2025 to 2033, estimating a value of USD 31.59 billion by 2033. This swift progression is propelled by the intersection of fashion, gaming, and immersive technologies, alongside the increasing embrace of digital assets and virtual realms by consumers and brands across the globe. According to our recent study, the metaverse fashion landscape is being influenced by shifting consumer habits, technological innovations, and the rising power of digitally native generations. A key driver for the metaverse fashion market is the escalating appetite for individualization and self-representation in virtual settings. As consumers, especially Gen Z and Millennials, devote additional time in digital spaces—from social media to gaming worlds—they seek distinct digital clothing and accessories to express their identities. This movement has resulted in a surge of virtual fashion showcases, NFT-based apparel releases, and brand partnerships within well-known metaverse platforms. The effortless merging of fashion with avatars and virtual environments is transforming the way consumers engage with brands, nurturing brand loyalty, and unlocking new revenue opportunities for designers and retailers. Additionally, the emergence of digital collectibles and blockchain-facilitated ownership has allowed users to securely purchase, sell, and trade virtual fashion commodities, enhancing the market's attractiveness and value proposition.

The capacity to launch and expand virtual fashion lines without the limitations of traditional production lines the way for enhanced creativity, smaller environmental impacts, and quicker adaptation to market demands. Consequently, the metaverse fashion world is experiencing a trend towards design independence, with emerging talents and boutique labels enjoying increased visibility alongside renowned brands. These alliances are not only boosting customer interaction but also allowing brands to explore novel business strategies, including exclusive digital collections and limited-edition NFT releases.



Picture 1. Metaverse Fashion Market Research Report 2033 (Growth Market Reports, 2026)

A significant factor driving change is the rising partnership between established fashion brands and tech innovators. High-end labels and mainstream retailers are delving into metaverse projects to connect with a broader, digitally sophisticated demographic, utilizing augmented reality and virtual reality as well as AI artificial intelligence to craft engaging shopping environments.



Picture 2. Source: Virtual Fashion Store Metaverse Development (Chanda, 2026)

The metaverse is a virtual world where individuals engage, shop, and connect through avatars in digital environments. The current transformation has ignited the emergence of digital fashion, enabling users to outfit avatars in high-end attire, discover avant-garde looks, and participate in online fashion shows. Broad enterprises specialized in garment, fashion such as Gucci, Balenciaga, and Prada are welcoming the current new era by introducing digital

collections and providing unique NFT-based fashion items. As technology progresses, fashion within the metaverse is redefining how consumers perceive and interact with style. A variety of revolutionary technologies as illustrated in Figure 2 are advancing virtual fashion: In particular, 3D garment technology permits creators to design realistic digital apparel that avatars can don in video games or social VR environments. Second, an augmented reality attire allows consumers to preview how outfits appear before buying, minimizing return rates for online shopping. Third, AI-driven customization assists brands in suggesting ensembles tailored to personal preferences, enriching the shopping experience. Fourth, NFT fashion items provide users with ownership rights to unique digital clothing that can be exchanged or resold in virtual marketplaces (Chanda, 2026). With these advancements, garment, knitting industries and fashion are evolving into a more engaging, sustainable and accessible phenomenon in the digital realm.

Conclusion and suggestions.

Digital marketing technologies play really essential role in development the business processes of garment, knitting enterprises as well the field of fashion. The implementation of digital marketing tools such as Metaverse, 3D technologies, virtual reality and artificial reality closely associated with enhanced essential performance indicators for the field of garment, knitwear production and fashion, which encompass better engagement on social media, and a rise in customer acquisition rates. Furthermore, digital marketing tools contribute to the development of customer-focused strategies.

Garment, knitwear clothing, enterprises, textile corporations, and the fashion world significantly depend on digital marketing tools to enhance engagement rates with customers, and boost sales through various virtual channels in metaverse for garment and fashion by developing online retailing experiences and field. The clothing, knitting, and textile businesses that embrace these technologies generally encounter elevated engagement levels and heightened revenue. The adoption of such digital marketing innovations enables personalized experiences, rapid responses to trends, and direct interaction with customers.

References/Адабиётлар /Литература:

- Chanda, D. (2026). *Virtual Fashion Store Metaverse Development*. Available at: <https://ideausher.com/blog/virtual-fashion-store-metaverse-development/>.
- Diak, V., & Diak, A. (2025). *Smart textile as advanced human digital interface in metaverse*. *The Design Journal*, 28(3), 386–412. <https://doi.org/10.1080/14606925.2025.2452084>.
- Fakhry N., & Nasr, M. (2023). *Metaverse and Brand Experience in Fashion Digital Marketing*. *International Design Journal*. 13. 331-344. [10.21608/idj.2023.296273](https://doi.org/10.21608/idj.2023.296273).
- Growth Market Reports (2026). *Metaverse Fashion Market Research Report 2033*. Available at: <https://growthmarketreports.com/report/metaverse-fashion-market>.
- Mogaji, E., Dwivedi, Y. K., & Raman, R. (2023). *Fashion marketing in the metaverse*. *Journal of Global Fashion Marketing*, 1-16. <https://doi.org/10.1080/20932685.2023.2249483>.
- Nalbant, K. G., & Aydın, S. (2023). *Development and Transformation in Digital Marketing and Branding with Artificial Intelligence and Digital Technologies Dynamics in the Metaverse Universe*. *Journal of Metaverse*, 3(1), 9-18. <https://doi.org/10.57019/jmv.1148015>.
- Sharma, A., & Bansal, A. (2023). *Digital Marketing in the Metaverse: Beginning of a New Era in Product Promotion*. 10.4018/978-1-6684-8150-9.ch012.pp.163-175.