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Consumption Culture in the Metaverse Economy as New Communication Technologies (ChatGPT Analysing)

Emine KILIÇASLAN¹

Cennet ARMAN ZENGİ²

Duygu YÜCEL³

Abstract

The intense technological revolution in the field of communication and information technologies has naturally affected economic and social life. As the economy evolves towards Industry 4.0 and the metaverse universe, digital transformation has started to reshape production and consumption relations. Thanks to advanced technology and mass media, the world has shrunk, communication has intensified and access to information is realised with a single click. At the last point, the Metaverse appears as a digital virtual universe. The Metaverse world, which provides a parallel but virtual reality for human beings, can be considered as a twin world where we live with our avatars. However, the virtual twin world changes the known consumption, production and financing patterns of the economic system and creates a commodity universe economy, or in other words, the Metaverse economy. In this context, the aim of this systematic review is to understand the consumption of individuals in the new economic life that comes with the changing world order. Many global, popular and world giant brands include the Metaverse in their production methods. When the Metaverse fully enters our lives, a new economic life will be formed in our daily work, working life and social life thanks to the Metaverse tools we will use. Keeping up with advanced communication and information technologies will harmonise both the production and consumption structure of society with technological change.

In this context, the aim of this study is to draw attention to the culture of consumption in the Metaverse economy as new communication technologies. For this reason, the Metaverse economy and ChatGPT analysis method were chosen in the context of the originality of the subject. The research questions of the study are, will the Metaverse economy as a new communication technology increase the consumption culture? Will people shop with their avatars in virtual stores? The originality of the study stems from the fact that there is no study on this subject and ChatGPT analysis method has not been used. Its contribution to the literature will be in this context. A literature review was also conducted. ChatGPT analysis method was applied in the study. With the ChatGPT analysis method, Internet 1.0 consumption culture, social media consumption culture and metaverse period consumption culture change processes were compared.

Keywords: Ekonomi, Consumption, Consumer Culture, Metaverse Economics, New Communication Technologies

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¹ Assoc. Prof. Dr. Aydın Adnan Menderes University, Aydın Vocational School, Department of Audio Visual Media Production, Aydın, Türkiye, emine.kilicaslan@adu.edu.tr, ORCID:0000-0002-4226-9409

² Lecturer Dr. Aydın Adnan Menderes University , Köşk Vocational School Management and Organisation Department Local Governments Pr. Aydın, Türkiye, cennetarman@adu.edu.tr, ORCID:0000-0001-8693-3263

³ Assistant Professor Dr. Trakya University Edirne Social Sciences Vocational School Department of Accounting and Tax Applications, Edirne, Türkiye, erdoganduygu71@gmail.com , ORCID:0000-0002-2665-6732



2023, 12 (5), 2480-2498 | Araştırma Makalesi

Yeni İletişim Teknolojileri Olarak Metaverse Ekonomisinde Tüketim Kültürü (ChatGPT Analizi)

Emine KILIÇASLAN¹

Cennet ARMAN ZENGİ²

Duygu YÜCEL³

Öz

İletişim ve bilgi teknolojileri alanında yaşanan yoğun teknolojik devrim, doğal olarak ekonomik ve sosyal hayatı da etkilemiştir. Ekonomi Endüstri 4.0 ve metaverse evrene doğru evrilirken, dijital dönüşüm üretim ve tüketim ilişkilerini yeniden şekillendirmeye başlamıştır. İleri teknoloji ve kitle iletişim araçları sayesinde dünya küçülmüş, iletişim yoğunlaşmış ve bilgiye erişim tek tıkla gerçekleşmeye başlamıştır. Geline son noktada Metaverse dijital bir sanal evren olarak karşımıza çıkmaktadır. İnsanoğlu için paralel ama sanal bir gerçeklik sağlayan Metaverse dünyası, avatarlarımızla birlikte yaşadığımız bir ikiz dünya olarak düşünülebilir. Ancak sanal ikiz dünya, ekonomik sistemin bilinen tüketim, üretim ve finansman kalıplarını değiştirerek bir meta evren ekonomisi ya da başka bir deyişle Metaverse ekonomisi yaratmaktadır. Bu bağlamda bu sistematik derlemenin amacı, değişen dünya düzeniyle birlikte gelen yeni ekonomik yaşamda bireylerin tüketimlerini anlamaktır. Küresel, popüler ve dünya devi birçok marka Metaverse'i üretim yöntemlerine dahil etmektedir. Metaverse hayatımıza tam anlamıyla girdiğinde kullanacağımız Metaverse araçları sayesinde günlük işlerimizde, çalışma hayatımızda ve sosyal hayatımızda yeni bir ekonomik yaşam oluşacaktır. Gelişmiş iletişim ve bilgi teknolojilerine ayak uydurmak, toplumun hem üretim hem de tüketim yapısını teknolojik değişimle uyumlu hale getirecektir.

Bu bağlamda bu çalışmanın amacı yeni iletişim teknolojileri olarak Metaverse ekonomisinde tüketim kültürüne dikkat çekmektir. Bu nedenle konunun özgünlüğü bağlamında Metaverse ekonomisi ve ChatGPT analiz yöntemi seçilmiştir. Çalışmanın araştırma soruları, yeni bir iletişim teknolojisi olarak Metaverse ekonomisi tüketim kültürünü artıracak mı? İnsanlar sanal mağazalarda avatarları ile alışveriş yapacaklar mı? Çalışmanın özgünlüğü bu konuda yapılmış bir çalışmanın olmaması ve ChatGPT analiz yönteminin kullanılmamış olmasından kaynaklanmaktadır. Literatüre katkısı da bu bağlamda olacaktır. Ayrıca literatür taraması da yapılmıştır. Çalışmada, ChatGPT analiz yöntemi uygulanmıştır. ChatGPT analiz yöntemi ile İnternet 1.0 tüketim kültürü, sosyal medya tüketim kültürü ve metaverse dönemi tüketim kültürü değişim süreçleri karşılaştırılmıştır.

Anahtar Kelimeler: Ekonomik, Tüketim, Metaverse, Metaverse Ekonomisi, Yeni İletişim Teknolojileri.

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¹ Doç. Dr. Aydın Adnan Menderes Üniversitesi, Aydın Meslek Yüksekokulu Görsel, İşitsel Teknikler ve Medya Yapımcılığı Bölümü, Aydın, Türkiye, emine.kilicaslan@adu.edu.tr, ORCID:0000-0002-4226-9409

² Lecturer Dr. Aydın Adnan Menderes University, Köşk Vocational School Management and Organisation Department Local Governments Pr. Aydın, Türkiye, cennetarman@adu.edu.tr, ORCID:0000-0001-8693-3263

³ Assistant Professor Dr. Trakya University Edirne Social Sciences Vocational School Department of Accounting and Tax Applications, Edirne, Türkiye, erdoganduygu71@gmail.com, ORCID:0000-0002-2665-6732

Introduction

The continuation of technological developments without slowing down brings many changes both economically and socially. Ecological disruptions caused by climate change, global epidemics, wars and advanced technology have led to the redevelopment of the economic process. The new economy, which adapts to the process and emerges with technological development, continues its digital development in accordance with the era with technologies such as blockchain, cryptocurrency, crypto wallet, NFT, token, artificial intelligence, etc. Metaverse, on the other hand, prepares a suitable ground for economic development.

The term Metaverse, which first appeared in the science fiction novel *Snow Crash* written by Neal Stephenson (1992) in 1992, does not have a clear definition today. According to Lee et al. (2021), the Metaverse is expressed as a vision of a large, permanent, unified and shared internet invented to facilitate digital transformation. Thanks to the Internet and Web technologies, a virtual universe that blends physical and digital has been created. Weinberger (2022) defined the Metaverse as an interconnected network of ubiquitous virtual worlds that partially overlap with and enhance the physical world. According to Weinberger, these virtual worlds enable users, called 'avatars', to interact with each other and allow the content produced to be experienced and consumed in a synchronised and permanent environment. Ball (2022) defines the Metaverse as a network of massively scaled and interoperable, real-time generated 3D virtual worlds that can be experienced simultaneously and persistently by an effectively unlimited number of users, with an individual sense of presence and continuity of data such as identity, history, rights, objects, communication and payments.

In reality, the Metaverse world are virtual platforms that provide an imitative life based on three-dimensional (3D) interaction and communication, where daily life can be maintained and economic activities can be carried out through avatars. They imitate the actual world with advanced information communication technologies. Thanks to Extended Reality (XR), there is a technology that has managed to bring together real and virtual life and human and machine interaction. Different types of XR technology such as Virtual Reality (VR), Mixed Reality (MR) and Augmented Reality (AR) are used in the system. The Internet of Things (IoT), which undertakes the task of collecting, sending and acting on data, and Artificial Intelligence (AI) technologies, which are indispensable for the Metaverse, are among the most important supporters of the system (Yılmaz, 2022).

Metaverse technology can be expressed as taking the experience of "surfing the Web" to a more advanced stage by maintaining it on a virtual planet with its own economy, currency, property and land. This situation has emerged with the evolution of the Internet from Web 1.0 to Web 3.0.

The period between 1990 and 2000 is called Web 1.0. It refers to a system in which users cannot produce their own content, provides one-way information flow and consists of fixed content (Badgers, 2021). Between 2000 and 2010, the Web 2.0 period started and in this period, users started to apply creativity actions. With the period of reading, writing and creating, social platforms such as Tik Tok, Instagram, etc. were formed and users started to use these platforms (O'Neill, 2022). The period between 2010-2020 is referred to as the Web 3.0 era. There is an internet environment that is decentralised and even independent of central authority (BasuMallick, 2022). Algorithms, database systems,

blockchain applications, smart contracts, NFTs, personalised content are the most important elements of the system. In this decentralised system, users can create their own virtual worlds thanks to Metaverse technology. NFTs are the most basic digital elements of Metaverse (Metaverse Blog, 2022). NFT (Non-Fungible Token), which means one-of-a-kind unique asset (Creighton, 2023), are cryptographic assets (Wang, Li, Wang & Chen, 2021). It is also defined as a unique digital token stored on a blockchain that can be distinguished from other tokens. They cannot be divided and combined and therefore have a unique identity and value (Muthe, Sharma & Sri, 2020). According to Cha (2022), NFTs, which are a smart contract technology, are expressed as a digital asset based on blockchain technology, which enables each of the virtual goods to have a physical existence, which is irreplaceable and cannot be substituted in any way. Evans (2019) stated that NFTs are a digital title deed that proves the ownership of a crypto asset, and that blockchain technology will enable the ownership of digitally scarce assets without the need for any legal measures to prevent abuse. The difference of NFT, which is a unique digital representation of a commodity (Clemens, 2022), stems from its classification as a commodity that has a virtual existence in the virtual world and is owned by someone. Therefore, in the Metaverse, the concept of NFT is valued in the context that it corresponds to a commodity. NFTs, each of which represents a single original product content, provides ownership to it, is recorded on the blockchain with smart contracts, and thus gains uniqueness, can provide shopping and exchange, and due to these features, it becomes the main point of sale and guarantees commercial communication (Khalil, 2021; Dowling, 2022). Thanks to these unique features, NFTs have demonstrated that they can be applied in different industries, especially art, in the Metaverse.

The aforementioned concepts arising from advanced communication technologies are analysed in this study in the form of a systematic review in order to see the changes in the phenomenon of consumption in economic terms. The main purpose of this study is to illuminate the changes in the behaviour of individuals who consume in the Metaverse economy in line with the developments in the Metaverse world. The study is developed as an introduction, conceptual definitions, literature review, examination of the relationship between differences in communication-economic change-consumption and conclusion.

Studies on Metaverse in the Literature

There have been many studies on the concept and technology of metaverse in almost all disciplines. In order to reach the ones close to the subject of the article, a literature search was conducted for the years 2010-2023 through Web of Science, ProQuest, Scopus and Social Sciences Citation Index databases by using the search terms economic behaviour, consumption, metaverse, metaverse economics, new communication technologies, economic behaviour, consumption, metaverse economics, new communication technologies. However, there is no research on the changes in the consumption behaviour of the individual caused by the Metaverse economy, which is the main subject of the study. For this reason, studies that may be close to the research topic both in Turkey and in the world are compiled in the table below.

Table 1: Studies on Metaverse in the Literature

<p>Ali B. Mahmoud (2023)</p>	<p>The Metaverse and Web 3.0: Revolutionising Consumption and Communication for the Future The metaverse is a new frontier in consumption. It is a digital place where people can buy and consume anything they want, whenever they want. It is an oasis of freedom and choice, and it has the potential to change the way we live and work. The future of the metaverse is placed where data and technology merge to create an experience that's both unique and engaging.</p>
<p>Anton Korinek (2023)</p>	<p>Metaverse Economics Part 1: Creating Value in the Metaverse We humans are embedded in a physical world that imposes many limitations on us. Physical space is by its nature rivalrous, meaning that a given unit of space can only be inhabited by one person at a time. The resulting scarcity implies that many are excluded from the appealing physical attributes of certain desirable locations.</p>
<p>Akkaya and Yüce (2022)</p>	<p>In the study titled Evaluation Of Metaverse Contracts In Terms <i>Of Tax Law</i>, it is emphasised that the problem of taxation of economic transactions will also be experienced by Metaverse users. They emphasise that the economic transactions in the Metaverse are likely to be of the same type as the tax liabilities in the real world and that users are expected to face this problem.</p>
<p>Xusen_Cheng_Shuang_Zhang_S hixuan_Fu_ Wanxin_Liu_Chong_Guan_Jian_ Mou_Qiongwei_Ye (2022)</p>	<p>Exploring the metaverse in the digital economy: an overview and research framework Metaverse is a virtual application spawned by digital technology that is becoming increasingly relevant to our lives. However, for the opportunities created and challenges posed by the metaverse, its important elements and future evolution trend remain largely unknown. Thus, this paper aims to understand the current status of metaverse research and its future research directions.</p>
<p>Çelikkol (2022)</p>	<p>The Evaluation Of The Metaverse World In Terms of Consumer Purchasing Behaviours In the article, it is stated that individuals who consume today adapt to the Metaverse world very quickly and show appropriate purchasing behaviour accordingly.</p>

<p>Katherine N. Cotter, Damien L. Crone vd.</p>	<p>Examining The Flourishing Impacts of Repeated Visits To A Virtual Art Museum And The Role Of Immersion Based on the increase in digital interaction in the field of art, the effects of repeated and repeated visits of the virtual art gallery on global development scales were examined. For this, 687 participants were subjected to an experiment consisting of 4 sessions and 9 experimental conditions in a period of 4 errors, and examined with various imaging instructions. However, it was observed that there was no change on global development scales, and ideas were put forward that allow us to virtually examine the effects of visual art on development and to determine the qualities of certain works of art that can offer experiences favourable to development.</p>
<p>Newell (2022)</p>	<p>In this study title Customer Engagement And Data Visualization Tools, Ambient Sound Recognition Software, And Deep Learning-Based Sensing Technologies In The Metaverse Economy, He conducted a systematic literature study by synthesising the Metaverse brand and immersive virtual shopping experiences. In the study, previous findings showing that immersive shopping experiences can be achieved through sensory data mining techniques and machine vision algorithms in the virtual retail market were collected. The question of whether interactive brand experiences in virtual marketplaces can improve consumers' sensitivity and behaviour is sought to be answered.</p>
<p>Okkay (2022)</p>	<p>In the study titled Metaverse In The Context Of Communication Theories A detailed examination was made using theories such as algorithmicisation, extended reality, augmented reality, virtual reality, globalisation, popular culture, culture industry, consumer society, digitalisation, convergence, network society, surveillance, digital divide, uses and gratifications, sowing theory, spiral of silence, agenda setting, computational propaganda, disinformation, privacy, political economy, hyperreality, alienation within the framework of communication theories.</p>
<p>Popescu et al. (2022)</p>	<p>Augmented Reality Shopping Experiences, Retail Business Analytics, And Machine Vision Algorithms In The Virtual Economy Of The Metaverse Augmented reality shopping experiences, retail business analytics, and machine vision algorithms" in the Metaverse economy. It contributed to the literature on customer interaction on live shopping platforms through virtual markets and data governance in the Metaverse economy.</p>

<p>Soares et al. (2015)</p>	<p>In the study title <i>A Educação Do Surdo No Brasil</i> the authors refer to the Metaverse as the second life of the consumer. In their study, in which they aim to reveal the factors affecting consumers' purchasing experiences and preferences, they conclude that they experience the same purchasing feeling in the Metaverse world as in real life, and sometimes even more exciting.</p>
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Metaverse Economy

With the Metaverse application, digital economic development has gone one step further and created a Metaverse economy. New employment structures, working conditions, occupational groups, investment strategies, areas and opportunities have started to emerge in the system. All sector representatives and companies have started to take their place in the Metaverse economy.

The Metaverse system, which provides virtual reality, augmented reality and mixed reality, can be considered as online shopping, digital marketing, gaming, content creation, social media, conferences, fairs, exhibitions and other events. From an industrial perspective, the Metaverse system can be divided into Banking and Financial Institutions (BFSI), retail, media and entertainment, education, aviation and defence, automotive and others (Valuates Reports, 2022).

Since content can be produced on demand without any restrictions in the Metaverse world, the Metaverse economy is likely to be a demand-driven economy. Changes in consumer preferences, especially Generation Z, and the demand for products, services, working style and lifestyle determine the Metaverse world (Momtaz, 2022). Web 3.0 Metaverse virtual worlds (Grider & Maximo, 2021) actually have real-world value for both those who create crypto-cloud economies, those who create content, and those who use them.

The Metaverse economy is free from economic scarcity, based purely on imitation, with real value reflected in virtual assets. In fact, the Metaverse economy depends on and is affected by the real economy. The buying and selling of a commodity, its price, the deposit and withdrawal of money is a function of the real economy. In order to buy Metaverse goods, it is necessary to use currency. These virtual assets can only be realised in the real world when they are cashed out in any fixed currency. Economic actors have to recognise that, ultimately, virtual commodity trading activities are linked to the real economy. There are also fluctuations in the virtual economy. The market in the metaverse can be driven by managing human emotions and persuasion rather than economic scarcity. If the persuasion process continues, supply and demand can be bent accordingly (Williams, 2022).

In the Metaverse economy, we will use our 'avatars' for our consumption such as work, entertainment, travelling, shopping, etc. In other words, we will live with our avatars. The economy of the future will create new properties, property types and property rights, new avatars and new ways of owning them (Belk, Humayun, & Brouard, 2022).

When we look at the old applications, we only come across computer games. However,

the situation is quite different today. Now, not only the gaming industry, but all economic products and services from A to Z can become Metaverse product content. Billions of people will meet Metaverse applications in the future. Virtual and real will be intertwined, people will buy digital products and digital content, do the jobs they are happy with (virtually), buy virtual land, virtual houses, virtual cars, virtual clothes (for their own avatars), virtual artworks. But none of these will be real experiences, nor will they need to be. Nor will content creators be expected to have real experience and skills. Everyone will have a digital identity. Everyone can live wherever they want in cyberspace. Everyone can marry whoever they want. No need for any physical presence. A virtual analogue of the real world. As the process works in this way, economic relations will evolve along with social relations. The economy will grow and the volume of transactions worldwide will increase day by day.

The key companies dominating the global Metaverse market are Alibaba Group Holding Limited, ByteDance Ltd, Facebook, Inc., Huawei Technologies Co. Ltd, Nextech AR Solutions Inc, NVIDIA Corporation, Roblox Corporation, Shenzhen Zqgame Co, Tencent and Unity Technologies (Valuates Reports, 2022).

We can only live in the virtual world thanks to Metaverse platforms. The first platform is Decentraland, which was established in 2015 based on Ethereum. Somnium Space2, Sandbox, Tencent, Alibaba Group, Baiud, Microsoft, Meta, Google, Apple, Amazon are among other examples (Soares, 2019).

Thanks to its different and unique characteristics, the Metaverse creates attractive opportunities for many companies and factories operating in different industries. It has already started to change sectors such as art, fashion, entertainment, interior design, architecture, real estate, tourism, etc. Companies now tend to create 3D models of their own branches (Bielczyk, 2022, 8 Jun). 3D models can enable job applicants to have virtual experiences, thus familiarising them with the company. In fact, by differentiating recruitment systems, it will be possible to conduct interviews through our avatars instead of physically going to the workplace for job interviews in the future.

NFTs have also started to be included in the metaverse world and serve as a bridge to the digital world. Thanks to NFTs in the Metaverse, applications such as collections, art museums, art galleries, fairs in the art world are among the most prominent ones. The Gucci brand has created a Gucci Collection by developing different fashion designs for Roblox players. The collection was offered for sale as NFT so that players can buy it for their own avatars. Coca-Cola made a similar application and offered red coats with logo for consumers' own avatars for sale as NFT on the Decentraland platform (Albayrak, 2021).

Brands such as Hyundai, Gucci, H&M, Nike, Nike, Vans, Zara have started to open stores in the Metaverse, and many large companies such as Netflix, Warner Bros, Disney, Pictures and BBC Studios have also created playgrounds. The music world was also included in the system. Warner Music Group and Sandbox have started to build a concert-oriented theme park on the Metaverse platform (STMThinkTech, 2022).

How much market share does the Metaverse have? According to the report titled Opportunities in The Metaverse (JP Morgan, 2022) published by JP Morgan in 2022, the amount spent on virtual goods in the world every year reaches 54 million US dollars. 60

billion messages are sent to the Roblox platform every day. The global Metaverse market totalled USD 41.1 billion in 2021. Between 2022 and 2028, this share is estimated to grow at a compound annual growth rate (CAGR) of 39% and reach USD 412 billion (Yeolekar, 2022). The market share of NFTs for 2021 was realised as USD 41 billion (Conti, & Schmidt, 2022). According to IntoTheBlock (2023) data, the global trade volume of NFTs increased from USD 16.94 billion on 1 January 2022 to USD 54.58 billion on 17 April. As of January 2023, 1,355,376 NFT transactions increased by 16.39%, with sales volume reaching USD 256,692,979.73. Includes 1,355,376 NFT transactions (Redman, 2023).

Consumption Culture in the Metaverse Economy

In the new virtual universe that offers many new experiences to online users, global companies have had to learn and use high technology in order to reach and meet consumer expectations. The new economic order or, in other words, the world of commodity economy has created a need for new technological products with the advanced technology tools it uses. New occupational groups created by new markets, new sources of employment, increasing cryptocurrency exchanges, NFT content, virtual industries and factories have naturally brought along the most basic consumption changes.

The development of information technologies in the market pushes consumers' benefit-oriented expectations of goods and services to new experiences (Schmitt, 1999). In the metaverse world, it is thought that it is important to make sense of the avatars chosen to understand the consumer. In this case, some assumptions are formed (El Kamel, 2014):

- First assumption: In the metaverse world, the consumer finds his/her self,
- The second assumption: that the consumer's avatar is a reflection of the role they have chosen in their virtual world,
- The third assumption: the consumer recognises that the avatar they choose is a reflection of their own motivation,
- The fourth assumption is that the consumer recognises that the avatar they choose is a reflection of their personality.

Individuals who consume in the metaverse world should not always be thought of as individuals who spend money on their avatars. These individuals consist of individuals who buy planets, start businesses, buy land, watch concerts, visit museums, sometimes even travel, and can exist in both worlds at the same time. Consumers in this system have the experience of buying and shopping with tokens that replace digital money with NFT, which cannot be exchanged. For this reason, it customises the individual is a part of the world of materiality. It is seen that these and many other developments in the metaverse world have changed the social, economic and political behaviours of individuals.

Communication and Consumption Relationship in The Metaverse world, which is an alternative to the physical world, is defined as a hypothetical iteration of the internet that supports the three-dimensional virtual environment with virtual and augmented reality tools. With the Metaverse concept, fields such as economy, politics, art and communication have entered the process of adapting to digitalisation. The metaverse world seems to enter every aspect of social life other than entertainment or games. This virtual universe enables human cognition to participate in a virtual environment with

computers, android and 3D devices.

The Metaverse world offers people virtual and augmented reality with fictions created using high-level technology. These fictions turn many visuals into commercial commodities. These commoditised products find buyers through communication established on a three-dimensional plane with avatars of real people in the Metaverse world. In the visual virtual communication environment, people can switch between their avatars and digital ones. People who enter this world that offers endless virtual possibilities through certain tools can shop or socialise, work, learn, design and trade in virtual worlds (Lin, Wan, Gan, Chen & Chao, 2022). Sociable people start to experience a different dimension of the communication they establish in the real world in the virtual world. Metaverse is a post-reality universe that combines physical reality with digital virtuality, which is a continuous and permanent, multi-user environment. It is based on the convergence of technologies that enable multisensory interactions with virtual environments such as virtual reality and augmented reality, digital objects and people (Mystakidis, 2022).

Metaverse offers artists a wide range of communication opportunities through NFTs. All NFT collections sold in the Metaverse world include all commodities that are produced virtually and have property rights on them. In this context, digital art has a very important place. Many artists in Turkey and around the world convert their products into NFTs and offer them for sale digitally. Wherever you are in the world, you can log in to any virtual world opened using Metaverse technology with your avatars, communicate as you wish, and purchase NFT product content in digital art galleries, fairs, exhibitions, etc. In this way, NFTs using blockchain technology have succeeded in giving a new impetus to economic life by being applied to the digital and virtual economy.

Digital art is a new art form that combines digital technology and artistic aesthetics. Digital art is versatile and has an artistic expression that cannot be compared with other forms of technology (Luo, 2022). Crypto art is usually digital artwork. Blockchain technology, while commonly associated with cryptocurrencies, has shown the potential to bring radical structural changes to the arts and creative industries (Whitaker, 2019). Using blockchain technology ensures that networks cannot be hacked, meaning that it is virtually impossible to reproduce or directly duplicate pieces without authorisation. Unlike other digital art forms, crypto art cannot be reproduced without the original file. This uniqueness makes it a valuable investment for those who want to protect their artworks.

Symbols are very important in the art platform, which we can call a form of communication between the individual and the outside world or between the individual and his/her inner world. In the metaverse world, art will again send its messages through symbols. Its relationship with the receiver will be through the meaning relationship established in the context of symbolic communication.

Virtual markets and virtual platforms provide a secure digital environment with blockchain technology, enabling the trade of all kinds of commodities, especially digital art, and thus accelerating the economy. As a result, it is usual for individuals to develop new communication methods and consumption behaviours by adapting to this technological process.

Relationship between Communication and Consumption Culture in the Metaverse

The Metaverse world, which is an alternative to the physical world, is defined as a hypothetical iteration of the internet that supports the three-dimensional virtual environment with virtual and augmented reality tools. With the Metaverse concept, fields such as economy, politics, art and communication have entered the process of adapting to digitalisation. The metaverse world seems to enter every aspect of social life except entertainment or games. This virtual universe enables human cognition to participate in a virtual environment with computers, android and 3D devices.

The Metaverse world offers people virtual and augmented reality with fictions created using high-level technology. These fictions transform many visuals into commercial commodities. These commoditised products find buyers through communication established on a three-dimensional plane with avatars of real people in the Metaverse world. In the visual virtual communication environment, people can switch between their avatars and digital ones. People who enter this world that offers endless virtual possibilities through certain tools can shop or socialise, work, learn, design and trade in virtual worlds (Lin, Wan, Gan, Chen & Chao, 2022). Sociable people start to experience a different dimension of the communication they establish in the real world in the virtual world. Metaverse is a post-reality universe that combines physical reality with digital virtuality, which is a continuous and permanent, multi-user environment. It is based on the convergence of technologies that enable multisensory interactions with virtual environments such as virtual reality and augmented reality, digital objects and people (Mystakidis, 2022).

Metaverse offers artists a wide range of communication opportunities through NFTs. All NFT collections sold in the Metaverse world include all commodities that are produced virtually and have property rights on them. In this context, digital art has a very important place. Many artists in Turkey and around the world convert their products into NFTs and offer them for sale digitally. Wherever you are in the world, you can log in to any virtual world opened using Metaverse technology with your avatars, communicate as you wish, and purchase NFT product content in digital art galleries, fairs, exhibitions, etc. In this way, NFTs using blockchain technology have managed to give a new impetus to economic life by being applied to the digital and virtual economy.

Digital art is a new art form that combines digital technology and artistic aesthetics. Digital art is versatile and has an artistic expression that cannot be compared with other forms of technology (Luo, 2022). Crypto art is usually digital artwork. Blockchain technology, while commonly associated with cryptocurrencies, has shown the potential to bring radical structural changes to the arts and creative industries (Whitaker, 2019). Using blockchain technology ensures that networks cannot be hacked, meaning that it is virtually impossible to reproduce or directly duplicate pieces without authorisation. Unlike other digital art forms, crypto art cannot be reproduced without the original file. This uniqueness makes it a valuable investment for those who want to protect their artworks.

Symbols are very important in the art platform, which we can call a form of communication between the individual and the outside world or between the individual and his/her inner world. In the metaverse world, art will again send its messages through symbols. Its relationship with the receiver will be through the meaning relationship

established in the context of symbolic communication.

Virtual markets and virtual platforms provide a secure digital environment with blockchain technology, enabling the trade of all kinds of commodities, especially digital art, and thus accelerating the economy. As a result, it is usual for individuals to develop new communication methods and consumption behaviours by adapting to this technological process.

ChatGPT Analysis Method

ChatGPT analysis method was used in the research. In this analysis method, the ChatGPT programme was asked about the consumption habits of the Internet 1.0 period. Then the consumption habits of the social media period and finally the consumption habits of the metaverse period were asked and comparisons were made about the changing consumption culture of each period. These comparisons are shown in the table below.

Table 2: ChatGPT Analysis

Internet 1.0 Era Consumption Culture	Social Media and Consumption Culture	Metaverse and . Consumption Culture
The Internet is Slow	There is brand and product promotion.	Virtual purchasing and consumption experience is common.
Websites are simple. They are not complicated.	Consumer reviews and influencers are becoming activ	They can own digital products and virtual property in virtual worlds. They can trade with virtual currencies.
It does not work for commercial purposes.	E commerce has started to develop and become widespread.	The Metaverse offers a wide market space.
Information sharing is mainly used.	Social pressure and trend fashion have started.	Consumption of metaverse individuals can influence and change their habits.
There was no social media, blogs or video sharing.	Personalised advertising has developed.	Luxury goods created and displayed in virtual worlds can become a means of expressing social status or self-expression.

The early stages of E Commerce are beginning. Shopping was done in physical stores.	The digital shopping era has begun.	The Metaverse can further emphasise consumer culture and create a competitive consumption environment.
Internet use is limited. Consumer culture is not developed.	Internet use and digital shopping have become widespread.	People can use avatars to shop in virtual stores with virtual money.

In this study, with the ChatGPT analysis method, the changing consumption culture and purchasing habits in the process from the introduction of the Internet until today are shown in the table above.

Internet 1.0 Era Consumption Culture

During the internet technology period from the 1990s to the 2000s, there was no development in the consumption culture as the use was low. Due to the newness of the Internet, there were infrastructure weaknesses. Uploading or downloading content took a long time. Websites were quite simple and not interactive. Text-based content was available. The Internet was functional for information use, not for commercial purposes. In the Internet 1.0 period, content production was mostly owned by experts and companies. Internet users were mostly limited to consuming content. Today's user-orientated content production tools such as social media, blogs or video sharing platforms had not yet emerged. Early stages of e-commerce: In the Internet 1.0 era, e-commerce was not as widespread as it is today. Internet users often turned to physical stores for shopping. There were some concerns about the security and convenience of online shopping and consumer habits were therefore limited. In the Internet 1.0 era, access to the Internet was not as widespread as it is today. Households generally used dial-up connections and mobile internet was not yet widespread. Therefore, internet usage was more limited and consumer culture was shaped accordingly.

Social Media and Consumption Culture

Social media has had a significant impact on consumption culture. Firstly, brand and product promotions have started. Social media offers a powerful platform for brands and companies to promote their products and services. Through advertisements, sponsored content, influencer marketing and other methods, brands reach a wide audience using social media. Users can also discover brands' products on these platforms and influence their purchasing decisions.

For consumer reviews and influencers, social media provides spaces where users can share their comments about products and services. Consumer reviews and influencer marketing help people make decisions when shopping. Users can evaluate products based on other users' experiences and shape their purchasing decisions based on this information.

E-commerce has started to develop. Social media platforms have facilitated the

consumption experience by offering direct shopping functionality. Users can discover, purchase and even pay for products through the platforms. This has increased the habit of consumers to shop online and changed traditional retail shopping habits.

Social pressure and trends have started to increase. While social media enables certain products or brands to gain popularity, it also paves the way for the disappearance of others. Social pressure causes people to tend to follow and buy products or brands that are popular on social media platforms. Trends can spread rapidly and influence consumer behaviour through viral content or influencers.

Personalised advertising has started to develop. Social media platforms offer personalised ads based on users' interests and preferences. This increases the likelihood that consumers will be exposed to products or services they are more interested in. Personalised advertising can influence purchasing trends and make it easier for consumers to discover the products they want.

The era of digital shopping has begun. Stores digitally advertise and sell products on the internet and social media platforms.

Metaverse and Consumption Culture

Metaverse is defined as a large virtual space where virtual and real worlds merge and users can interact and experience. Consumption culture is a cultural field that expresses individuals' demands for goods and services and includes purchasing habits and consumption behaviours. In this context, it is seen that the metaverse offers many opportunities in terms of its effects on consumption culture.

The metaverse offers users a purchasing and consumption experience in virtual worlds. Users can buy digital products in virtual worlds, own virtual property and trade with virtual currencies. With Metaverse, the boundaries of traditional trade are overcome and a wider market area is offered. The Metaverse can also influence and change the consumption habits of individuals. Luxury goods created and displayed in virtual worlds can become a means of expressing social status or self-expression. This can further emphasise the culture of consumption and create a competitive consumption environment.

Conclusion

The metaverse, which is the latest dimension in communication technology, seems to create evolutionary processes in the field of economy. As it is known, economic relations have a very important place in the evolution of societies. Economic relations determine political and cultural relations. The First Industrial Revolution was based on steam power economy. The peasants who worked in factories powered by steam power migrated to the cities and started to work as labourers. In this process, newspapers representing communication technology have been effective in the formation of new social classes by establishing ideological cognition. In this context, with the newly established free market economy and a new political system, a new social structure consisting of bourgeois and labourers began to form rapidly.

The capitalist economic system structure, which discovered the importance of developments in the field of science and technology, entered the industry 2.0 electrical production process with the discovery of electric waves. Radio and then television

technology as a communication tool representing this process fed the social structure with the data of the political system in terms of the continuation of the production and consumption relations of the new process. As can be seen, communication technologies serve as the most important tool in the continuation of production-consumption and market relations in the free market economy. In particular, they play a major role in balancing the consumption and market relations of the system.

With the discovery of electronic infrastructure, the industry 3.0 period has entered. This process has enabled production relations to continue with electronic infrastructure. The new communication technology of the electronic production process has been computers. While computers play a role in new production relations, they have also been the beginning of the new communication process. Along with the computerised production process, the internet, one of the new communication technologies, was first used for intelligence purposes in military fields and then between banks. The use of internet technology by people on the social plane has brought a new dimension to production-consumption and market relations. The introduction of social media into human life in the 2000s brought the economy face to face with a new technology. The widespread use of social media as a new communication tool has brought producers and consumers together on this platform.

The metaverse world, which is the latest dimension in communication technologies in the process of Industry 4.0, is an alternative universe that attracts the attention of everyone from 7 to 70. Metaverse applications create a virtual economy and this system is actually It should be recognised that it is not different from or dependent on the real economy. The Metaverse economy creates numerous opportunities that attract the attention of investors, finance, business, the arts and creates new industries with high transaction volumes. However, establishing a business in the Metaverse and ensuring sustainability will require expertise, knowledge, creativity and competition.

Technological development, advanced communication and information systems, and the new Metaverse economy formed accordingly continue to develop. In this new process, creativity, innovation, human-smart machine interaction revitalise the production sectors and lead to new consumer demands. Accelerating economic momentum will contribute to the growth of national economies and thus increase social welfare.

As the last communication technology developed with the Industry 4.0 process, painful days await the production-consumption relationship in the Metaverse world. Because humans are social and biological beings. With Industry 4.0, production using artificial intelligence and the use of intelligent robots reset the labour power of human beings. In this context, it seems to be contrary to the philosophy of existence that man, as a social being, tries to exist with a virtual twin and enters into a virtual production-consumption relationship.

The study was conducted as a literature review. As a result of the research, it was concluded that no study has been conducted in the context of Metaverse economy and consumption culture. Therefore, the study has achieved its purpose.

As a result, as can be seen in the ChatGPT Analysis method, various steps are taken in the context of influencing the purchasing culture of consumption in the metaverse world. many stores take their place in the metaverse world and allow their customers to buy and

shop through avatars. As it is known, consumption culture is a cultural field that expresses individuals' demands for goods and services and includes purchasing habits and consumption behaviours. In this context, it is seen that the metaverse offers many opportunities in terms of its effects on consumption culture.

The metaverse offers its users a purchasing and consumption experience in virtual worlds. Users can buy digital products, own virtual property and trade with virtual currencies in virtual worlds. With Metaverse, the boundaries of traditional trade are overcome and a wider market area is offered. The Metaverse can also influence and change the consumption habits of individuals. Luxury goods created and displayed in virtual worlds can become a means of social status or self-expression. This may further emphasise the culture of consumption and create a competitive consumption environment.

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