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The Taxational Dimension of NFTs

Orçun AVCI [1]

Abstract

Today, the dynamic progress of technology has revealed many effects both individually and socially. Advances in technology and widespread use of the internet have pushed individuals, companies, and countries along with them to keep up with innovations and digital transformation. Blockchain technology has also been one of these areas. The technology in question is used in many industries, including the arts and banking. Blockchain technology has begun to generate value in games, including Non-Fungible Tokens (NFTs). However, a new digital token has recently emerged and has taken its place in the modern financial world. With the growth of the digital economy day by day, the interest in NFTs is also increasing. NFTs - as cryptographic assets - are immutable digital certificates in which ownership or other rights are stored on a blockchain. An NFT is a cryptographic asset that has been authenticated and exchanged using blockchain technology. Due to the anonymous nature of the blockchain, everyone can see and follow all trading processes, including the birth (issuance) of each NFT, by account numbers. However, there are some problems with the taxation of NFTs. The aim of this study is to offer various solutions for the problems that arise in the taxation of NFT earnings. There is a gap in the literature in this regard. Accordingly, the existing legal gap is tried to be filled by evaluating the application examples both in terms of developed countries and Türkiye. As a result of the study, it would be appropriate to say that comprehensive tax legislation on the subject can be created in many countries led by developed countries in the coming years. When the legislative preparations and taxation studies on NFTs, which will be one of the important actors of the metaverse, are completed, the virtual world door for humanity will be fully opened. However, considering the possibility that taxpayers can easily move to countries that are tax havens, it is necessary to be very sensitive about the taxation of this area. First of all, in order for taxation to be done correctly, the base must be determined correctly. Therefore, while doing all this, it is of great importance that tax liabilities are compatible with other countries. Thus, taxpayers' voluntary compliance will be ensured, and the gains to be obtained from NFTs will be taxed.

Keywords: Digital Asset Earnings, Blockchain, Cryptocurrency, NFT, Taxation

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NFT'lerin Vergisel Boyutu

Orçun AVCI[1]

Öz

Günümüzde teknolojinin dinamik şekilde ilerleyişi hem bireysel hem de toplumsal alanda birçok etki ortaya çıkarmıştır. Teknolojideki ilerlemeler ve internet kullanımının yaygınlaşması bireyleri, şirketleri ve bunlarla beraber ülkeleri, yeniliklere ayak uydurmaya ve dijital dönüşüme itmiştir. Blok zincir teknolojisi de bu alanlardan birisi olmuştur. Söz konusu teknoloji sanat ve bankacılık da dâhil olmak üzere birçok sektörde kullanılmaktadır. Blok zincir teknolojisi, değiştirilemez jetonlar (NFT'ler) dâhil olmak üzere oyunlarda değer üretmeye başlamıştır. Bununla birlikte son zamanlarda yeni bir dijital jeton ortaya çıkmış ve modern finans dünyasında yerini almıştır. Dijital ekonominin her geçen gün büyümesiyle birlikte NFT'lere olan ilgi de artmaktadır. NFT -kriptografik varlıklar olarak- sahiplik veya diğer hakların bir blok zincirinde depolandığı değişmez dijital sertifikalardır. Bir NFT, blok zincir teknolojisi kullanılarak kimliği doğrulanmış ve değiştirilen bir kriptografik varlıktır. Blok zincirin anonim yapısı gereği her NFT'nin doğumu (ihracı) dâhil tüm alım satım süreçlerini hesap numaraları itibariyle herkes görebilir ve takip edebilir. Ancak NFT'lerin vergilendirilmesi konusunda birtakım sorunlar ortaya çıkmaktadır. Bu çalışmanın amacı NFT kazançlarının vergilendirilmesinde ortaya çıkan sorunlara ilişkin çeşitli çözüm önerileri sunmaktır. Literatürde bu hususta bir boşluk olduğu göze çarpmaktadır. Buna göre gerek gelişmiş ülkeler gerekse de Türkiye açısından uygulama örnekleri değerlendirilerek mevcut hukuki boşluk doldurulmaya çalışılmaktadır. Çalışmanın sonucunda önümüzdeki yıllar içerisinde gelişmiş ülkelerin başını çektiği birçok ülkede konuya ilişkin kapsamlı vergi mevzuatının oluşturulabileceğini söylemek yerinde olacaktır. Metaverse'ün önemli aktörlerinden biri olacak NFT'ler hakkında yapılan mevzuat hazırlıkları ve vergilendirme çalışmaları tamamlandığında insanlık için sanal dünya kapısı tam manasıyla aralanmış olacaktır. Ancak mükelleflerin kolay bir şekilde vergi cenneti olan ülkelere kayabilme olasılığı da düşünülerek bu alanın vergilendirilmesi konusunda oldukça hassas davranılmalıdır. Zira öncelikle vergilendirmenin doğru yapılabilmesi adına, matrahın doğru tespit edilmesi gerekmektedir. Dolayısıyla tüm bunlar yapılırken vergisel yükümlülüklerin diğer ülkelerle uyumlu olması da büyük önem arz etmektedir. Böylelikle mükelleflerin vergiye gönüllü uyumu sağlanarak NFT'ler üzerinden elde edilecek kazançlar vergilendirilmiş olacaktır.

Anahtar Kelimeler: Dijital Varlık Kazançları, Blok Zincir, Kripto Para, NFT, Vergileme

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Introduction

NFTs are the next evolution of cryptocurrencies. The difference between NFTs and other cryptocurrencies is that they are unique digital assets. However, NFT, a private digital asset, cannot be exchanged for any other token as it has no analogues. Its intrinsic value is determined by its producer or investor. NFT is a technology that is still developing and where it will lead and what kind of innovations it will bring is not exactly clear. However, despite all this, there are some advantages that it provides in the light of available information. Among these advantages are that it functions as a digital title deed, is also considered as an investment tool, bears the artist's signature, and gives the artist the opportunity to copyright. It would be more accurate to consider NFTs as a digital art product. In addition, in the transfer of NFTs, the transfer of the product and the payment of the price to the product owner are carried out automatically with the smart contract system. NFTs also contain proof of many file formats such as images, audio, short video, and documents. The digital nature of the works allows all types of users to purchase them from all over the world. Therefore, as the demand for NFTs increases day by day, the supply also increases. This increases accessibility for investors and art lovers. Selling more works expands the ecosystem. This is what is called the new order. All the issues mentioned in this context clearly reveal the importance of NFTs.

Although the future of NFTs is uncertain, it is certain that they will be in our lives for a while. However, it is not possible to say that NFTs, which are one of the achievements of the digital age, have yet to be adequately understood by the states. On the other hand, if an earnings is made from an activity wherever it is, a reasonable justification for the state authority to show its legitimate sovereign power in this area. Therefore, states want to tax NFT. However, while taxing, there are deficiencies in which income elements that can be obtained from NFTs can be included in accordance with the current tax understanding and how tax can be collected. This study especially aims to shed light on this issue. The limited number of studies on NFT increases the importance of the subject. At this point, it is thought that the study will contribute to the literature in terms of showing what countries can do about the taxation of NFTs and how this delicate balance can be achieved in terms of both taxpayers and tax administration. In this context, first of all, the conceptual framework is explained in the study. Then, the emergence process of NFTs, legal structure and regulations, taxation of NFTs in the world and in Türkiye took place. Finally, current problems related to the taxation of NFT are evaluated.

Looking at similar studies done before, Gazioğlu and Özen (2022) mentioned the necessary legal regulations for taxation and control of this technology in the light of statistical information on NFTs in their studies. In addition, some predictions were made about the future of NFT in the study. Gediz Oral (2022), in her study, classified NFTs and evaluated their taxation dimension by associating them with cryptocurrencies in a general perspective. Houser and Holden (2022), considering the opportunities offered by NFTs, discussed how laws and policies regarding NFTs should progress. İçten (2022) discussed NFTs in particular with the value-added tax and income tax dimension. Kurt (2022) evaluated NFTs in terms of Turkish tax laws in his study. Nguyen (2022), discussed NFTs as a tool for tax evasion within the scope of crypto assets and possible solutions for the American government to solve the problem.

In this study, unlike previous studies, NFTs have been evaluated in terms of both their legal structures, regulations, and taxation in the world and in Türkiye. At the same time, current tax problems are discussed under a separate heading in the study. In this context, in this study, it is aimed to present the current deficiencies by considering various legal regulations in countries that can set an example for the world in NFT, and to propose solutions in order to make the failing aspects more effective and functional.

Conceptual Framework

The rapid development of technology in the field of digital trade has created convenience impact on people's mobility and fertile life. One of the latest technologies is the existence of blockchain, which is a database of transaction records distributed, verified, and managed by the worldwide network of computers. Blockchain is a system underlying the development of cryptocurrency using a method of creating virtual currencies that provide secure ownership and transaction using a cryptographic system (Dwitanti and Simatupang, 2022, p. 255). Thus, the modern financial world has begun to shift from traditional wallets using cryptocurrencies, a globally accepted virtual currency, to digital wallets (Houser and Holden, 2022, p. 896). Cryptocurrencies are virtual, coded, and decentralized exchanges that operate without a central authority to manage and maintain their value. They are highly resistant to imitation. Cryptocurrencies find a wide range of uses such as stocks, valuables, daily common goods and services. No central authority issues cryptocurrencies. As a result, government manipulation and regulation does not occur. At the same time, thanks to blockchain technology, cryptocurrencies are also decentralized (Nguyen, 2022, p. 323-324).

The concept of NFT has started to appear frequently today. NFT represents a value in blockchain infrastructure (Kükrer, 2023, p. 151; Öncel, 2022, p. 100). It is the protection of the property of digital assets such as pictures, videos, photos, music, and virtual creations with smart contracts by recording them in the blockchain infrastructure. NFTs, which protect the property of the work, put an end to injustice by giving the copyright to the owner of the work. With NFT, which is an alternative to the traditional order, a democratic and accessible platform is created, while the ownership and sale of the work is guaranteed. NFTs can be any type of digital asset. The most common types are collectibles and artworks, virtual world objects, digitized characters from sports, and other games. With NFT, ownership of a digital asset is usually recorded on the blockchain on the Ethereum infrastructure (Bonolis et al., 2022, p. 8; Dowling, 2022; Mazur, 2021, p. 6; Nguyen, 2022, p. 325; Ustaoğlu et al., 2022, p. 1803). NFT is a part of the digital asset that has a strong relationship with the blockchain, which underpins cryptocurrency such as Ethereum or Bitcoin. Basically, NFT can be understood as a digital entity that represents various types of tangible or intangible objects that are unique. NFT is a certificate of authenticity on the blockchain issued by the creator of the digital asset (Arıkan, 2022, p. 331; Dwitanti and Simatupang, 2022, p. 255-256). So, an NFT is a unique code stored on the blockchain that allows to verify the origin, custody, and transfer history for a particular piece of digital art. It gives uniqueness to a digital object and creates a layer of ownership and authenticity for transactions involving digital art (Dong et al., 2015, p. 1621). Because each NFT is unique, one NFT cannot be equal to another. However, NFTs can be combined to produce another unique NFT (Nguyen, 2022, p. 324; Scamacci, 2021, p. 83).

If we consider in more detail what a fungible token is, it will also be easier to understand the non-fungible token. According to this (Akbulak, 2022):

- Fungibility: “Fungible” assets are those that are interchangeable, that is, substitutable. For example, $10 bill can be exchanged for another $10 bill. These assets are also called as fungible goods. The same logic applies to all cryptocurrencies: 1 BTC is the same as 1 other BTC; 1 ETH is equal to another 1 ETH.
- Non-Fungibility: “Non-Fungible” items cannot be exchanged for something else of equal value, such as a fingerprint, as they are completely unique in their identity. NFT is a drawing, image, GIF, song, video game avatar, digital accessory and the like that is uploaded to the blockchain. Blockchain is a decentralized, distributed ledger that makes peer-to-peer transactions transparent and irrefutable. It is the same network that secures cryptocurrencies and maintains the integrity of the digital certificate of NFT ownership. An NFT printed once becomes one of a kind.
- Property nature of NFTs: Digital ownership of cryptocurrencies and NFTs (purchased with cryptocurrencies) is also considered “property” and income from its sale is taxed as capital gains.
- Buying NFT with cryptocurrency/buying artworks with cash: NFTs purchased with cryptocurrency are not the digital equivalent of purchasing artwork with cash. Instead, the Internal Revenue Service (IRS) uses a two-part process:
    - Liquidation of cryptocurrency: When an NFT is purchased, the cryptocurrency becomes “dispose”. Income from this crypto sale is also taxed as capital gains.
    - Purchase of the NFT: If NFT is purchased with cryptocurrency, the fair market value of the cryptocurrency at the time of purchase becomes the basis for NFT.

NFTs can be digital or physical in nature. Exchangeable goods such as money or trade goods can be exchanged for goods of the same type, while unpaid goods cannot be exchanged for a similar good (Orkunoğlu Şahin and Çiftçi, 2022, p. 687). The main reason for this is that its value is more than its actual material value. Examples from the analog world include items of artistic or historical significance and rare trade items that have a long history of trading at auctions and other markets. In the digital world, trading and auctioning non-tradable goods has not been easy until now, as their authenticity is difficult to verify. NFTs have now started a new era by paving the way for commerce with the digitization of unique values on the internet (Ante, 2021, p. 1). NFTs have been sold for substantial sums (Das et al., 2022, p. 1). The NFT of the animated flying Pop-Tart cat, which sold for $600,000 took the world by surprise (Giesselman et al., 2021, p. 18). As you can see, there is a serious demand. Many tax administrations in the world realize that it is an important source of income and put the issue of taxation on their agenda.

The Emergence of NFTs

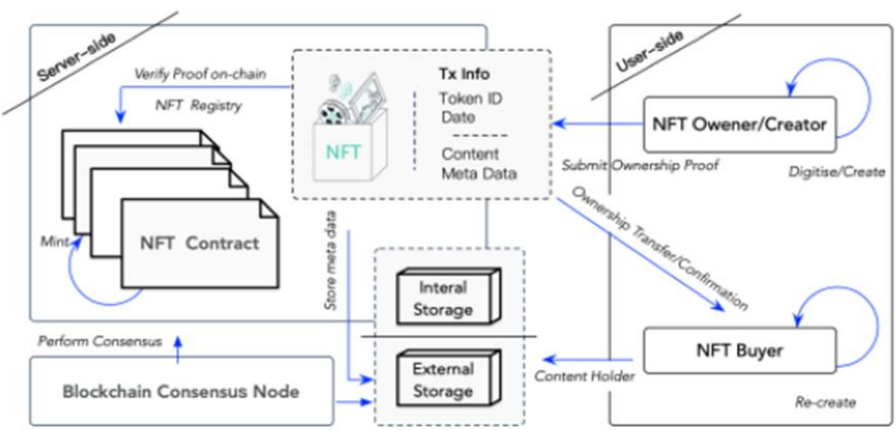
NFTs came into our lives with the example called “The CryptoPunks”, which was released in June 2017 by the technology company called LarvaLabs. The development of CryptoPunks holds an iconic place in the evolution of NFTs. As a matter of fact, CryptoPunks refers to crypto pictures, each of which is unique, consisting of 10,000 tokens with proof of ownership on the Ethereum blockchain. While most CryptoPunks tokens are made up of male or female faces, tokens with zombie and alien figures are also among the popular NFTs. Digital assets in the form of NFTs have been sold for millions of dollars each. The most expensive ever sold for $69.3 million (Kong and Lin, 2021, p. 2).

Although NFT technology is a new technology, it has a very fast developing and growing economic market. Some of the works sold in this economic market include (Kahraman, 2022, p. 159):

- Mike Winkelmann's digital artwork "Everydays-The first 5000 Days" has sold for $69 million.
- CryptoPunks' Punk #6965 sold for a total of $1.5 million, #7804 for $7,566,173.88 and #3100 for $7.58 million.
- "Ocean Front", one of the masterpieces in Beeple's "Everydays" series, which describes the dangers of climate change, sold for $6 million and "Crossroad" for $6.6 million.
- Jack Dorsey, CEO and founder of Twitter and Square, sold his first tweet for $2.9 million by converting his first tweet to work on Valuables, operated by Cent.
- Replicator, a digital artwork by Canadian artist Michah Dowbak, known under the pseudonym Mad Dog Jones, was sold for $4.1 million.
- Edward Snowden's "Stay Free" sold for $5.4 million.
- World Wide Web developer Tim Berners Lee has auctioned an NFT of WWW's source code and sold it for $5.4 million.

NFTs are expected to become widespread in many areas in the future, as they provide a bridge to the digital world. NFT applications that catalyze the digital circular economy are actually endless and unexplored. Figure 1 is an important guide for us to understand the workflow of NFT systems.

Figure 1. Workflow of NFT Systems



Source: (Wang et al., 2021, p. 6).

"Essentially, this process consists of two roles: NFT owner/creator and NFT buyer. An NFT owner digitizes the raw data from the transaction in the appropriate format, then stores it in a database outside the blockchain (or on a blockchain, but this is more costly). The owner then signs the transaction with a hash (or cryptographic signature consisting of a series of numbers) and sends the data to a smart contract. The smart contract processes the data, then prints or exchanges it on the blockchain as a transaction. Once confirmed through mathematical consensus, the NFT is permanently linked to the unique hash identifier and distributed blockchain record that it cannot be changed" (Cornelius, 2021, p. 5-6). In addition to these, it has the potential to be one of the basic building blocks of metaverse technology, which is generally produced with a series of techniques such as augmented reality and internet technology and allows digital activities to be carried out in a virtual world (Thenjono et al., 2022). This technology, which has been in demand for the last ten years, has made significant progress with the blockchain technology and has gained a very common usage area today. The impact of NFTs of course, on this widespread use is undeniable. Metaverse, where digital versions of many real-world objects and activities such as virtual land and stores are offered to people with their ownership and uniqueness features, while showing much greater developments in the coming years, NFT technology will of course provide the greatest support (Wang et al., 2021, p. 12).

It has become one of the most popular investment tools in financial markets in 2021, approximately 4 years after the first production of NFTs, and it has been seen that the art community has also attracted great interest with the features such as identity, ownership, and property rights that it brings to digital assets. NFTs have begun to attract the attention of not only investors, collectors, artists, and users, but also public authorities and academics. The decentralized finance world, which people were very interested in in the Covid-19 crisis, also attracted the attention of central banks and governments and caused them to make statements on the subject. Although it is not accepted as an official currency outside of El Salvador and a few regional governments, the number of governments, regional governments, and central bank officials who are positive towards cryptocurrencies has increased significantly (Gazioğlu and Özen, 2022, p. 29). The growing popularity of NFTs means that a better understanding of NFTs will be necessary and regulators must deal with this new asset class to protect the interests of both buyers and sellers of NFTs.

Legal Structure and Regulations of NFTs

The interest in NFTs, one of today's popular investment tools and digital artworks, continued in 2022 and has been accepted as one of the important figures of the digital finance world consisting of digital money, crypto money, and electronic money. As NFTs have significant potential in some sectors due to their structure, they also have the potential to develop in many areas with their characteristic features such as being unique. For example, although it has already reached a significant volume in the game industry with CryptoKitties, CryptoPunks, Cryptocats, Axeie, and Infinity, it has a much greater potential in this industry. The features that make these games fascinating can be described as feeding the mechanism. Users can raise pets and spend a lot of time feeding newborn puppies in these games (Wang et al., 2021, p. 11). In addition to this potential, NFTs also have some important challenges to be solved. In this context, it is important to determine the legal structure of NFTs. To determine the legal nature of NFTs, the Howey test (created in the United States of America -USA- in 1946 as a result of a controversy over the use of orange trees, used to tell whether an asset is a security) can be used. According to this test, in order to understand whether an asset is a security, it is checked whether it has four basic characteristics (Mukhopadhyay and Ghosh, 2021, p. 7-8):

• Was it obtained for money?

- Those who buy NFT invest money or cryptocurrencies (something of value).

• Was the investment made in a company/enterprise?

- There seems to be no joint ventures generally associated with NFTs. Instead, most NFTs are one-off or limited editions of digital art, collectibles, or have some utility like an in-game item.

• Hoping to profit from the investment?

- Some people buy NFTs as an investment in anticipation of profit, while others may buy NFTs to build a collection.

• Is the profit derived from the efforts of the third party or entrepreneur?

- Generally, there is no third party backing the value of NFTs sold.

According to Mukhopadhyay and Ghosh (2021), because NFTs are immutable, they are more like non-securities art or collectibles than exchangeable cryptocurrencies. If an NFT has a large supply or a large number of prints, a more tradable token will tend. Mutual funds work the same way. Investors collect the money in a fund and this money is used to buy assets. Each investor owns a portion of the entire fund (Mukhopadhyay and Ghosh, 2021, p. 8). However, despite all this, the issue of whether NFTs are legal securities causes significant debates in the literature. Regarding this issue, the judicial process continues in the American courts. In addition, issues such as the fractional production of NFTs with technological developments and their separation into shares make it difficult to qualify NFT as legal (Şağban, 2021, p. 474).

Although crypto assets and NFTs do not yet have a definition in Turkish tax legislation, crypto assets are defined as "intangible assets" according to the Regulation on the Non-Use of Crypto Assets in Payments, which came into force on April 30, 2021 and prepared by the Central Bank of the Republic of Türkiye (CBRT). The definition of crypto assets as "intangible assets" in our tax laws with a definition similar to the definition in the CBRT Regulation will not fully grasp NFTs, a type of crypto asset. Namely, while some NFTs represent digital artworks, some represent digital states of non-artistic goods and physical assets (for example, Gucci's digital bag, Victoria's Secret's digital dress or Nike's digital shoes). These digital products are used by the avatars of their owners or game characters in the virtual environment. For this reason, it would be more appropriate to make an evaluation about NFTs by taking into account the rights and benefits they provide to their owners (İçten, 2022, p. 143-144). Therefore, the lack of legal regulations regarding NFTs is the most important risk of NFTs for both NFT owners and NFT buyers (Gediz Oral, 2022, p. 9).

Taxation of NFTs in the World and Türkiye

Tax evasion creates serious problems around the world. In the USA, a significant difference emerges between the amount of money taxpayers earn from crypto assets and the amount of tax paid to the tax administration. The main reason for this difference is that taxpayers are using cryptocurrencies and NFTs as tools as new tax havens and tax evasion methods. Increasing investors and companies are shifting to countries where cryptocurrencies and NFTs are tax-exempt or have crypto-friendly tax policies. For example, Singapore has recently introduced many exemptions, including tax exemptions on capital gains, into its tax legislation. In addition to the exemptions, the country announced that the revenues from NFT transactions are covered. This means that any profits from NFT transactions are not taxable. This situation will reveal that many countries will not be able to compete with each other (Nguyen, 2022, p. 326). However, some crypto experts think that countries are not experiencing serious tax erosion because NFTs are so new and unknown to many.

NFTs constitute multiple taxable events for both creators and traders. But the taxation of NFTs is primarily based on the tax treatment of cryptocurrencies. Therefore, to understand the taxation of NFTs, it is necessary to understand the tax treatment of cryptocurrencies. The taxation of cryptocurrencies is very important for understanding the taxation of NFTs. However many problems arise from the emergence of NFTs to the very last moment when they become worthless (Nguyen, 2022, p. 325). NFTs have a life cycle that includes various events, from creation, use in transactions, to depreciation. This situation causes various tax effects. To understand the tax scope of NFTs, it is necessary to master several factors. These factors vary depending on whether the person selling the NFT is the creator of the NFT, whether the seller is an investor, dealer, trader, collector or personal user (Nguyen, 2022, p. 333; Wilson et al., 2022, p. 662).

There is much more to discover about NFTs. Despite its growing popularity and some innovations, many aspects emerged as society grew and began to adapt to the system. How NFTs will be taxed and how participation in the NFT market will be for taxpayers is the most important issue. Despite the growing prevalence of NFTs, the IRS has yet to issue guidance on how they should be taxed. The IRS has only issued Notice 2014-21 and Rev. Rul. 2019-24. This provides guidance on the tax implications of "virtual currency" or "cryptocurrency". As an intangible asset, NFTs raise a number of tax issues. It becomes very difficult to define it due to the absence of NFT before. The Internal Revenue Code has not taken into account the different transactions that may arise at various points in an NFT's lifecycle. Therefore, the taxation of NFTs is largely based on cryptocurrency tax principles (Blum and Foster, 2021, p. 10; Nguyen, 2022, p. 333).

Although no study has been carried out in this direction in Türkiye, legal regulations have been initiated in the USA, South Korea, and Germany on the taxation of NFTs. The USA was the first country to initiate work on the taxation of the sale of NFTs. Since NFTs are a new concept in terms of tax law, it is not clear which tax they will be classified under. So much so that many experts treat NFTs as jewellery, antiques or works of art and argue that they should be taxed as collectibles. If NFTs are considered collectibles, this means they will be taxed at a flat tax rate, which in practice in the USA corresponds to a higher tax than cryptocurrencies treated as stocks (Valbrun, 2022). Work continues on a legal regulation that will subject NFT to an income tax ranging from 10% to 37% on the income to be generated as a result of the disposal of NFT as crypto in a virtual market. In addition, 15.3% of the income of the digital author will be subject to self-employment taxes (Fennimore, 2021). In the event that the said regulation is implemented, a separate tax is foreseen to be applied to the person who creates this work in the sale of NFT sales in the USA through a virtual market. However, this situation has not yet passed into legal regulation. The USA established a National Cryptocurrency Enforcement Team (NCET) in October 2021 of special prosecutors focusing on a wide range of crimes, including cryptocurrency-related crimes, NFT fraud. That same year, the Financial Action Task Force (FATF) introduced the first global standards to address the money laundering and terrorist financing risks of non-tradable currencies (FATF, 2022).

Following the USA, the South Korean Tax Administration (Financial Services Commission- FSC) announced that NFTs will be taxed from 2023. This tax law amendment states that as of January 1, 2022, 20% tax will be applied to income from virtual assets exceeding Won 2.5 million (approximately $2,102). Doh Kyu-sang, vice president of the FSC, stated that only some NFTs will be classified as virtual assets and therefore will be subject to the so-called "other income" tax class, referring to users who choose to invest or pay on a large scale. The FSC now equates NFTs, which they previously did not consider as virtual assets, to cryptocurrencies (İçten, 2022, p. 147). Another country that has been working on the taxation of NFTs is Germany. Although there is no legal regulation regarding NFT in German Tax Laws, the following opinion comes to the fore regarding the taxation of NFTs. In Germany, the profit to be obtained from the disposal of private works of art within one year must be declared and taxed. If the profit is less than 600 Euros, this income is exempt from tax. NFTs should also be evaluated in this context and should be taxed as a special work of art. This situation has not yet been implemented as a legal regulation. The most important reason for this situation is the ongoing discussions on whether the digitization date of the work or the date when the original work was first revealed should be taken into account as the date of obtaining the special artwork (Kurt, 2022, p. 32).

The issue of taxation of NFTs is not only on the agenda of the USA, South Korea, and Germany. Although a clear document or text has not been published in detail, the taxation of NFTs in the United Kingdom as well as the USA is considered as capital gains tax. However, although there is no clear provision covering NFTs in the tax legislation of many countries and none of the definitions in this tax fully meet NFTs, country practices are carried out according to income tax. In addition, as in Singapore, if NFT buying and selling transactions are carried out by a company, they are subject to corporate tax (Cheong, 2022). Also in Indonesia, digital assets do not have specific tax legislation (Dwitanti and Simatupang, 2022, p. 261).

In Türkiye, the tax situation of crypto assets and NFTs is that these assets are not within the scope of tax due to the fact that there is no legal regulation in tax laws yet. In Article 73 of the Turkish Constitution, the provision that taxes will be imposed, abolished or changed by law is in force. Taxation of works of art in the digital environment, which is currently an important application area of NFTs, to physical works of art "by convergence" is also not applicable as it would be contrary to this provision of the Turkish Constitution. Likewise, the fact that crypto assets are defined as "intangible assets" in the CBRT Regulation does not mean that these assets can be taxed. Looking at the current tax laws in terms of NFTs (İçten, 2022, p. 161):

- First of all, NFT trading in terms of institutions or real persons transacting within a commercial organization will not change the general approach in this regard. The earnings will be in the position of corporate income and commercial income. However, in order to clarify the issue in terms of income and corporate tax laws, it would be appropriate to add a separate clause to the second paragraph of Article 37 of the Income Tax Law. This clause may take the form of *"continuous dealing with the trading and issuance of crypto-assets within a commercial organization"*.

- In the event that artists who own artworks and their legal heirs sell or lease their NFTs, some arrangements should be made in order to apply the exception set out in Article 18 of the Income Tax Law. Accordingly, it would be appropriate to add provisions that include both NFTs and the way they are removed to the wording of the article, and to exclude NFTs from the withholding tax application within the scope of this article.
- A regulation to comprehend NFTs should be made within the "gains from appreciation" regulation of the Income Tax Law.

Although the tax and legal regulation studies on NFTs are quite new, it is seen that it is a very foreign concept to the tax legislation of the states. For this reason, there is no exemplary legal regulation with NFTs defined in detail yet. It can be said that the legal regulation and taxation studies for NFTs are at the initial stage. On the other hand, it would be appropriate to say that in the next few years, in many countries led by developed countries, especially the USA, comprehensive tax legislation on this issue can be created.

Current Problems with Taxation of NFTs

Tax guidance on NFTs is rather vague. Treating the taxation of NFTs as analogous to the taxation of cryptocurrencies and other intangibles is an indicator of progress. But the challenge arises as NFTs are unique assets, unlike cryptocurrencies and other intangibles. For NFTs to be properly taxed, it is important that the IRS publishes tax guidance on NFTs. Thus, various difficulties related to taxation of NFTs can be solved (Nguyen, 2022, p. 339).

Valuation of NFTs is a problem for both tax administration and taxpayers. The volatility of NFTs poses a challenge to valuation. Taxpayers need to know the fair market value to determine whether there is a gain or loss as a result of the sale or exchange of NFTs (Sitompul, 2022, p. 48). The valuation of NFTs, like the valuation of traditional art in an auction house, varies greatly according to its market value. It matters how much people are willing to pay for a work of art, which is influenced by various factors. For example, it affects the value of the old NFT, as older NFTs can be considered a "digital artifact" with a greater value. In addition, NFT's marketability and its creator's reputation also affect its value. As a result, if the marketability of NFT is high and a famous artist made NFT, the value of NFT increases. One of the latest trends to increase the value of NFTs is to destroy original artworks. When this happens, leaving NFT as the "only remaining form", NFT becomes a more valuable and rare digital asset. The most convenient method of increasing the value of an NFT is to use contractual restrictions to limit viewing of the original work. Thus, the creator cannot use the original work, display it publicly, or even license the work to anyone else (Nguyen, 2022, p. 340).

In Türkiye, it is clear that the definition of crypto assets as "intangible assets" in the Tax

Laws as in the CBRT Regulation, among other problems, does not cover NFTs, which are a type of crypto assets. It is not expected to include other types of crypto assets, which are likely to emerge in the near future (products in this field can occupy the agenda very quickly), or products of other digital technologies that will emerge in the blockchain environment or outside of blockchain technology. Moreover, the legal status of these newly emerging assets cannot be revealed only by tax laws, it may also necessitate changes in other laws. The speed in this matter is certainly not at the speed of these beings. This situation will cause similar time losses in the taxation of other digital products as in crypto assets. The economic magnitudes created by these assets also make it difficult for countries to act jointly in their efforts to get more of this pie (İçten, 2022, p. 162).

Investors holding assets that are sensitive to large value fluctuations like NFTs need more tax planning. But given the diversity of each, it may not be appropriate to tax all NFTs the same. NFTs are unique, indivisible, and not interchangeable (Çokmutlu and Kılıç, 2022, p. 25). This is the main difference with cryptocurrencies. In taxing NFTs, it is necessary to consider cases where there is an NFT-independent value and the value is created or significantly increased by the NFT (Gediz Oral, 2022, p. 11). Another problem is the difficulty of calculating NFT gains and losses. NFT marketplaces are relatively new. It does not provide any tax documents or transaction history reports that can assist taxpayers in calculating NFT capital gains and losses. However, many tax software can help taxpayers automatically calculate capital gains and losses when dealing with cryptocurrency. But the software for NFTs is still relatively new and unreliable (Nguyen, 2022, p. 340-341).

Studies have been initiated in many countries on the taxation of NFTs. However, there is no country where it has been enacted yet. The growing trend of the digital economy makes it compulsory to tax this area. Tax liabilities should be compatible with other countries, as the virtual incomes can quickly shift to tax haven countries with the arrangements to be made. In fact, the regulation on the taxation of social media phenomena with the Law No. 7338 in Türkiye has been a proper and efficient regulation. Namely, the said law ensures that the revenues of social media phenomena operating in the digital environment are transferred to the Treasury by deducting the tax at the source with the withholding method. Thus, while social media phenomena, who are the taxpayers, fulfill their tax duties without feeling (in financial anesthesia), they earn income by minimizing possible tax losses and evasion by deducting the tax at the source in the state. In addition, with the withholding method, the tax cost of the state decreases (Kurt, 2022, p. 33). Therefore, it is necessary to make a legal regulation on NFT. While making the said regulation, only one dimension should be avoided, it should be regulated by consulting the opinions of experts who have knowledge in the digital field, and a special tax legislation should be created for the digital economy.

Conclusion and Recommendations

One of the rare technologies within the crypto-asset ecosystem that encourages users to produce an artifact is NFT. NFT is a type of digital certificate that comes with certain rights attached to an asset. NFTs are often traded with cryptocurrencies like other crypto assets. All kinds of digital assets can be marketed through NFTs, as well as the right to use certain real-world movable or real estate or services and/or the right to use goods and services. Thus, owning an NFT means having the rights contained in the

NFT.

NFTs are expected to become widespread in many areas in the future, as they provide a bridge to the digital world. But there are some complex legal issues and risks posed by NFTs. Trading in NFTs can also pose additional investor risks to their abuse to facilitate fiscal crimes such as fraud and money laundering. These risks are related to the volatility and anonymity in NFT trading. In particular, NFT buyers may be advised to take advantage of an institutional crypto custody service to protect their NFT. However, this is not enough. The main problem with NFTs is that their legal status has not yet been clarified. In this process, the developments that emerged with the existing public legislation were tried to be controlled and partial regulations were started in case of inadequacies. However, it would not be appropriate to say that decision makers dominate the developments in the digital age with the eye of an expert. In fact, it is not possible to say that NFTs, which are one of the achievements of the digital age, have yet to be adequately comprehended by the states. For this reason, there is no exemplary legal regulation that has defined NFTs in detail yet. It can be said that the legal regulation and taxation studies for NFTs are at the initial stage. On the other hand, it would be appropriate to say that in the next few years, in many countries led by developed countries, especially the USA, comprehensive tax legislation on this issue can be created.

In the USA, it is possible to report to the IRS if the income from the purchase and sale of NFTs is above a certain limit and these incomes can be taxed as gains from appreciation or self-employment earnings. However, in practice, the main issue to be resolved is whether it is sufficiently understandable how much income they actually earn and what kind of income NFTs can be subject to. It is certain that the framework of cryptocurrencies cannot be applied to NFTs. The main reason for this is its unique features. Therefore, when taxing NFTs, it is necessary to consider situations where there is an NFT-independent value and the value is created or significantly increased by the NFT. While doing all this, it is very important to pay attention to data privacy, tax privacy, and tax compliance. Legislation preparations and taxation studies for NFTs, which will be one of the important actors of the metaverse ecosystem, will be one of the preliminary steps to prepare for the metaverse ecosystem that will bring humanity to the virtual world. It is necessary to make adjustments taking into account the metaverse.

In Germany, there is a prevailing view that NFTs should be taxed as private works of art. However, this situation has not yet been implemented as a legal regulation. The main reason for this is the ongoing debate as to whether the date of digitization of the work or the date when the original work was first revealed should be taken into account as the date of acquisition of private works of art. As can be seen, there is no clear consensus on the subject in the world. Therefore, it will not be possible to tax anything that cannot be determined. It is obvious that the discussions, which are thought to continue for a while, should be concluded in the near future. Taking steps in this regard, FSC announced that NFTs will be taxed from 2023 and accelerated the work.

This study reached similar results with previous studies. Although the studies on taxation of NFTs are quite new, it is also a very foreign concept to the tax legislation of the states. Therefore, the legal framework defining NFTs in detail should be implemented immediately. It is seen that the legal regulation and taxation studies for NFTs in the examined countries are at the initial stage. On the other hand, it would be appropriate to say that in the next few years, especially developed countries can create comprehensive tax legislation on the subject.

It is obvious that the tax aspect of the issue should be prioritized, when possible lost tax revenues are taken into account. Of course, with the taxation of these transactions, the NFT sector will now be legally recognized and regulated. Thus, residents of regulatory states will also have certain legal rights as a result of these regulations. When regulating NFTs, their legal status and the different regulatory frameworks they may be subject to in different countries must be strictly taken into account, as they can be traded globally. However, tax liabilities should be compatible with other countries in order to prevent the virtual incomes from rapidly shifting to tax haven countries with the arrangements to be made.

Although the tax system of each country is based on different dynamics, taking the steps taken by the countries working on the subject as an example will contribute to the development. It is important for future researchers to analyze the possible effects of tax with various empirical studies after the legal framework is formed by eliminating the deficiencies mentioned on the subject.

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