Journal of Namibian Studies, 34 S2(2023): 633–642 ISSN: 2197-5523 (online)

Young Generation Perspectives of NFT in the Metaverse Era: Challenges and Opportunities

Setiani Putri Hendratno[1], Tommy Andrian[2], Michael Angelus[3], Theresia Lesmana[4]

[1] Accounting Program, Accounting Department, School of Accounting, Bina Nusantara University, Jakarta, Indonesia

[2] Accounting Program, Accounting Department, School of Accounting, Bina Nusantara University, Jakarta, Indonesia

[3] Accounting Program, Accounting Department, School of Accounting, Bina Nusantara University, Jakarta, Indonesia
zaidfj@coeng.uobaghdad.edu.iq

[4] Finance Program, Accounting Department, School of Accounting, Bina Nusantara University, Jakarta, Indonesia

shendratno@binus.edu

Abstract

Non-Fungible Token (NFT) has grown extraordinarily recently. The concept of NFT is essentially a digital asset based on smart contracts on a blockchain traded with cryptocurrencies such as Ethereum and other NFTs. The NFT and metaverse were booming in 2021 and early 2022. On another hand, not all the people who join or investing NFT know NFT well. Along with that issue, people's point of view, especially young generations are divided into two points of view, one of them supports it, on the other hand, they are against it. Therefore, This study aims to provide diverse understandings of NFT, the benefits & drawbacks of NFT, and the potential of NFT and metaverse according to them. In this paper, researchers perform a qualitative study that consists of 17 respondents, which are young generations. This research uses a semi-structured interview and descriptive analysis method. The results are the young generations are still trying to choose the best choices when they are investing in NFT by learning about it first. The young generations also have an optimistic opinion about development in NFT and metaverse in the future. The prospect theory is used in this research and can be proven in this study with the proof that they are willing to be in the metaverse even though some of the young generations rejected it. Also, they add that metaverse should be added to the university curriculum so they can be facing the future model business.

Keywords: Non-Fungible Token, Blockchain, Metaverse, Challenges, Opportunities, Accountant

1. INTRODUCTION

Currently, we are facing Industry 4.0 as our development in technology and communication. One of the developments in technology including blockchain development. Blockchain was founded in 2008 and introduced by Satoshi Nakamoto through a cryptocurrency called Bitcoin [1]. The blockchain is growing currently, especially during the pandemic COVID 19. A new development arose with it having new software called a smart contract, which allows any user to create and deploy a program on a shared global infrastructure that later on creates a new concept design to simplify human interaction and collaboration on a large scale [2]. The development includes the Non-Fungible Token (NFT) used to buy digital arts, songs, and games. This also became one development in Bitcoins that means not only as digital currency which you can trade but also for doing transactions.

[3] stated that the metaverse refers to a shared 3D virtual world in which all activities can take place using augmented and virtual reality equipment. Metaverse was booming because Facebook announced the new project that they called Metaverse. Besides that, according to The Wall Street Journal (2022), PwC in Hong Kong purchased virtual real estate in the Sandbox metaverse, resulting in investors' optimism and cautiousness. In contrast, [4] also mentioned that NFT and metaverse still have a long way to go since they're still in early development and even premature. Along with Lee's opinion, [5] mentioned that NFT is still in the early stage and they will face challenges and also there will be business opportunities.

Based on these factors, researchers were interested in identifying the young generation's opinions about NFT and some opportunities and challenges of NFT and metaverse in the future. Researchers provide an analysis based on their opinion from the interview.

A. Problem Identification

The problem identifications are as follows:

1. What do young generations think about NFT and metaverse?
2. What are the opportunities and challenges of NFT and metaverse based on the young generations ahead?

B. Research Purpose

The purpose of this research comes from the overwhelming interest of NFT and metaverse in recent years. It aims to describe and analyze the positive and negative aspects of NFT and metaverse according to the young generation's perspectives. In addition, researchers are also curious about the potential that would happen many years ahead in NFT and metaverse according to their opinion.

2. LITERATURE REVIEW

Prospect theory

Prospect theory is a theory of decision-making under conditions of risk [6]–[8]. In addition, people's underweight outcomes are merely probable in comparison with outcomes that are obtained with certainty. There are two phases in prospect theory which are the editing phase and the valuation phase [7]. In the editing phase, people will be analyzing the choice problem, including the identification of the options available, the possible outcomes or consequences of each, and the values and probabilities associated with each of these outcomes. In addition, it includes the organization and reformulation of perceived options to simplify subsequent evaluation and choices. In the evaluation phase, the prospects that have already been edited will be evaluated and the preferred prospect is selected. In this paper, the prospect theory is used to explain the young generation's choices about investing in NFT and choosing to join the metaverse as a new challenge and opportunity.

Blockchains and Cryptocurrencies

Blockchain is a fairly new technology and first gained popularity as the protocol behind the cryptocurrency Bitcoin, which was introduced in 2009 at the height of the financial crisis [9]. Blockchain is a distributed, collaborative and collective electronic registry that documents payments across multiple devices so that the database cannot be modified arbitrarily without modifying all frameworks and platform engagement accordingly. [10] stated that blockchain can be described as a distributed ledger technology protocol that allows direct data exchange between various parties without the need for intermediaries.

Blockchain is the foundation of all currently available cryptocurrencies [11]. The Blockchain platform is operated independently through a peer-to-peer infrastructure and a decentralized printing period database. They are operated independently by private interests with continuous coordination [12]. The effect is a stable process where there is little confusion about the protection of stakeholder data or consumer information. The use of Blockchain removes the endless methodological rigor of digital currency. This ensures that each expenditure variable is reassigned only once, overcoming the persistent problem of double income [13].

NFTs

NFTs are digital tokens that represent specific content such as digital artwork, object play, and collectibles. NFTs replicate properties, such as rarity, uniqueness, and proof-of-stake on public blockchains (e.g., Ethereum) using cryptographic mechanisms and are typically deployed in online markets with cryptocurrencies [14]. NFT protects digital assets from counterfeiting or counterfeiting. NFTs make digital assets very difficult to copy which makes their unique assets retain their value by the song owner. Since NFTs are based on Blockchain, they are transparent and open to everyone by default. However, the timestamp generated by Blockchain retains the ownership of the owner of the bird. NFT issuance time, multiple issuances, ownership history, and transaction data are available to everyone [15].

A Non-Fungible Token (NFT) is a permanent, certifiable online token that links digital works of art to their owners, which are often called crypto art. Most NFTs are registered on the Ethereum-monitored decentralized cryptocurrency platform that uses blockchain technology, typically used to drive millions of transactions worldwide for multiple applications [15]. Every transaction associated with an NFT, and associated artwork is stored in a ledger via a Proof-of-Work (PoW) mechanism, enabling easy and fail-safe transfers of digital assets, and verifiable ownership of artwork [16]. Therefore, NFTs offer a mechanism for artists to create digital artworks and validate their work as unique, timeless, and collectible, as well as offer collectors the ability to showcase their collections on digital platforms [17]. Driven by these technological innovations, digital art sales reached $2.5 Billion in just the first two quarters of 2021.

3. METHOD

The research approach used in this research is qualitative. The type of interview conducted was a semi-structured interview. Qualitative semi-structured interviews are one of the most widely used data collection methods in the social sciences and they allow researchers to explore subjective viewpoints as well as compile in-depth accounts of people's experiences. Interviews were conducted to discuss a specified topic and the respondent was able to answer in his way. In this sense, the interview should resemble a 'flowing conversation' [18]. Qualitative research using semi-structured interviews was used in this study to obtain the views of respondents regarding the use of NFTs and their opinion about NFT and metaverse in the future.

4. RESULT AND DISCUSSION

In this study, the researcher will elaborate on the data gathered from the respondent of the interview that had been examined, the data was gathered through directly recorded with the respondents via online media (Zoom and Discord). The research question gained 17 respondents which consist of 14 male respondents and three female respondents, within the age, range of around 20-35 years old. The majority of respondents were domiciled in Jakarta and others came from other domiciles. Most of the respondents already have working experience of up to 10 years, including in the creative industry and accounting, also 8 respondents are college students.

According to our respondents, most of them are saying that NFT is a digital asset of an artist or company in a digital world.

"*NFTs are intangible assets that have a smart contract system written on the blockchain.*"-Respondent 15

Most of our respondents learned bout NFT based on their initiative. They would like to join seminars, books, Google, or other resources. On another hand, some of our respondents didn't want to buy NFT because she doesn't know about that meanwhile she knows that NFT is very booming right now.

"*For my own (NFT) knowledge I searched through Google, often searching on Google for knowledge about NFT and crypto, and because I have traded in crypto so I am interested in knowing the derivative products of these crypto*s."- Respondent 9

"*I'm not interested in buying NFT because I don't have enough knowledge about it, the concept is too abstract for me, NFT is having a big risk*." - Respondent 15

Respondents know about risks in NFT that can be faced by the user, including art theft, rug pull scams, money laundering, hacking, or even climate change issues.

"*Many artist friends raise the issue of climate change, first, Ethereum can revive how many trees, for example. No matter what, angels & devils will always exist in the economic & creative world. We blame it but still use gasoline & don't segregate waste. Second, if my artist friends say this (NFT) will/is easy to steal. In the digital world, that must be the challenge. Even the NFT in my wallet was stolen by hackers and that's part of the risk. Some of Arist's friends shared the link on Twitter via DM, he clicked it and his wallet ran out. If it was his work that was stolen, we will announce it in the community. It will be different if you have your branding for your work. If you know how to put the branding and can make people familiar with your work, so no need to be worried* " - Respondent 7

All of our respondents are interested in diving into the metaverse in the future but they thought it was still very early in development and they were eager to wait years later.

"*More to the development of the digital age this NFt will expand into the metaverse because we will expand into the metaverse then this NFT will make us live virtually where we will only know them on a virtual basis indirectly if we want to do business with them there will be difficulties where get used to we will have a face to face meeting*." - Respondent 5

Not only are young generations familiar with or even being users of NFT, but there are also people playing NFT games. Our respondents said that they are spending their time 2-4 hours a day. Some of the young generations don’t like to play NFT games because it will make them lose their interest and enjoyment in playing games. Even they said the game is pay to play a game instead of the free-to-play NFT game.

“*In my opinion, it is more pay-to-play where like before we have to spend money to play the game but it depends on the game itself, there are some games that are free to play but there are some games that might be more pay-to-play*.” - Respondent 12

“*In this NFT game we have to buy NFT first so we can play the game we want to play, or we can use the jockey system where we use a person's ID to play the NFT game where the income earned will be divided by two because, for this NFT game, we have to buy his assets to play his game*.” - Respondent 17

Based on the respondents' answers, most of them play NFT games because of the trend of NFT. During the COVID-19 Pandemic, NFT became famous and also boosted digital engagement and stimulated the growth of NFT [6].

“ *This NFT is new and trending with the play to earn model where if you play the game intending to make a profit*”- Respondent 11

Some of our respondents are coming from accounting backgrounds and they also give their perspectives about NFT and metaverse. They said it's also a new thing with many challenges and also risks in it, but also can give opportunities for the new business model. As an accountant, they don't find NFT and metaverse as an obstacle because they can learn about that, and also a great opportunity for the accounting profession in the future.

“ There can be potential for money laundering, just like crypto. But in my opinion, there is a positive side, which is that it can open new jobs for anyone, including accountants. In addition, it can open up business opportunities for auditors or taxation people, or people in the accounting field.” – Respondent 13

Most of the respondents were mentioning about metaverse when they were asked about the next opportunity or the future of NFT.

“ *I don't think we are in Industry 4.0 anymore, we have gone digital. Our world is headed in that direction. There is even talk of Facebook creating a metaverse where a world will be digital & NFTs will play an important role because everything will be bought with cryptocurrencies. If this happened, the impact would be enormous. On the accounting side, there are no regulations such as IFRS that specifically regulate NFT, maybe for now it still relates to intangible assets, but there is still some gray matter. When you grow up, rules will be formed*.” – Respondent 14

Some of them added that the metaverse will face a new challenge because the metaverse is still a concept of a new digital world but there are no rules until this time.

"*Maybe more people are using it because of its development, apart from that the metaverse is one of the reasons that allows NFT to continue to develop in the future*. " – Respondent 1

In addition, there is still a challenge that people must face including the metaverse concept and also the current technology that people use. It requires fast internet and up-to-date technology to run it.

"For me, I still don't know what metaverse is by my goals and vision, because in my opinion, the concept of this metaverse is very abstract. In addition, there is the issue of our technology getting there and the initial capital to purchase these goods is currently very expensive. This technology is also still developing. On the other hand, it requires a lot of internet quota to run the application." – Respondent 10

Most of the respondents said that they are optimistic about the metaverse and people can learn about the metaverse in the future. Specifically, they add that maybe the metaverse can be implemented 10-15 years from now, including the metaverse game. Additionally, they said there will be so many job opportunities in the metaverse including accountants.

"*I think humans will have a new life for them again, maybe many people think that it is different when meeting other people in the metaverse compared to meeting in person but over time they will adapt to the evolution of this technology*" – Respondent 3

"*In my personal opinion, it very possible for accounting firms to follow the development of metaverse and NFT*" – Respondent 10

"*We need accountants as our consultants, especially for our digital assets because we can't value it by ourselves and we must calculate the cost and benefit. Currently, we don't know about that, even though we don't know about the opportunity cost that will be appeared if we rebuild our design instead of making a new one. Rebuild a design takes time and we don't know how to calculate how much we must sacrifice because we use our time to build that design*." – Respondent 7

Based on the interview with respondents, we can conclude that NFT and metaverse will continue to grow and even young generations waiting for that. The respondents who have to account or even work as accountants believe that the metaverse will be a brand new opportunity because there will be a digital asset that will relate to tax. If they have assets, so they will need a consultant to give a valuation of their assets. If they will be using NFT as their currency, they need the bank to save their NFT, so that bank is also needed in the metaverse [19].

The respondents said that NFT and metaverse will have big opportunities in the future, even one of the respondents said that the company will change to a microeconomy. This can happen in the future since the company will be using its currency and will have regulations about its business. Because it will affect the future business model, respondents said that it should be learned in the university and included in curriculum.

The correlation with the prospect theory, young generations think that there are still many challenges and also a risk in the NFT. More specifically, respondents stated there is still money laundering and also scams from the company. Instead of being afraid of the risk, some of them have a good opinion about the future NFT because they have an optimistic opinion that there will be a rule for NFT, especially in accounting. Also, along with the technology development, NFT and metaverse can develop advanced cyber security [5]. In the accounting area, they can focus on the knowledge about the NFT and metaverse industry so they can adapt to the technology and business model development. The accountant must adapt to the real-world business case, including NFT and metaverse development, and use their analysis and critical thinking [20], [21].

In the future, NFT & metaverse are unavoidable. Users of NFT can display their works and collection in the metaverse even though people still using the physical one. People can use the metaverse to get simulations and also can buy or order the goods in the metaverse and will receive the physical ones. People also can invest in digital arts and also games. People also will gather in the metaverse because people can hang out in the digital world without physical interaction every time and everywhere they want. Metaverse also can replicate the real world so people will comfortable in it. It will have an economy that we called a microeconomy in the metaverse because companies will use NFT as their currency and also have their regulation or law about their company. Referring to prospect theory, the young generations will still take the risk and will try to lower the risk based on their investment choices They will look at the external movement especially the government regarding regulations in NFT and metaverse.

5. CONCLUSION

NFT & metaverse are innovations coming from blockchain that were recently becoming very popular in the world during the pandemic & created new opportunities in a wide variety of areas. Based on this research, the respondents still found that NFT and metaverse are still early in development, and also st Most of the respondents have optimistic opinions about NFT and metaverse that create new opportunities for businesses including accountants. As the challenge in NFT, NFT is still not well regulated and has considerable risks such as money laundering, scams, etc. The risks make them still not believe in the industry but also they are waiting for the regulation so they can lower the risk. This along with the prospect theory that they will try to find the best choices with two phases, the first one is editing with analyzing the choices. The second one is about evaluating the choices and will think about the preferred choice that they must make. This research implies that companies who have NFT and are ready to join the metaverse, must look at the young generations' concerns and try to develop their microeconomy. They can ask their consultant or accountant if it's related to digital assets. The research findings also can be used as a reference to develop NFT and metaverse in the future based on the young generations' point of view.

This research has limitations. First, our sample size is relatively small (17 respondents) because it was difficult to find respondents who understood the fundamental knowledge of NFT & metaverse. Second, this research needs more points of view from other stakeholders in the NFT and metaverse ecosystem. Furthermore, findings found by researchers were only based on the interview, which possibly can be biased. In this paper, creating predetermined questions and determining the scope before conducting the interview can lower the biased. For future research, the research can be developed by interviewing stakeholders from the NFT and metaverse ecosystem. Future research also can use observation as additional data in the research and have balanced demographic respondents including males and females.

REFERENCES

1. H. Hassani, X. Huang, and E. Silva, "Big-crypto: Big data, blockchain, and cryptocurrency," *Big Data Cogn. Comput.*, vol. 2, no. 4, pp. 1–15, 2018, doi: 10.3390/bdcc2040034.
2. F. Regner, A. Schweizer, and N. Urbach, “NFTs in practice - Non-fungible tokens as core component of a blockchain-based event ticketing application,” *40th Int. Conf. Inf. Syst. ICIS 2019*, pp. 1–17, 2019.
3. M. Damar, “Metaverse Shape of Your Life for Future: A bibliometric snapshot,” vol. 1, pp. 1–8, 2021, [Online]. Available: http://arxiv.org/abs/2112.12068.
4. L.-H. Lee *et al.*, “All One Needs to Know about Metaverse: A Complete Survey on Technological Singularity, Virtual Ecosystem, and Research Agenda,” *J. LATEX Cl. FILES*, vol. 14, no. 8, pp. 1–66, 2021, [Online]. Available: http://arxiv.org/abs/2110.05352.
5. Q. Wang, R. Li, Q. Wang, and S. Chen, “Non-Fungible Token (NFT): Overview, Evaluation, Opportunities and Challenges,” 2021, [Online]. Available: http://arxiv.org/abs/2105.07447.
6. F. Heukelom, “Prospect Theory,” *Int. Encycl. Soc. Behav. Sci. Second Ed.*, pp. 261–269, 2015, doi: 10.1016/B978-0-08-097086-8.03193-7.

7. J. S. Lavy, "An introduction to prospect theory," *Polit. Psychol.*, vol. 13, no. 2, pp. 171–186, 1992, [Online]. Available: https://www.jstor.org/stable/3791677.
8. Daniel Kahneman and A. Tversky, "An Analysis of Decision under Risk," *Econometrica*, vol. 47, no. 2, pp. 263–292, 1979.
9. S. Nakamoto, "Bitcoin: A Peer-to-Peer Electronic Cash System," *Decentralized Bus. Rev.*, 2008, doi: 10.1108/TG-06-2020-0114.
10. Deloitte, "The Blockchain (R)evolution – The Swiss Perspective White Paper," *Deloitte*, no. February, p. 39, 2017, [Online]. Available: https://www2.deloitte.com/content/dam/Deloitte/ch/Documents/innovation/ch-en-innovation-blockchain-revolution.pdf.
11. R. Houben and A. Snyers, "Cryptocurrencies and Blockchains," *Inference Int. Rev. Sci.*, vol. 2, no. 4, 2016, doi: 10.37282/991819.16.38.
12. A. Bahga and V. K. Madisetti, "Blockchain Platform for Industrial Internet of Things," *J. Softw. Eng. Appl.*, vol. 09, no. 10, pp. 533–546, 2016, doi: 10.4236/jsea.2016.910036.
13. S. Pongnumkul, C. Siripanpornchana, and S. Thajchayapong, "Performance analysis of private blockchain platforms in varying workloads," *2017 26th Int. Conf. Comput. Commun. Networks, ICCCN 2017*, 2017, doi: 10.1109/ICCCN.2017.8038517.
14. M. U. Noor, "NFT (NON-FUNGIBLE TOKEN): MASA DEPAN ARSIP DIGITAL? ATAU HANYA SEKEDAR BUBBLE?," *Pustakaloka*, vol. 13, no. 2, 2021.
15. Z. Chen, Y. Li, Y. Wu, and J. Luo, "The transition from traditional banking to mobile internet finance: an organizational innovation perspective - a comparative study of Citibank and ICBC," *Financ. Innov.*, vol. 3, no. 1, 2017, doi: 10.1186/s40854-017-0062-0.
16. M. Dowling, "Is non-fungible token pricing driven by cryptocurrencies?," *Financ. Res. Lett.*, vol. 44, no. March 2021, p. 102097, 2022, doi: 10.1016/j.frl.2021.102097.
17. M. Franceschet and C. Braidotti, "Enhancing Art With Information: The Case of Blockchain Art," *Univ. Stud. Di Udine Dip. Di Mat. E Inform.*, vol. 1, no. 1, pp. 1–11, 2021, [Online]. Available: https://users.dimi.uniud.it/~massimo.franceschet/publications/jocch20.pdf.
18. J. Swain and B. King, "Using Informal Conversations in Qualitative Research," *Int. J. Qual. Methods*, vol. 21, pp. 1–10, 2022, doi: 10.1177/16094069221085056.
19. L.-H. Lee *et al.*, "All One Needs to Know about Metaverse: A Complete Survey on Technological Singularity, Virtual Ecosystem, and Research Agenda," no. November, 2021, doi: 10.13140/RG.2.2.11200.05124/8.
20. ICAEW, *SUSTAINABILITY: THE ROLE OF ACCOUNTANTS - Sustainable business initiative*. 2004.
21. H. Rkein, Z. A. Issa, F. J. Awada, and H. J. Hejase, "Impact of Automation on Accounting Profession and Employability: A Qualitative Assessment from Lebanon," *Saudi J. Bus. Manag. Stud.*, no. May, pp. 372–385, 2019, doi: 10.21276/sjbms.2019.4.4.10.