Application Of Technology Acceptance Model Theory In The Realm Of Metaverse Tourism
Study In Batu City- East Java

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ABSTRACT

This study investigates the influence of perceived utility, enjoyment, and simplicity of use of metaverse tourism on the satisfaction of individuals belonging to Generation Z. Furthermore, the level of satisfaction that Gen Z experiences with metaverse tourism directly impacts their intents to promote it through word of mouth. Data was taken at 4 educational tourism sites in Batu City, Jatim Park, Museum Angkut, BNS and Eco Park, with a sample size of 100 visitors. The visitors who were used as respondents were Gen Z with birth years above 1997, namely aged 15 to 27. The data collected was analyzed using SMART PLS 3.3.9. The findings show that perceived ease of use and perceived usefulness do not have a significant effect on Gen Z's satisfaction. Satisfaction has a significant influence on Gen Z's intention to promote by word of mouth. Gen Z has a character who easily shares good and bad experiences regarding how they feel about something they use.

Keywords: Metaverse, Perceived Usefulness, Perceived Ease Of Use, Perceived Enjoymend, Satisfaction, WOM

1. INTRODUCTION

Indonesia's tourism industry is developing quite rapidly, and has an important role in economic growth. The tourism sector plays an important role in national and global economic growth. Tourists travel to various places around the world. Every country has extraordinary cultural, natural and tourist attraction wealth that can be "sold" as a tourism product. Domestic and international tourism significantly contributes to state revenues, creates jobs, and strengthens tourism infrastructure and local communities. In addition, tourism can improve local welfare, preserve local culture including superior local products, and improve the welfare of local communities(Gameliel et al., 2024). The goal of tourism is not only to bring in consumers, but it must also work on how to make consumers comfortable and communicate with their relationships.

The tourism industry in Indonesia must always follow current technological developments to compete with foreign tourism industries (Yesicha et al., 2019). Tourism offers visitors an experience that is adapted to the environmental conditions of the local area. To support sustainable tourism, tourism managers must develop products that combine reality and digital tourism (Go & Kang, 2023). The tourism industry must create virtual tourist goods and services that make use of the metaverse and other forms of virtual reality (Min & Wakslak, 2022).

In the Metaverse, users are encouraged to form interconnected social ties within a three-dimensional virtual realm powered by AI and virtual technologies. In particular, the metaverse is developing into a unified platform that can improve the perception of real-world goods and services and provide a virtual environment for productive cross-platform collaboration. The tourism industry is rapidly recognizing the significance of mixed reality, a technology that effectively blends virtual reality with the real world. When virtual and physical elements collaborate in the actual world, we say that we are experiencing mixed reality (Chou et al., 2022).

When real-world things engage with a set of digital components in a metaverse, it's like stepping into a hybrid of AR/VR/MSR (Gursoy et al., 2022). Through the merging of virtual and physical worlds, metaverse tourism enhances tourist experiences by mixing three-dimensional surroundings with multisensor data processing (Vishwakarma et al., 2020). Metaverse tourism is aimed at the millennial generation because they are known to be tech-savvy and open to trying new things (Szymkowiak et al., 2021). The members of Generation Z, defined as those born between 1997 and now, have grown up in an era of fast technological advancement and widespread availability of digital gadgets. This generation is particularly adept at using the internet and social media (Ketut et al., 2022). Compared to the millennial

generation, generation Z has been exposed to technology from an early age and was raised in a technological environment.

Malang City is a tourism city that has begun to develop rapidly after the Covid 19 pandemic. Many tourists come to visit Malang Raya to visit a number of existing tourist attractions. One of them is the city of Batu which is included in the Greater Malang area. Tourism in the city of Batu is very diverse. Starting from natural tourism to educational tourism. Batu City tourism which is included in educational tourism is Jatim Park, MuseumAngkut ,BNS, and Eco Park. The available educational tours use a mix of metaverse, namely virtual reality and augmented reality. The Metaverse experience contributes to tourism by providing alternative resources so that it can be profitable for tourists (Martha Gegung, 2023). With the emergence of the Metaverse experience, it brings a new color to the tourism industry (Vishwakarma et al., 2020). Thus, following a fulfilling metaverse encounter, millennials and, most significantly, Gen Z can be inspired to encourage actual travel.

Using the technology acceptance model (TAM), this study investigates how Gen Zers' impressions, happiness, and plans to spread the word are affected by the metaverse's usability and simplicity of use. The work of Davis (1989) refines TAM into a hypothesis that helps to explain the emotions felt by consumers while interacting with cutting-edge goods and services.

2. RESEARCH METHODS

This study employs a quantitative approach to field research. Since the exact number of tourists in Batu City cannot be determined with precision, the population of this research object remains uncertain. Researchers used a Google Form to administer an online questionnaire to tourists in Batu. To select participants, they looked for those who were (1) willing to participate, (2) had been to the city at least once, and (3) could give all the information needed for the study in an online survey. This sampling method is part of non-probability sampling and is used in research. Beyond that, the researcher additionally requested that respondents, who were also visitors, help spread the word about the online questionnaire by sharing the URL to the Google form. In this study, one hundred participants were surveyed. The results match those of the calculations done for a population whose identity is unknown (Arikunto, 2016). To get a better look at the data at the indicator level, we used partial least square (PLS) analysis.
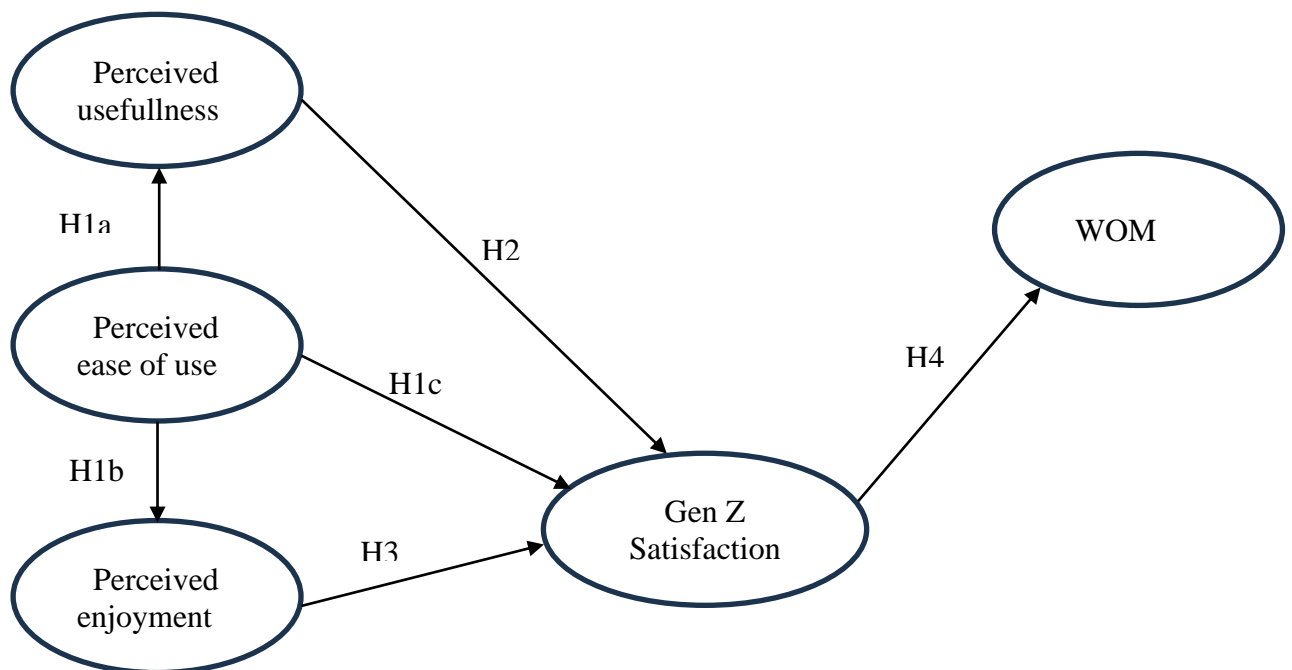

Figure 1. Theorical Model

3. RESULT AND DISCUSSIONS

Result

This study explores results based on the technology acceptance model (TAM) for metaverse tourism (Davis, 1989). The characteristics that contribute to Gen Z's happiness when interacting with the metaverse, according to this research,

include perceived utility, ease of use, and fun. So that the sense of satisfaction that Gen Z feels will form Word of Mouth promotions.

A total of 100 Batu City tourist respondents who visited the Jatim Park, Museum Angkut, BNS and Eco Park tourist attractions answered the questionnaire distributed via Google form. The selection of these 4 destinations was carried out so that researchers could filter questions according to what the researchers expected. From the results of distributing questionnaires, the majority of respondents were women (52.2%). The average age of respondents was 14 to 27 years, and 52% of respondents were students. Respondents were asked to indicate the metaverse experience they had when visiting 4 tourist destinations. Figure 2 displays the structural model that was developed based on the findings of the PLS analysis.
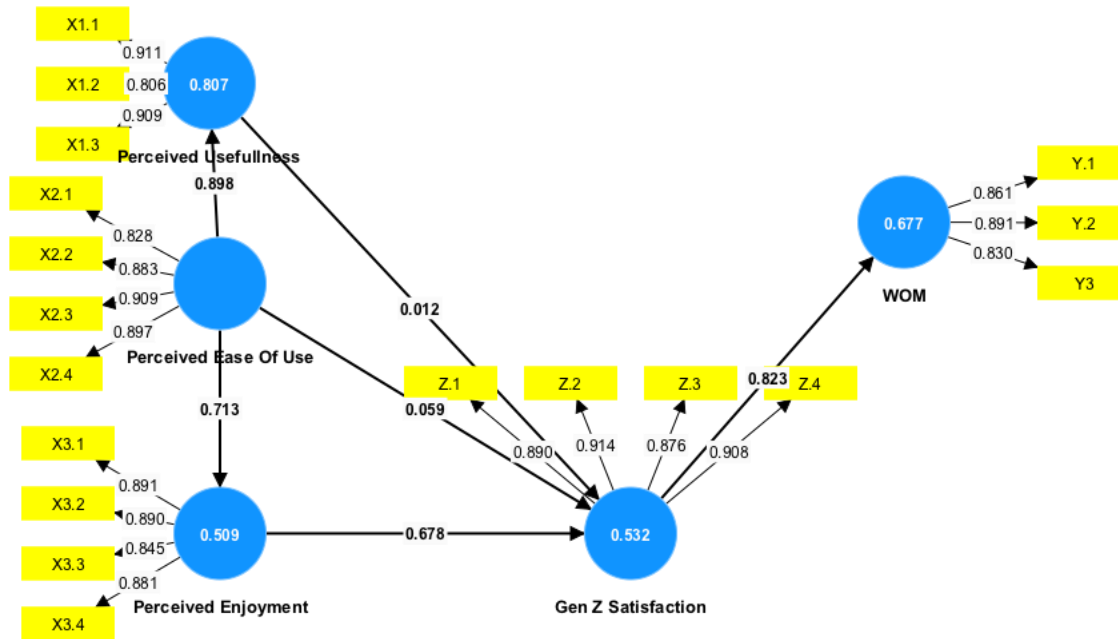

Figure 2. Result of Theorical Framework

This study assesses the measurement and structural model of each perceived benefit, ease of use, enjoyment, satisfaction and WOM in tourist destinations using SmartPLS 3.3.9 (Bhatiasevi & Krairit, 2013). Measures are considered reliable and valid when their Alpha, composite reliability, standardized loading, and AVE are all greater than 0.70, 0.80, and 0.50, respectively (Hair et al., 2019). All of the evaluation criteria are satisfied for every goal. In addition, the constructs may be easily distinguished from one another due to their internal correlation being greater than the square root of AVE and/or having an HTMT ratio less than 1 (Hair et al., 2019). Table 2 shows that perceived ease of use has no significant effect on Gen Z Satisfaction with a P value of 0.762 and perceived usefulness has no effect on Gen Z Satisfaction with a P Value of 0.953.. Table 1 below shows the results of the Validity and Reliability assessment. Table 2 further shows the path assessment of the structural model.

Table 1. Validity and Realibility

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Gen Z Satisfaction	0,919	0,920	0,943	0,805
Perceived Ease Of Use	0,902	0,905	0,932	0,774
Perceived Enjoyment	0,900	0,902	0,930	0,769
Perceived Usefullness	0,848	0,847	0,909	0,769
WOM	0,827	0,834	0,896	0,741

Table 2. The Structural Model Path

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Gen Z Satisfaction -> WOM	0,823	0,821	0,035	23,455	0,000
Perceived Ease Of Use -> Gen Z Satisfaction	0,059	0,042	0,195	0,303	0,762
Perceived Ease Of Use -> Perceived Enjoyment	0,713	0,711	0,057	12,574	0,000
Perceived Ease Of Use -> Perceived Usefullness	0,898	0,897	0,023	39,560	0,000
Perceived Enjoyment -> Gen Z Satisfaction	0,678	0,676	0,084	8,020	0,000
Perceived Usefullness -> Gen Z Satisfaction	0,012	0,028	0,203	0,059	0,953

. Discussion

Perceived ease of use, perceived utility, and enjoyment are significant elements to see the level of satisfaction of Gen Z, according to this research, which uses the technology acceptance model (TAM) theory. The feelings felt by Gen Z can measure the level of satisfaction, because they are directly involved in tourism activities metaverse. The results show that perceived ease of use and perceived usefulness do not have a significant effect on Gen Z satisfaction. The fact that Batu City is still in the early stages of implementing metaverse tourism demonstrates that Gen Z happiness is not solely influenced by perceived usefulness and simplicity of usage. Gen Z is still not familiar with the tourism metaverse technology that is provided, and the existing metaverse technology still needs to be improved in several aspects to make it easier for visitors to use. This is in line with research (Yoon & Nam, 2024) which shows that technology needs to be consumed regularly, and the convenience of technology features will automatically make it easier for users to apply it. Gen Z involvement is not always accompanied by technological convenience (Buhalis et al., 2023).

In addition, high satisfaction significantly shapes Gen Z's intention to promote word of mouth. Gen Z has the character of easily sharing good or unpleasant experiences regarding what they have felt about something they have used (Buhalis et al., 2023).

4. CONCLUSION

This research found that perceived ease of use influences perceived usefulness and perceived enjoyment, because when Gen Z feels the ease of metaversal tourism, they will also gain benefits and enjoyment. Respondents were spread across 4 educational tours in Batu City, educational tours implementing metavers have not been around for a long time so visitors still experience difficulties in using them. The existing metavers technology still needs to be improved and adapted to visitor needs, so that visitors find it easy to use.

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