

## WHAT DRIVES GEN-Z TO VISIT TOURIST DESTINATIONS USING VIRTUAL REALITY? THE STIMULUS-ORGANISM-RESPONSE APPROACH

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**Abstract:** The Covid-19 pandemic significantly impacted tourism globally due to international travel restrictions. One of the technological advancements, Virtual Reality (VR), offers the pre-travel experience as an alternative method to alter human existence in tourism destinations. VR has been applied in tourism and hospitality to promote tourist experiences, especially for Gen-Z, a generation born in the technology era. This paper investigates the determinant factors of VR experience impact on Gen-Z's visit intention to Indonesian tourism destinations during the Covid-19 pandemic. This study presents a Stimulus-Organism-Response (SOR) framework to provide a sequential process of the interaction between antecedents and consequences. The model was examined using 199 respondents and employed Smart PLS 3 for empirical analysis to assess the relationship. This study result confirmed that Gen-Z visit intention was derived from their satisfaction as a part of the response stage in the SOR model. Their satisfaction was affected by telepresence, focused attention, and temporal distortion, influenced by the sense and quality of information. This study contributes to digital tourism literature, particularly in VR studies amidst the pandemic. Furthermore, for the managerial implication, this study will give insight for tourism marketers and local or national governments to understand consumer behaviour through the technology approach in order to thrive back in business.

Keywords: Gen-Z, virtual reality, visit intention, the Covid-19 pandemic

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### INTRODUCTION

The Covid-19 pandemic, which is considered to have started around January 2020, quickly spread to practically all countries in the world despite severe travel ban restrictions and quarantine procedures enacted by governments. Infected cases surpassed 1 million in April 2020, 5.8 million in late May, and 23 million in August 2020. This ends up in more than 800.000 death globally as of August 23<sup>rd</sup>, 2020 (Sun et al., 2020). This caused one-third of the world's population to be under stay-at-home orders. This has been impacting tourism operations around the world which the Covid-19 pandemic has severely reduced. According to the United Nations World Tourism Organization (UNWTO), Covid-19 effects on the tourism and hospitality sector included a loss of USD 1.3.trillion and a 74% drop in international visitor numbers in 2020 compared to 2019 (UNWTO, 2021). The World Health Organization (WHO) and national governments implemented border closures due to the kind of travel that facilitates the spread of the pandemic, which disrupted tourism activities globally (Lock, 2022; DeCambre, 2020). This caused actual travel limitations. The Covid-19 pandemic has hindered travel and diminished people's willingness to travel (Gursoy and Chi, 2020). One of the main factors preventing travellers is the perceived health danger that the pandemic poses to tourists (Chua et al., 2020).

While some tourists may continue to travel and use risk-reduction techniques, others may choose not to. Travel is only viewed as fulfilling and is relatively likely to happen even during a pandemic when motivation and cleanliness are highly maintained (Aebli et al., 2021). Thus, this pandemic has brought attention to the need for innovative travel options (Lacina, 2020). In stay-home orders under the Covid-19 situation, many tourism and hospitality industry altered their business model with Artificial Intelligence to enhance people's experience in leisure. Airbnb, as the lodging industry, for example, has offered stay-at-home travel and virtual restorative experiences to take people into a new spectrum of realism and interactivity in cyberspace (Wong et al., 2022; Fredman, 2020). In Indonesia, Virtual Reality (VR) has been applied to several tourist destinations in the capital city and secondary. Gen-Z was the dominant market in the tourism and hospitality industry during the pandemic (Choirisa and Rizkalla, 2021).

According to Kim et al. (2022), aside from security seeking, Gen-Z's characteristics significantly impact the preference for contactless service. Additionally, Gen-Z sees new technology as having a higher demand for contactless services. Moreover, Gen-Z are becoming increasingly interested in transformative experiences. They can participate in more exciting and varied interactions with VR (Buhalis and Karatay, 2022; Buhalis et al., 2019). More than 84% of customers worldwide say they would be interested in utilising VR or augmented reality (AR) for travel experiences, and 42% think these technologies will shape tourism in the future (Han et al., 2017). The distinctions between the real and digital experiences of culture and tourism are blurred due to ambient intelligence, ushering in a new era of cultural tourism

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(Buhalis, 2020). However, despite the new opportunities provided by information and communication technology (ICTs), the desire to travel and escape daily life still predominates. Utilising computer-generated images or videos, immersive technologies like Virtual Reality (VR) allow people to travel virtually while imitating real-life experiences and providing an alternative to traditional travel (Guttentag, 2010; Loureiro and Guerreiro, 2020). VR is the technological breakthrough that stimulates reality perception in real scenarios through computer-generated sensory outputs (Gavish et al., 2015).

VR has emerged over the past few decades as one of the most significant innovations in travel and tourism. It offers tourism operators cutting-edge media to improve the customer experience while allowing travellers to experience a destination or site early and quickly (e.g., Buonincontri and Marasco, 2017; Lin et al., 2020). VR experiences are excellent for engaging presentations that raise public understanding of cultural heritage, mainly if developed using web-based technology (Chotrov and Bachvarov, 2021). A study found that spatial presence influences how people feel about places; a stronger sense of spatial presence produces more substantial interest in and preferences for the tourist destination. This demonstrates how beneficial VR experiences are as a marketing tool (Tussyadiah et al., 2017).

The theoretical concept of stimulus-organism-response (SOR), according to Mehrabian and Russell (1974), is appropriate for this study due to its support for the environment can assess pro-environmental behaviour and conceptualise the VR tourism continuance intentions (e.g., Tandon et al., 2021; Kumar et al., 2021). Hence, SOR provides a pertinent framework for grounding our research goals. However, fewer studies have been on utilising VR for tourism destinations in pandemic circumstances. Hence, this study raises the following critical question:

1. How can VR effectively be used by Gen-Z to determine their visit intention?
2. What factors impact Gen-Z visit intention?

Therefore, this study aims to examine the Stimuli-Organism-Response (SOR) framework to explore the VR experience in Indonesia during the Covid-19 pandemic, which can replace actual travel in situations when travel options are constrained due to travel limitations amidst the COVID-19 pandemic. To understand the intricate process governing the interplay of SOR, this study is possibly sustainable for future tourism development (e.g., Wiltshier and Clarke, 2017).

## LITERATURE REVIEW

### 1. Virtual Reality

A computer-generated universe that simulates a natural or manufactured world is what has been referred to as virtual reality (Guttentag, 2010), where humans can live in a place and real situations (Diemer et al., 2015; Loureiro and Guerreiro et al., 2020) using or not using wearable technology (Wei, 2019). VR Technology has been used in tourism since the early 1990s (Hudson et al., 2019) to provide visitors with an immersive experience (Loureiro et al., 2020). This technology offers tourism operators cutting-edge media to improve the customer experience while allowing travellers to experience a destination early and easily (Lin et al., 2020; Buonincontri and Marasco, 2017).

Moreover, to improve the visitor experience before, during, and after visits, several tourism destinations have included VR applications in their experience portfolio (Errichiello et al., 2019). This is due to the possibility that VR is present for removing physical obstacles and reducing distance barriers. The benefits of VR could alter the nature of tourism which are movement and human presence to destination. Otherwise, this technology can create perceptions of users' feelings analogous to how they would in a physical location (Parsons et al., 2017). Since several theories have been applied to several studies on VR in gaming and tourist contexts, understanding the impact of VR utilising flow is a critical aspect of user experience (Kang et al., 2020). Furthermore, it has been demonstrated that flow has many dimensions, each linked explicitly to various psychological and behavioural impacts (An et al., 2021).

### 2. Stimulus-Organism-Response

This study employed the Stimulus-Organism-Response (SOR) framework as an overarching hypothesis since earlier studies had shown its ability to anticipate how visitors would respond to virtual reality stimuli (Talwar et al., 2022). Marketing researchers have used the S-O-R framework to comprehend environmental elements (Xu et al., 2014). The framework is based on the theories of Mehrabian and Russell (1974), who conceived behaviour as taking place in a setting composed of stimuli. The organism affects consumers' cognitive and affective processes, resulting in behavioural responses. The three-part paradigm has made it possible to create models that incorporate affective and cognitive intermediary layers rather than direct causal relationships between stimuli and action (Xu et al., 2014).

#### 2.1. Stimulus

According to Chen et al. (2019), the sense is a critical component of VR marketing since it elicits visual and auditory inputs and offers an immersive experience. The quality of sense in VR is determined by the VR technological aspects such as vividness and interaction (Shih, 1998; Steuer, 1992). Compared to traditional media, like television and movies, VR's visual and audio stimuli substantially affect information delivery. In Virtual Reality Experiences, the stimuli are the visualisation of Indonesian tourist destinations and the widespread use of online channel sources. VR gives viewers a more realistic and immersive experience than TV or movies because it increases the response time to changes in visual information (Aebli et al., 2021). Several studies supported the favourable association between sense and telepresence (Algharabat and Dennis, 2010; Dinh et al., 1999; Hulten et al., 2009).

Moreover, Lin and Kuo (2016) discovered that telepresence was highly influenced by sense as a visitor experience. The enhancement of telepresence by supplying sense was confirmed by Dinh et al. (1999). According to Mpinganjira (2016), focused attention and temporal distortion are two components of flow influenced by vision. In addition, a significant factor

in determining a satisfying experience is the quality of information (QOL) of VR travel content. Low-quality information distracts users, ultimately lowering the travel experience's value (An et al., 2021; Gao and Bai, 2014). This study involved sense and QOL as a part of stimulus on the SOR framework. Hence, the following hypotheses are:

- H1:** Sense (SEN) -> Telepresence (TEL)
- H2:** Sense (SEN) -> Focused Attention (ATT)
- H3:** Sense (SEN) -> Temporal Distortion (TEM)
- H4:** Quality of Information (QOL) -> Telepresence (TEL)
- H5:** Quality of Information (QOL) -> Focused Attention (ATT)
- H6:** Quality of Information (QOL) -> Temporal Distortion (TEM)

## 2.2. Organism

Three variables are employed in this study to explain the organism aspect: telepresence, focus attention, and temporal distortion. The word “telepresence” was first coined by Minsky (1980) to describe the phenomenon of humans experiencing a sense of being “transported” through a system. The fulfilling experience of being present in what seems to be a natural setting is also known as telepresence. It results inadvertently from tangibility and imaginative immersion (Beuckels and Hudders, 2016; Hopkins et al., 2004; Hyun and O’Keefe, 2012). Scholars from various disciplines, including tourism, computer science, psychology, and marketing, have studied and examined the telepresence concept in technology due to the initial description as “being transported” (Kim and Ayyagari, 2018, Viput et al., 2020). Sheridan (1992) claimed that sensory stimuli, sensor control, environmental control, task difficulty, and a higher level of automation are the five factors that cause telepresence. People are highly immersed and attentive during telepresence since they imagine firsthand encounters (Cuny et al., 2015; Huang, 2006). Telepresence can also reinforce the link between tourism and destination in VR. In the context of tourism in media such as youtube, the degree to which it depicts reality through the content can be an instance of an out-of-body experience (Lim and Ayyagari, 2018). Website users may have an intense sense of immersion because websites use a variety of multimedia materials and objects (animated graphics, sounds, and movies) (Sukoco and Wu, 2011). According to Kim and Hyun (2016), because of the mediated environment created by the website, telepresence may induce visitors to feel surprised or as though they are in a fantasy world.

Further explanations of how websites operate as stimuli that might affect visitors’ emotions and behaviours were provided (Lim and Ayyagari, 2018; Song et al., 2007). Similarly, Mollen and Wilson (2010) claimed that telepresence could be produced by website engagement, which fosters favourable consumer attitudes and behaviours. The ability to allow website users to feel as though they are transported into the reality of the hotel and experiences that they imagine that is near to the actual products and services supplied by the tourism destination, which similar presence-arousing tools would work well in a tourism video in the website. As a result, in the context of the current study, telepresence refers to the experiences that website visitors to tourism destinations have of feeling as though they have been psychologically transported into the world the hotel website has created and are now directly interacting with the goods and services offline. A study confirms that telepresence positively led to a high level of satisfaction (Aebli et al., 2021). However, there a study found that telepresence has no relationship to their purchase intention (Jang et al., 2019). Therefore, this study aims to explore the following hypothesis:

- H7:** Telepresence (TEL) -> Satisfaction (SAT)
- H8:** Focused Attention (ATT) -> Satisfaction (SAT)
- H9:** Temporal Distortion (TEM) -> Satisfaction (SAT)

## 2.3. Response

Studies related to the satisfaction of online and offline tourism encounters have become a predictor of tourist behavioural intention (Choi et al., 2018; Hudson et al., 2019). According to Wu et al. (2019), attachment to virtual reality (VR) experiences favourably and immediately increased satisfaction and behavioural intentions with the experiences, which were also validated in the context of hotel experiences (Wu and Cheng, 2018). In this definition, visit intention is a person's intention to visit a tourist destination that has already been virtually visited.

At the same time, satisfaction is defined as the overall appraisal of the experience compared to individual expectations (Oliver, 1980; Kim et al., 2020). Although Kim et al. (2020) discovered that VR attachment improves visitors' intentions to visit, their study did not examine how VR attachment affects visitors' enjoyment of the experience. According to studies on VR experiences as well as existing tourism literature (e.g., Prayag and Ryan, 2012; Akhoondnejad, 2016; Ramires et al., 2018), tourists' behavioural intentions are significantly influenced by their level of satisfaction (Hudson et al., 2019 and Lee et al., 2020). Therefore, this study aims to explore the hypothesis as follows:

- H10:** Satisfaction (SAT) -> Visit Intention (VIT)

## RESEARCH METHODOLOGY

This study employed a quantitative research approach with a survey method to collect data by distributing online questionnaires through email. The survey was sent to 215 Gen-Z in Indonesia, with a 92.55% of response rate or 199 participants who participated to be analysed. The questionnaire was designed to measure the tourists’ experience in VR simulations. Firstly, respondents were asked to confirm that they had experience in VR for leisure purposes, followed by demographic questions. Then, they were asked to assess their agreement level with the Likert scale (1= strongly disagree; 5= strongly agree). The survey depicted in Table 1, that more than half of the percentage was female, and the male accounted for 43.71%. In terms of their education, more than two-thirds of this study's respondents were at the undergraduate level, and nearly

half of the respondents were students. All respondents have experience in VR, and 78.89% of them also have an experience in tourism purposes with VR. Afterwards, participants were asked to complete the following stages in the questionnaire.

Table 1. Demographic Profile

Variables	Frequency	Percentage
<b>Gender</b>		
Male	87	43.71%
Female	109	54.77%
Prefer not to say	3	01.52%
<b>Education</b>		
Senior High School	23	11.56%
Diploma	19	09.55%
Undergraduate	157	78.89%
<b>Monthly Income</b>		
Below Rp. 2.000.000,-	158	79.39%
Rp. 2.000.100 – Rp. 3.900.000	32	16.08%
Above Rp. 3.900.000	9	04.53%
<b>Occupation</b>		
Student	189	94.97%
Entrepreneur	2	01.00%
Unemployment	6	03.03%
Employee	2	01.00%
<b>Experiences using Virtual Reality</b>		
Yes	199	100%
No	0	0%
<b>Experience use Virtual Reality for Tourism Purposes</b>		
Yes	157	78.89%
No	42	21.11%

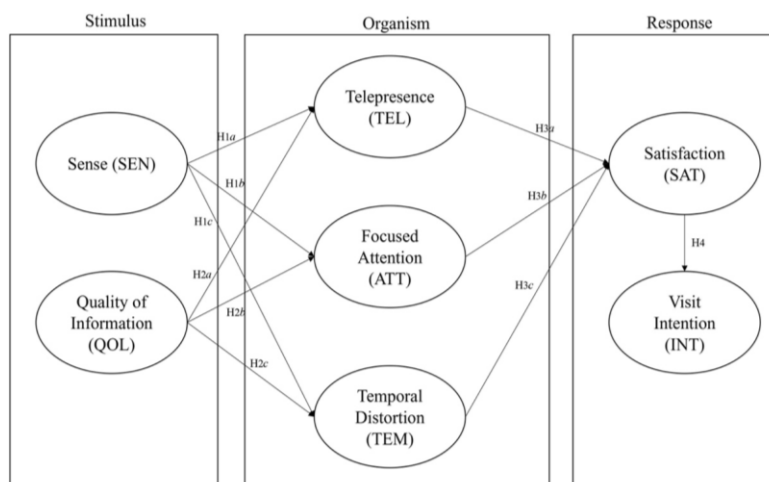


Figure 1. Research Framework (Source: An et al., 2021)  
(Virtual travel experience and destination marketing: Effects of sense and information quality on flow and visit intention)

The subsequent questions are for study measurement. The quality of VR travel content was conceptualised as the attributes of sense and information quality. The sense was measured with three items derived and modified from previous studies (Brakus et al., 2009; Lee et al., 2018; Ong et al., 2018). Three items were also used to quantify information quality (Ahn et al., 2007; Gao and Bai, 2014; Hsu et al., 2012; Lin, 2008; Lin and Lee, 2006). Three items were adopted and modified for telepresence by Choi et al. (2018) and Novak et al. (2000). For focused attention, another three items were utilised from prior investigations (Huang, 2003; Mpinganjira, 2016; Novak et al., 2000).

Table 2. Reseach Instruments and Outer Loadings

Variable	Code	Indicator	Outer Loadings
Sense	SEN1	Virtual travel appealed to my senses.	0.893
	SEN2	Virtual travel made a strong impression on my senses.	0.870
	SEN3	I found virtual travel interesting in a sensory way.	0.835
Quality of Information	QOL1	The information provided by virtual travel is accurate.	0.878
	QOL2	The information provided by virtual travel is reliable.	0.863
	QOL3	The information provided by virtual travel is well formatted.	0.806
Telepresence	TEL1	Virtual travel creates a new world for me, and this world suddenly disappears when I stop the VR program	0.801
	TEL2	I felt like I was actually in a real-world location during virtual travel	0.882
	TEL3	During virtual travel, my body is at my current location, but my mind is inside the world created by virtual travel.	0.806
Focused Attention	FCA1	I became absorbed in virtual travel.	0.839
	FCA2	I concentrated fully on virtual travel.	0.900
	FCA3	My attention was focused on virtual travel.	0.920
Temporal Distortion	TPD1	During virtual travel, time seemed to go by very quickly.	0.898
	TPD2	During virtual travel, I forgot the time flow.	0.906
	TPD3	During virtual travel, I tended to lose track of time.	0.900
Satisfaction	STF1	Overall, I was satisfied by my virtual travel.	0.832
	STF2	I possess a positive attitude toward virtual travel.	0.843
	STF3	My virtual travel experience was close to my expectation.	0.859
Visit Intention	VIT1	I plan to visit places that appeared in my virtual travel in the near future.	0.896
	VIT2	I will make an effort to visit places that appeared in my virtual travel in the near future	0.909
	VIT3	I have the intention to visit places that appeared in my virtual travel in the near future.	0.907
	VIT4	I am willing to visit places that appeared in my virtual travel in the near future.	0.878

Conversely, temporal distortion was assessed with three items derived and refined from Mpinganjira (2016) and Novak et al. (2000). To evaluate satisfaction, three items from existing research were applied (Gao and Bai, 2014; Hsu et al., 2012; Lin and Kuo, 2016). Visit intention was measured with four items by Lee et al. (2018). As a result of the aforementioned research instrument, Figure 1 shows the research framework used in this study which adapt derived from An et al. (2021). The online questionnaire was developed in the English language and back-translated into the Indonesian language. This survey was pre-tested on 30 hospitality students to minimise language biases. All participants were aware of the anonymity of the survey and

that the information would only be utilised for academic study and analysis. Indicators were evaluated with outer loading levels to determine how accurately they would measure the variable questions. The individual item reliability was measured using the standardised outer loadings (Roldán and Sánchez-Franco, 2012). For the manifest variable to be approved as a construction element, it must have a loading of at least 0.707 (Carmines and Zeller, 1979; Roldán and Sánchez-Franco, 2012). Table 2 demonstrates that each indicator's measurement is substantially coherent with the minimum demands of outside loadings. In a covariance SEM analysis, the vital signs result in a superior fit (Roldán and Sánchez-Franco, 2012).

**FINDING AND DISCUSSION**

**1. Reliability of the measurement**

Hair et al. (2016) and Urbach and Ahlemann (2010) both claim that Partial Least Square Structural Equation Model (PLS-SEM) can be used to analyse complicated research framework that contains several constructs. This can be used for exploratory and predictive analyses of the causal links and effects among variables proposed in theoretical models (Romo-Gonzales et al., 2018). Statistical analysis demonstrates the relationship between latent variables using measurement data from the indicator or latent variable (Williams et al., 2009). A reflective model was used in this study to analyse the data about reliability and validity criteria (Roldán and Sanchez-Franco, 2012). According to Chin (2010) and Hair et al. (2016), PLS is appropriate for researchers that need to employ latent variable scores in the predictive relationship of further analysis. For the two-step analytical process in this study, partial least squares with Smart PLS 3.0 were employed as a variance-based technique (Anderson and Gerbing, 1988). Measurement model analysis begins with evaluating reliability, convergent and discriminant validity. To examine research hypotheses, this study then evaluates the structural model.

Table 3. Convergent Validity and Reliability

Variables	No of Indicators	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Focused Attention (ATT)	3	0.864	0.917	0.787
Quality of Information (QOL)	3	0.807	0.886	0.722
Satisfaction (SAT)	3	0.799	0.882	0.714
Sense (SEN)	3	0.834	0.900	0.750
Telepresence (TEL)	3	0.774	0.869	0.690
Temporal Distortion (TEM)	3	0.885	0.929	0.813
Visit Intention (VIT)	4	0.920	0.943	0.806

Table 4. Discriminant Validity (Fornell-Larcker Criterion)

Variables	Focused Attention (ATT)	Quality of Information (QOL)	Satisfaction (SAT)	Sense (SEN)	Telepresence (TEL)	Temporal Distortion (TEM)	Visit Intention (VIT)
Focused Attention (ATT)	<b>0.887</b>						
Quality of Information (QOL)	0.617	<b>0.849</b>					
Satisfaction (SAT)	0.716	0.707	<b>0.845</b>				
Sense (SEN)	0.610	0.731	0.689	<b>0.866</b>			
Telepresence (TEL)	0.745	0.666	0.730	0.583	<b>0.831</b>		
Temporal Distortion (TEM)	0.677	0.486	0.598	0.513	0.556	<b>0.902</b>	
Visit Intention (VIT)	0.468	0.593	0.620	0.516	0.521	0.359	<b>0.898</b>

Table 5. Cross Loading

Indicators	Sense (SEN)	Quality of Information (QOL)	Telepresence (TEL)	Focused Attention (ATT)	Temporal Distortion (TEM)	Satisfaction (SAT)	Visit Intention (VIT)
SEN1	<b>0.893</b>	0.628	0.523	0.595	0.486	0.642	0.505
SEN2	<b>0.870</b>	0.633	0.503	0.487	0.440	0.603	0.435
SEN3	<b>0.835</b>	0.642	0.487	0.495	0.403	0.541	0.394
QOL1	0.656	<b>0.878</b>	0.588	0.562	0.470	0.637	0.498
QOL2	0.577	<b>0.863</b>	0.567	0.528	0.436	0.571	0.500
QOL3	0.633	<b>0.806</b>	0.543	0.477	0.322	0.595	0.518
TEL1	0.471	0.533	<b>0.801</b>	0.626	0.526	0.553	0.503
TEL2	0.506	0.625	<b>0.882</b>	0.577	0.372	0.639	0.432
TEL3	0.474	0.497	<b>0.806</b>	0.662	0.500	0.625	0.369
FCA1	0.513	0.507	0.692	<b>0.839</b>	0.599	0.610	0.350
FCA2	0.561	0.566	0.646	<b>0.900</b>	0.614	0.629	0.438
FCA3	0.548	0.566	0.648	<b>0.920</b>	0.590	0.666	0.454
TPD1	0.475	0.488	0.539	0.637	<b>0.898</b>	0.582	0.338
TPD2	0.476	0.449	0.500	0.627	<b>0.906</b>	0.541	0.299
TPD3	0.432	0.368	0.457	0.559	<b>0.900</b>	0.486	0.334
STF1	0.498	0.533	0.648	0.647	0.594	<b>0.832</b>	0.424
STF2	0.662	0.579	0.577	0.568	0.464	<b>0.843</b>	0.528
STF3	0.589	0.674	0.624	0.601	0.461	<b>0.859</b>	0.613
VIT1	0.480	0.577	0.470	0.449	0.370	0.582	<b>0.896</b>
VIT2	0.494	0.540	0.447	0.418	0.331	0.550	<b>0.909</b>
VIT3	0.444	0.521	0.469	0.458	0.314	0.561	<b>0.907</b>
VIT4	0.434	0.487	0.484	0.353	0.270	0.531	<b>0.878</b>

The first measurement of this study analysis is to assess the convergent validity and reliability, which have three criteria given (a) the Average Variance Extracted (AVE), (b) the item reliability of each measurement, and (c) the composite reliability of each construct. Each indicator's AVE and outer loadings were used to test the convergent validity (Fornell and Larcker, 1981). Values for the AVE should be higher than 0.50. Accordingly, at least 50% of the indicator variance must be considered (Roldán and Sánchez-Franco, 2012). As a result, all the variables in Table 3 above 0.50 denote a sufficient convergent validity measurement. The measurement's reliability was evaluated to confirm the items' consistency and stability. The Cronbach alpha should be higher than 0.7 to test a concept (Nunnally and Bernstein, 1994).

The scores were adequate, as evidenced by the Cronbach Alpha values of 0.774 – 0.920). On the other side, Internal Consistency Reliability was calculated using the Composite Reliability (CR) value (Kamis et al., 2020). To maintain sufficient internal consistency, CR scores must be more than 0.7 (Gefen et al., 2000; Hair et al., 2016). Table 2 shows that all values are above the threshold. The Fornell and Larcker, 1981 criterion was also used to corroborate the measures' discriminant validity of the AVE indices for each concept should be higher than the squared between the constructs (Bagozzi et al., 1991). The AVE square root value is compared to the construct correlation value in Table 4, which provides the highest value in any column or row relative to the highest correlation value of any other construct (Hair et al., 2016). Results satisfied the criteria according to the value analysis. The values answered the research question that was put forth on the validity of the research framework (Kamis et al., 2020).

Cross-loading analysis was then performed to determine any correlations between the constructs' values and the indicator-standardized data (Gefen and Straub, 2005). Additionally, by showing the Average Variance Extracted (AVE) value of each indicator that must be larger than the others, it can lessen the multi-collinearity between the latent variables (Fornell and Larcker, 1981; Chin, 1998; Vinzi et al., 2010). The outcomes are displayed in Table 5. The cross-loading values support the construct measurement framework's validity.

**2. Hypotheses identification**

Results of the proposed hypotheses are reported in Table 6 (Path Coefficient) and Figure 2 (Bootstrapping result in Smart PLS 3). All hypotheses were significant and accepted. In stimulus and organism correlation, findings have shown that the first hypothesis, sense positively impacts telepresence (H1:  $\beta = 0.206, t = 2.341, p < 0.05$ ), second hypothesis, telepresence directly influences focused attention (H2:  $\beta = 0.341, t = 3.627, p < 0.05$ ), third hypothesis sense has a significant impact on temporal distortion (H3:  $\beta = 0.338, t = 3.172, p > 0.05$ ) followed by quality of information positively affect telepresence as a fourth hypothesis (H4:  $\beta = 0.516, t = 6.487, p > 0.05$ ), quality of information directly impact on focused attention as a fifth hypothesis (H5:  $\beta = 0.367, t = 4.380, p > 0.05$ ), and sixth hypothesis, quality of information has a significant impact on temporal distortion (H6:  $\beta = 0.239, t = 2.157, p > 0.05$ ). In organism and response correlation, the path coefficient has depicted that the seventh hypothesis, telepresence has a positive influence on satisfaction (H7:  $\beta = 0.422, t = 7.541, p > 0.05$ ), focused attention directly affects satisfaction as the eighth hypothesis (H8:  $\beta = 0.288, t = 3.661, p > 0.05$ ), temporal distortion significantly influences satisfaction as a ninth hypothesis (H9:  $\beta = 0.169, t = 2.180, p > 0.05$ ), and last hypothesis satisfaction positively influences the travel intention (H10:  $\beta = 0.620, t = 10.340, p > 0.05$ ).

Table 6. Path Coefficients

	Path	Beta	t value	p values	Result	F2
H1	Sense (SEN) -> Telepresence (TEL)	0.206	2.341	0.020	Accepted	0.037
H2	Sense (SEN) -> Focused Attention (ATT)	0.341	3.627	0.000	Accepted	0.096
H3	Sense (SEN) -> Temporal Distortion (TEM)	0.338	3.172	0.002	Accepted	0.075
H4	Quality of Information (QOL) -> Telepresence (TEL)	0.516	6.487	0.000	Accepted	0.232
H5	Quality of Information (QOL) -> Focused Attention (ATT)	0.367	4.380	0.000	Accepted	0.111
H6	Quality of Information (QOL) -> Temporal Distortion (TEM)	0.239	2.157	0.031	Accepted	0.038
H7	Telepresence (TEL) -> Satisfaction (SAT)	0.422	7.541	0.000	Accepted	0.204
H8	Focused Attention (ATT) -> Satisfaction (SAT)	0.288	3.661	0.000	Accepted	0.074
H9	Temporal Distortion (TEM) -> Satisfaction (SAT)	0.169	2.180	0.030	Accepted	0.040
H10	Satisfaction (SAT) -> Visit Intention (VIT)	0.620	10.340	0.000	Accepted	0.625

**DISCUSSION**

VR technology has advanced rapidly, allowing tourism and hospitality sectors to improve the tourist experience and allowing the potential visitor to pre-experience a tourism destination and offer easy access. A few research have specifically addressed the significance of the existential VR experience for a tourism destination during the Covid-19 pandemic in Indonesia, especially in determining factors in evoking tourist satisfaction and people's behavioural intention.

Employing the S-O-R framework, this study examined several variables consisting of stimuli (sense and quality of information), organism (telepresence, focused attention, and temporal distortion), and response (satisfaction and visit intention). Through the SEM analysis, this study has assessed the research questions related to the Gen-Z experience using VR for tourism purposes. The first examination of RQ1 concerns how VR can effectively be assessed using the S-O-R framework to determine tourist visit intention. This study result has shown that the sense and quality of information significantly affect telepresence, focused attention, and temporal distortion. In particular market segmentation, Gen-Z in Indonesia perceived VR has appealed to their sense and provided accurate tourism content. Telepresence fosters a favourable attitude toward the platform when users feel they are transported to the virtual world (Lee, 2018). This has influenced their positive effect on their new world. They are fully focused and able to absorb information, although they

tend to lose track of time. Therefore, this study result verifies other research findings that VR fosters a favourable psychological state that results in users' behavioural intentions (Xi and Hamari, 2021; Kang et al., 2020; Jang et al., 2019).

The second examination of RQ2 concerns the factors that influenced Gen-Z visit intention to tourism destinations using VR. The study result explained that satisfaction variables directly influenced their visit intention. This result is similar to previous studies that found that satisfaction directly affects visiting intention (Muensit and Thongmak, 2022; Atzeni et al., 2021); An et al., 2022). VR has given the pre-travel experience to people, which can process their sense and quality of information that provides new experiences. People enrich their organism steps through the stimuli stages to participate in a real-world simulation. This has driven their mind to concentrate on VR tourism content. However, another study found that visitors' formed attachment to VR has a considerable impact on visit intention but is revealed to have less effect on satisfaction (Kim et al., 2020). Therefore, their involvement in technology made them out of the real world and affected their temporal distortion. The relationship between humans and VR technology vividly improves the possibility of travelling in stay-home order as a substitute for human existence in tourism destinations.

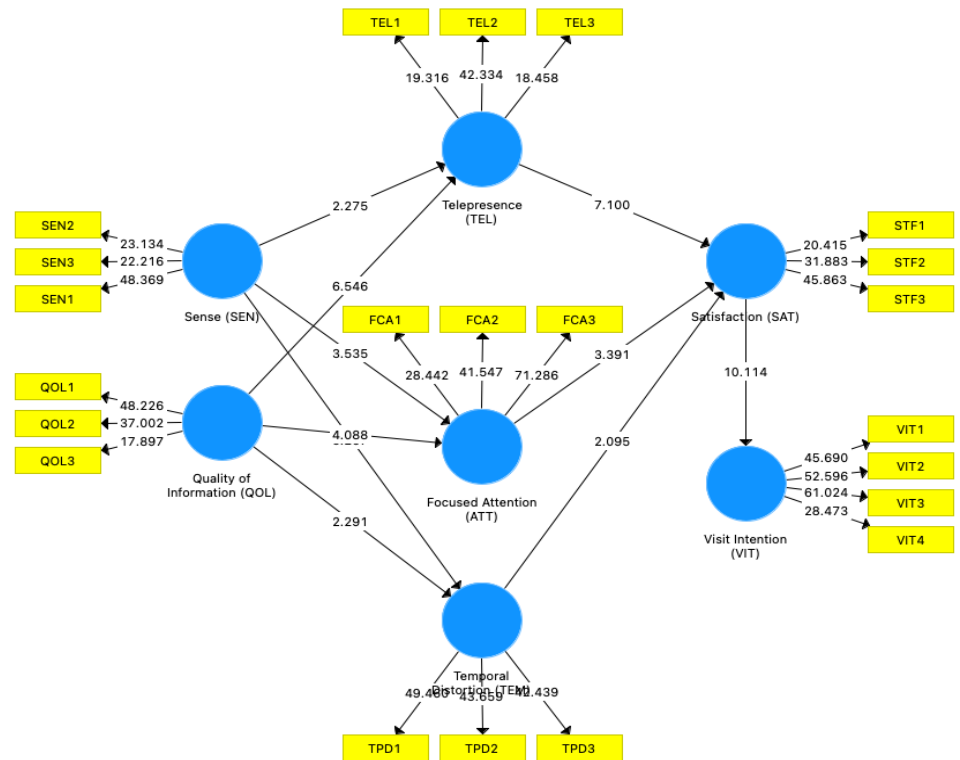


Figure 2. Structural Model (Bootstrapping result – PLS 3)

**CONCLUSION AND IMPLICATIONS**

This study investigated the VR potential technology utilised by Gen-Z to influence their visit intention during the Covid-19 pandemic. This study aimed to look into the possibility of using virtual reality to substitute actual travel when it is restricted due to external factors. The research questions on Gen-Z VR experiences are answered through SEM analysis. VR plays as a substitute for actual travel when travel is prohibited owing to external and environmental factors by employing the research model with variables such as stimuli, organisms, and response. Satisfaction is the factor that directly affected Gen-Z's visit intention to tourist destinations after the VR experience. This study found that all stimuli impact the organism variables, raising Gen-Z's satisfaction with the technology engagement. Forecasting potential visitors' propensity to visit depended heavily on their enjoyment of the VR experience provided by the site.

Young adults travel more frequently and for more extended periods. They are questioning the established practices of the tourist sector in their pursuit of transformative and meaningful experiences. The tourism and hospitality sector has already been revolutionised by Gen-Z, who demand more engaging experiences across all sectors (Buhalis et al., 2020). In addition, Gen-Z was the profitable market in Indonesia during the pandemic since they contributed more likely to tourism and hospitality in Indonesia than the other generations (Choirisa and Rizkalla, 2021).

This study has several limitations that can potentially be addressed in future research. Determining the generation sample can be beneficial to consider a better understanding of technology implementation. This study only used Gen-Z as a respondent; future studies can mediate diverse generations to seek possibilities in tourism marketing segmentation. In addition, an in-depth interview as a qualitative research method is also suggested to validate the study's finding of VR effectiveness. Subsequently, this study cannot be generalised since the sample was only for Gen-Z in Indonesia. The result might be different in dynamic respondents. This study contributes to the literature as an expansion of the Stimulus-Organism-Response model as a study framework to present a study of human-technology interaction through the Covid-19 pandemic. The findings showed how VR technology could simulate travel experiences and even replace actual travel (Sarkady et al., 2021). Damjanov and Crouch (2019) state that VR experiences go beyond physical representations. It primarily concerns the visitor's subjective experience in the mediated realm, as evidenced by existential authenticity's significant and direct influence on the visitors' cognitive response. This result emphasises the significance of VR technology experiences in conveying the tourism destination in stimulating vivid cognitive and emotional responses. It also consolidates our understanding of the relationships between perceived and tourists' responses.

The research findings and discussion lead to essential managerial implications. Tourism marketers must grasp the opportunity to produce VR content and create a genuine preview of the tourism destination. Planning technologically savvy

activities that keep the appeal of real travel and promote wanderlust while utilising technology to replace actual tourist activities can be difficult. Customers should be able to use the VR platform easily via various devices, including smartphones, tablets, and other mobile devices, in terms of service and system quality (Muensit and Thongmak, 2022).

In addition, enriching media tools, video, music, and animation, can be considered tools that make an experience vivid (Cheng et al., 2014). Moreover, The Ministry of Tourism and Creative Economy in Indonesia should provide at least the Indonesian' tourism destination priority to have 360 videos or VR animation to make people easy to seek tourism content as a pre-travel experience. Although the Indonesian government has offered super-premium destination 360 official videos on social media, the content needs to be emphasised for post-pandemic excitement to sustain their commercial success (Talwar et al., 2022). The immense support from the government for tourism towards technological advancement can significantly enhance potential tourists as a target and boost their willingness to visit Indonesian tourist destinations.

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