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Factors Influencing 5G Adoption in Java: A Theory of Consumption Value and Stimulus-Organism-Response Approach

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ABSTRACT

The rapid advancement of information and communication technology has led to a significant transformation in telecommunication networks, particularly with the introduction of 5G technology, which offers high speed, low latency, and extensive device connectivity. However, the adoption of 5G in Indonesia, particularly in Java, remains challenging due to unequal network distribution and disparities in purchasing power between urban and rural areas. This study examines the key factors influencing consumer acceptance of 5G services in Java using the Theory of Consumption Value (TCV) and Stimulus-Organism-Response (SOR) framework. A descriptive quantitative approach was applied, collecting primary data from 200 respondents through purposive sampling. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that Safety Affordance and Facilitation Conditions significantly influence consumption value, whereas Visibility Affordance and Guidance Affordance do not. These results highlight the importance of security perceptions and supporting infrastructure in 5G adoption. This study contributes to the theoretical understanding of technology adoption by integrating TCV and SOR in the context of 5G and provides practical recommendations for policymakers and service providers to enhance 5G implementation, particularly by addressing infrastructure gaps in rural areas.

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1. INTRODUCTION

The evolution of communication technology has significantly transformed with the introduction of 5G networks, which provide high speed, low latency, and large capacity compared to earlier generations [1], [2]. The transition from 1G to 4G has transformed interactions, while 5G offers more innovation through affordability, visibility, and informed consumer choices [3], [4]. The adoption of 5G networks in Indonesia, particularly in Java, is still not at an optimal level. This slow adoption suggests that there are challenges in consumer acceptance of the technology. These challenges may stem from various factors that have not been thoroughly explored in the local context, as well as ongoing concerns about radiation and health effects [5]–[7]. The implementation of 5G should be tailored to the needs and purchasing power of people across different regions, taking into account the disparities between urban and rural areas [8]. While 4G/LTE is predominant, some areas still rely on 3G, and the national standard remains 4G [8]. There is a noticeable gap in the use of mobile phones between urban and rural areas. While mobile phones encourage easy internet access that can improve quality of life, many people still face obstacles such as a lack of knowledge and a fear of technology [9]–[12].

In this study, the author utilizes the Theory of Consumption Values (TCV) and the Stimulus-Organism-Response (SOR) framework to explore the factors influencing the adoption of 5G network technology in Java. The TCV highlights five key aspects of consumption value—functional, social, emotional, knowledge, and situational values—that impact consumer decisions related to technology adoption [13]. Consumers assess the value of a product or service before making a purchase decision, as research on food ordering applications has demonstrated. [14]–[16]. The Theory of Consumption Values integrates both emotional and cognitive aspects in decision-making, offering a comprehensive understanding of consumption value [15], [17], [18]. This method forms the basis of contemporary marketing strategies focused on delivering customer value and establishing competitive advantage. Perceived value represents how consumers assess a product's benefits and costs in comparison to its rivals [19]. In the context of technology, consumption value has expanded into the digital realm, including in the adoption of 5G networks [20]. Previous studies have shown two main approaches in measuring consumption value: a unidimensional approach based on utility and economics, and a multidimensional approach that captures the complexity of perceived value. These studies have identified various dimensions of value that are relevant in consumer decision-making, which can be applied to research on 5G adoption [21]. The SOR (Stimulus-Organism-Response) model is used to explain how external stimuli affect an individual's internal processes that ultimately result in behavioral responses. Stimulus in this context is an external factor that affects the psychological condition of consumers, which then triggers their decisions regarding 5G adoption [22].

In the context of 5G adoption, the stimulus factors studied include visibility affordance, safety affordance, guidance affordance, and facilitation conditions [23]. Visibility affordance refers to the accessibility of product information, which can enhance consumer engagement and perceived social value. [24]. Second, safety affordance refers to the perception of safety and the risks associated with using 5G, which is shaped by consumers' understanding of potential health and environmental hazards.Second, safety affordance refers to the perception of safety and the risks associated with using 5G, which is shaped by consumers' understanding of potential health and environmental hazards [23]. Third, guidance affordance refers to information support provided to consumers to reduce uncertainty about new technologies [25]. Fourth, facilitation conditions include regulatory and infrastructure support that affect the acceptance of 5G technology in society [23]. Based on this background, this study aims to identify the factors that influence consumer behavior and intentions. to adopt 5G services in Java Island by integrating TCV and SOR perspectives. In addition, this study also explores the influence of personal innovation and environmental concern on 5G adoption intentions, given that consumers who are innovative and care about the environment are more likely to adopt new technologies that support sustainability [26].

The contribution of this study is to fill the gap in 5G adoption studies in Indonesia with a consumption value-based approach. This study integrates the Theory of Consumption Value (TCV) and Stimulus-Organism-Response (SOR) theories to analyze consumer behavior in adopting 5G network technology. With this approach, this study provides a more comprehensive an understanding of the factors that influence. 5G adoption decisions in Indonesia.

2. METHODS

The research method to be carried out will go through several stages as can be seen in Fig. 1. Problem identification is the initial step, by determining the main problems related to the adoption of 5G technology in Java. Furthermore, the formulation of hypotheses is carried out based on relevant theories to understand the relationship between research variables. Primary data collection was conducted. Through a questionnaire using a 5-point Likert scale. with a purposive sampling technique to ensure the relevance of the data obtained. After the data was collected, the data cleaning stage was carried out to eliminate inconsistencies and ensure the accuracy of the analysis. Data analysis used descriptive statistical tests with SPSS and PLS-SEM, which were chosen because of the exploratory nature of the research and the existence of latent variables. The hypothesis testing process includes evaluation of the measurement model (convergent and discriminant validity), evaluation of the structural model (relationships between variables and collinearity), and evaluation of model fit using R-Square, F-Square, and SRMR. With this approach, the study is expected to provide in-depth insight into the factors that influence the adoption of 5G technology in Java.

2.1. Research Framework

This study focuses factors influencing the adoption of 5G technology Java Island, considering various affordances such as visibility, safety, guidance, and facilitation conditions. As shown in Fig. 2, this research

framework links independent variables with dependent variables to understand the consumption value of 5G technology in areas with rapidly developing digital infrastructure.

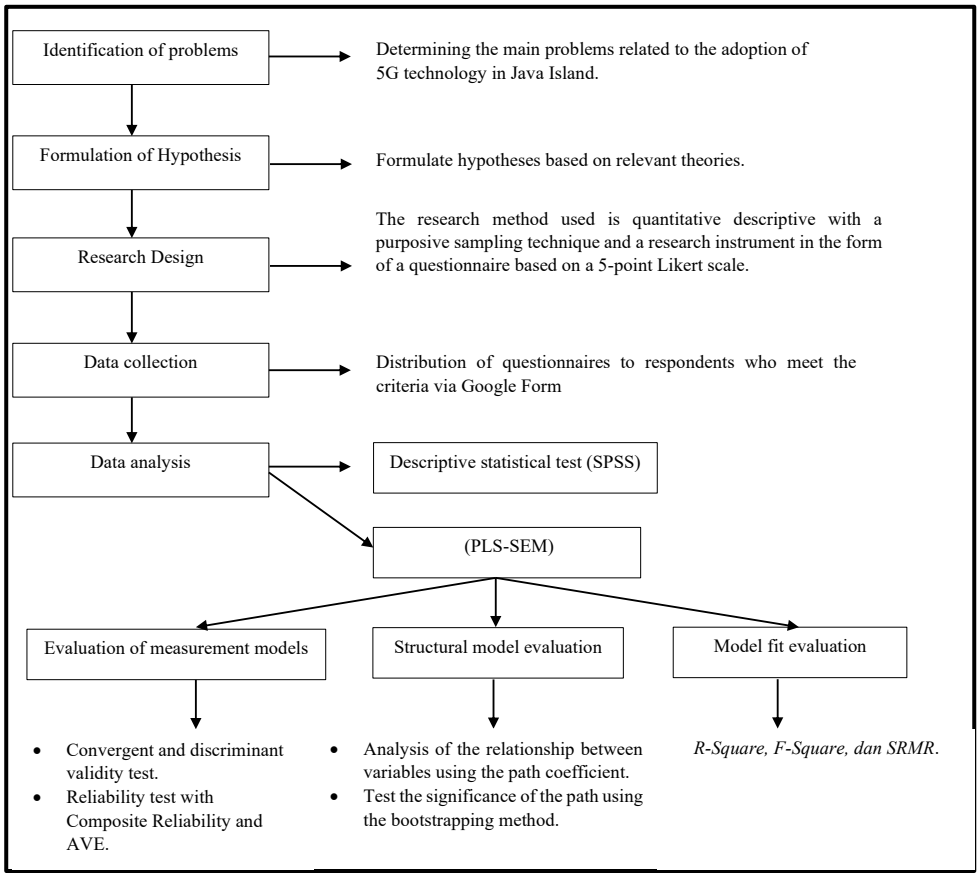

Fig. 1. Research Methodology Flowchart

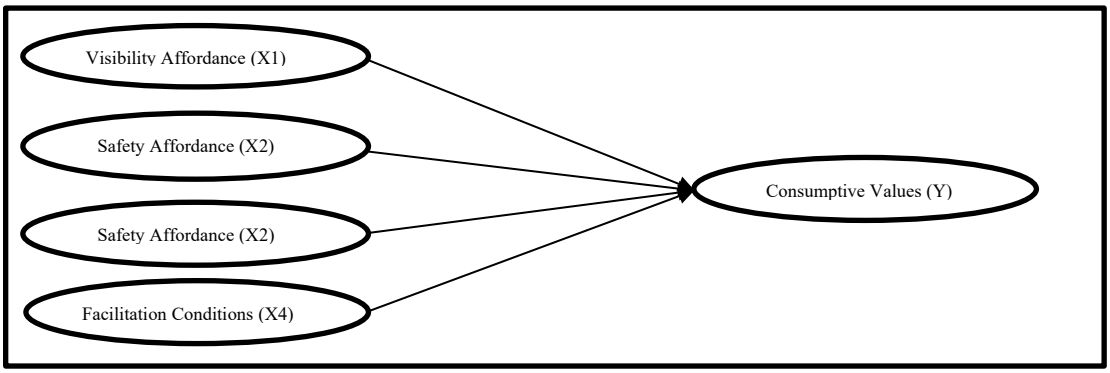

Fig. 2. Research Framework

The four independent variables (Visibility Affordance, Safety Affordance, Guidance Affordance, and Facilitation Conditions) are assumed to the independent variable has a direct influence on the dependent variable, which is specifically mentioned. Consumption Values, which reflect the perception and consumptive benefits felt by users in adopting 5G network technology. This framework is used to test the significant relationship between these variables in accordance with the research objectives [23], [27].

2.2. Research Design

This research aims to test the accessibility of the 5G network on Java Island using the TCV and SOR approach. The independent variables in this research include Visibility Affordance, Safety Affordance,

Technology Stigmas, Guidance Affordance, and Facilitation Conditions, while the dependent variable is Consumption Values. The research method used is a descriptive quantitative method. An exploratory study was carried out because information about this situation is still limited, so a preliminary study is needed to understand the problem, determine the scale, and explore the phenomenon in depth [23], [28].

2.3. Variables and Operational Definitions of Research Variables

The main focus of this study is the dependent variable., which aims to understand and explain the variations that occur in it. By analyzing the dependent variable, researchers try to find solutions to existing problems and measure the dependent variable along with the factors that influence it. The independent variable is generally considered a factor that influences the dependent variable, either positively or negatively. Its presence is related to the dependent variable, where an increase in the independent variable tends to increase the dependent variable. In other words, variations in the dependent variable occur as a result of the independent variable. In this study, the independent variables consist of Visibility Affordance (X1), Safety Affordance (X2), Guidance Affordance (X3), and Facilitation Conditions (X4), while the dependent variable is Consumption Values (Y).

Visibility affordance refers to the ease with which consumers access relevant information about a product so that they can understand its quality before making a purchasing decision [24], [29]. Consumers often choose high-quality products to show social status through conspicuous consumption, which reflects the physical or social value associated with the use of the product. Security affordances, on the other hand, focus on protection in the use of the product. Lack of information about safety increases risk perception, which ultimately decreases consumer willingness to purchase [23]. Affordability of product security relates to the provision of security features for safe use. Buyers are risk averse, and lack of information can reduce purchase intention. Risk understanding and factors such as knowledge, environment, and health awareness influence perceptions of 5G products, including their potential negative impacts [22], [33], [24]. Technology stigma, which is a negative perception of the risks of new technologies, can create confusion and uncertainty regarding their impact on safety and health. This can be overcome by providing personalized services and relevant and authentic information according to consumer needs [25], [34], [35]. An enabling environment, such as government support and regulation, helps drive investment in 5G infrastructure. This support includes simplifying licensing, tax incentives, and spectrum frequency management, which enable reliable and high-quality 5G services and accelerate network development [27], [36], [37], [38]. In addition, effective regulation also ensures adequate security measures, creates a competitive market, improves service quality, and encourages innovation while protecting consumers [27]. Consumer perceived value reflects the balance between product benefits and costs. This value is a determinant of intention and service utilization, especially in the telecommunications sector [23] Services or products that can trigger emotions, preferences, or impacts provide functional, emotional, and social value to consumers. Trust also plays a key role, helping to reduce uncertainty and perceived risk. This trust is seen as a reliance on the quality and commitment of service providers, which has a major influence on purchasing patterns and the adoption of new technologies [39]. [23], [40], [41].

2.4. Data Sources and Data Collection Techniques

This research uses primary data obtained directly from respondents through questionnaires. The sampling technique used was purposive sampling, with certain criteria that ensure the relevance of the data obtained. The questionnaire uses a 5-point Likert scale, which was chosen because of its ease in detecting neutral responses or respondents' disagreement compared to larger scales [42].

2.5. Hypothesis Testing Method

This study employs Partial-Least-Squares (PLS) as the technique used for data analysis. PLS Structural-Equation-Modeling (PLS-SEM) Has been designed to develop and build the information to meet specific measurement criteria and applies to complex models. This analysis does not depend on particular distribution assumptions and is suited for testing theoretical models with a focus on prediction and theory development.

The evaluation process in PLS-SEM includes assessing measurement models, structural models, and overall model fit. Throughout this research, Secondary Confirmatory-Factor-Analysis (CVA) is utilized for measure latent variables, which consist of indicators that are not directly observable. The estimation method employed is a two-stage approach. In the initial stage, we estimate this dimensions of the variables, and in the second stage, we use the scores of the latent variables as core dimensions or sub-variables [23].

First, descriptive the values of the latent variables statistical tests aim to describe or develop an understanding of a phenomenon through a sample or population of data studied without analyzing and drawing

conclusions. This test includes the average, minimum, maximum, and standard deviation values, to describe or explain data from respondents' responses to each variable measurement indicator. Secondly, the assessment of the measurement model is a part regarding the path framework that links indicators towards other variables, following specific criteria for measurement items. Secondly, the evaluation of the measurement model is a part of the path model that links indicators to other variables, following specific criteria for measurement items [43]. Convergent validity measures how strongly the indicators of a variable correlate as a whole. It is assessed using three key metrics: the loading factor, composite reliability (CR), and average variance extracted (AVE).

The loading factor indicates how valid an item is in measuring a variable. The suggested minimum value for the loading factor is 0.70 or 0.06. If an item's loading factor falls below 0.70, it should be removed from the model and re-estimated [43]. Composite Reliability (CR) assesses the reliability or coherence of a measurement instrument. A recommended lowest CR value of 0.70 indicates which the instrument is generally consistent and reliable in measuring the variable [43]. Average Variance Extracted (AVE) serves as an indicator of convergent validity that indicates the extent to which a set of measurement items collectively represents or reflects a particular variable. Additionally, AVE provides insight into the share of variance within the measurement items that can be ascribed to the variable being measured. A minimum AVE value of 0.50 is generally recommended [43]. Discriminant validity measures how well a variable differentiates itself from other variables, specifically in terms of its measurement and its representation of a single construct. It can be assessed using several methods, including cross-loading, the Average Variance Extracted (AVE) Root, and the Heterotrait-Monotrait Ratio (HTMT) [43]. Cross-loading is an evaluation of the level of discriminant validity assumptions. To assess discriminant validity, the criterion is that the cross-loading value of each indicator within a variable must be higher than the cross-loading values of the same indicator in other variables [43]. HTMT (Heterotrait-Monotrait Ratio) is a measure used to assess discriminant validity, in addition to the Fornell and Larcker criterion. A recommended HTMT value is below 0.90. HTMT represents the ratio between heterotrait correlations, which measure the average correlation between items that assess different variables, and the geometric mean of monotrait correlations, which measure the correlation among items that assess the same variable [43].

Third, evaluating the structural model involves testing the research hypothesis by examining the influence between the variables represented by the path coefficients. The stages of hypothesis testing typically include checking for collinearity between the variables, which is conducted through the results of model estimation to ensure that there is no collinearity or high correlation among the variables. Includes evaluating the research hypothesis by assessing the effects among variables as indicated by path coefficients [43]. Assessing the significance of the path coefficient in SEM (Structural Equation Modeling) is directly linked to hypothesis testing. In SEM-PLS (Partial Least Squares), this process is conducted using bootstrapping, where a T-statistic greater than 1.96 or a p-value below 0.05 signifies a significant relationship between variables. [43]. Fourth, Evaluation of Model Goodness and Suitability. In this step, we will evaluate the overall model. SEM PLS, or Structural modeling approach with PLS-SEM (Partial Least Squares Structural Equation Modeling), is a type of SEM analysis that focuses on variance and aims to test the theoretical model with an emphasis on prediction. Several measures have been developed to assess the acceptability of the proposed model, including R-Squared, Q-Squared, and SRMR [43]. R-squared is a statistical measure that indicates the extent to which variation in dependent variables Can be accounted for by independent or intrinsic factors Inside the model. Generally, R-squared values are interpreted as follows: a value of 0.19 represents a low influence, 0.33 signifies a moderate influence, and 0.66 denotes a high influence [43]. F-Square measures the impact Of variables in the structural model and is used to assess the model's suitability. F-Square values of 0.02, 0.15, and 0.35 suggest that a variable has a weak, moderate, or strong impact, respectively, on predicting latent variables at the structural level. Essentially, F-Square quantifies the extent to which variables influence the structural predictions of the model [43].

3. RESULTS AND DISCUSSION

This section is divided into three parts: The findings of the outer Model, including the inner structure, and the evaluation of the model's suitability and goodness. In this study, the measurement model follows a reflective approach. The evaluation of this reflective measurement includes Convergent and Discriminant Measurement Validity. In this section, we will discuss Structural Model Test (Inner Model) Results, which includes the Inner Variance Inflation Factor (VIF) and the Significance Path Coefficient. At this stage, we will evaluate the overall model. Several measures will be used to determine whether the proposed model is acceptable, including R-Squared, Q-Squared, and Standardized Root Mean Square Residual (SRMR) [43]. Model pengukuran dalam

penelitian ini terdiri dari model pengukuran reflektif. Dalam Hair *et al.* evaluasi pengukuran reflektif terdiri dari *Convergent Validity* dan *Discriminant validity* [43].

3.1. Evaluation of Measurement Model (*Outer Model*)

The evaluation of the measurement model in this study employed a reflective measurement model. As shown in Table 1, The assessment of the reflective the model incorporates convergent validity and discriminant validity [43]. Convergent validity was tested using outer loading, composite reliability (CR), and Average Variance Extracted (AVE). An indicator qualifies as valid if its outer loading surpasses 0.7. Additionally, a minimum composite reliability of 0.70 is required to establish good internal consistency. The AVE should be at least 0.50, signifying that the variable sufficiently captures all measurement items [43].

Table 1. Evaluation of Convergent Validity and Discriminant Validity Measurement Models

Latent Variables	Measurement Items	*Outer loadings*	*Composite reliability*	AVE	Note
Visibility Affordance	VA1	0.711	0.834	0.589	Fulfilled
	VA2	0.785			
	VA3	0.765			
	VA4	0.860			
	VA5	0.705			
Safety Affordance	SA1	0.803	0.865	0.808	Fulfilled
	SA2	0.862			
	SA4	0.853			
	SA5	0.824			
Guidance Affordance	GA1	0.847	0.933	0.780	Fulfilled
	GA2	0.877			
	GA3	0.907			
	GA4	0.882			
	GA5	0.903			
Facilitation Conditions	FC3	0.924	0.789	0.808	Fulfilled
	FC4	0.873			
Consumtive Values	CV1	0.831	0.908	0.717	Fulfilled
	CV2	0.853			
	CV3	0.835			
	CV4	0.863			
	CV5	0.852			

Convergent validity testing was carried out By utilizing outer loading, composite reliability (CR), and AVE values. Outer loading is considered valid if the value is > 0.7, indicating that the indicator is feasible for research. The minimum recommended composite reliability is 0.70, which means that the instrument is consistent and reliable in measuring variables. Meanwhile, the minimum recommended An AVE value of 0.50 signifies that the variable can reflect the overall measurement item [43]. Discriminant validity is tested using cross-loading values, AVE roots, and HTMT. An indicator meets discriminant validity is achieved if the cross-loading value on the variable is greater than that of other variables, as seen in this study, where each item of the Usage Interest measurement has a higher correlation with its own variable. In addition, the recommended HTMT value < 0.90 shows indicating that the variables in this study fulfill the criteria for good discriminant validity [43].

Based on Table 2, each variable has a value below 0.90, indicating that the criteria have been met. The HTMT value, which is entirely below 0.90, demonstrates that the variables in this study satisfy The criteria for achieving discriminant validity. This suggests that each variable is distinct from the others and that there is no issue with multicollinearity. As a result, it can be concluded that all variables in the model have been effectively separated, allowing for further analysis with confidence in the quality of the data used. The results of the analysis showed that the correlation between constructs did not exceed the square root of their respective AVEs, confirming that the constructs had adequate discriminant validity. This strengthens the model in this study by ensuring that each construct has a different meaning and does not overlap [43].

3.2. Test the Structural Model (Inner Model)

Evaluating the structural model is intended to test the research hypothesis by analyzing the relationship between variables through the path coefficient. As shown in Fig. 3, this process includes Collinearity Assessment, which measures collinearity between variables using the inner Variance Inflated Factor (VIF).

The recommended VIF value is less than 5 to avoid excessive correlation. In addition, Path Coefficient Significance Testing in Structural Equation Modeling (SEM) is carried out using the bootstrapping method to determine the statistical significance of the relationship between variables [28].

Table 2. HTMT (Heterotrait-Monotrait Ratio)

	Consumptive Values	*Facilitation Conditions*	*Guidance Affordance*	*Safety Affordance*	*Visibility Affordance*
Consumptive Values					
Facilitation Conditions	0.618				
Guidance Affordance	0.564	0.595			
Safety Affordance	0.589	0.490	0.692		
Visibility Affordance	0.418	0.375	0.523	0.643	

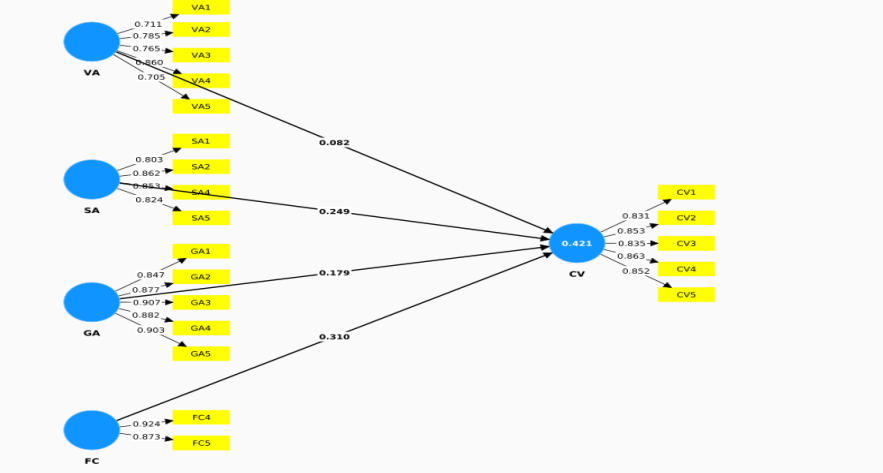

Fig. 3. Test Structural Model (Inner Model)

The structural framework test (Inner Model) includes the analysis of Inner VIF and the significance of path coefficients. As shown in Table 3, Inner VIF is used to assess the collinearity between variables based on the results of the model estimation. This The purpose of the evaluation is to assess whether there is a relationship between variables. The recommended Inner VIF value is below 5, in order to avoid excessive collinearity problems and ensure more accurate analysis results [43].

Table 3. VIF (Variance Inflated Factor)

Variable	Consumptive Values
Visibility Affordance	1.466
Safety Affordance	1.924
Guidance Affordance	1.908
Facilitation Conditions	1.358

The structural framework test (Inner Model) shows that all variables exhibit Inner VIF values below the threshold of 5, as shown in Table 3. The VIF values for Visibility Affordance (1.466), Safety Affordance (1.924), Guidance Affordance (1.908), and Facilitation Conditions (1.358) indicate that there is no excessive collinearity problem between variables. Thus, this model meets the recommended criteria, so that the analysis results can be interpreted more accurately without any significant collinearity influence [43].

The path coefficient significance test is conducted to evaluate the research hypothesis by determining whether the relationships between variables are statistically significant. In this analysis, the p-value serves as the primary indicator, where a lower p-value indicates stronger evidence of a significant relationship between the tested variables. As shown in Table 4, if the p-value falls below the predetermined threshold (typically

0.05), the relationship is considered significant, thereby supporting the proposed hypothesis. This test plays a crucial role in validating the structural model and ensuring the reliability of the research findings [43].

Table 4. Path Coefficient

Hypothesis	*Original sample (O)*	*Sample mean (M)*	*Standard deviation (STDEV)*	*T statistiks (|O/STDEV|)*	*P values*
H1	0.082	0.091	0.063	1.312	0.095
H2	0.249	0.249	0.114	2.182	0.015
H3	0.179	0.178	0.111	1.604	0.054
H4	0.310	0.312	0.075	4.140	0.000

The results of the significance test showed that Visibility Affordance (0.082) and Guidance Affordance (0.179) had a positive but not significant effect on Consumptive Values, with t-statistic <1.96 and p-value >0.05, respectively, so both did not affect the interest in using 5G network technology. On the contrary, Safety Affordance (0.249) and Facilitation Conditions (0.310) Exerted a positive and significant influence on user interest, with t-statistic >1.96 and p-value <0.05, indicating that changes in these two variables increase interest in the use of 5G network technology.

3.3. Model Fit and Goodness Evaluation

At this stage, a comprehensive evaluation of the research model is carried out. As shown in Table 5, there are several measures used to assess whether the proposed model is acceptable, including R Square, F-Square, and SRMR [43]. Specifically, the R-Square value represents the degree to which variations in endogenous variables are explained by exogenous or other endogenous variables within the model. Qualitatively, an R-Square value of 0.19 suggests a low influence, 0.33 indicates a moderate influence, and 0.66 signifies a high influence [33]. Therefore, a higher R-Square value indicates a greater ability of the model to explain the relationships between variables.

Table 5. R Square

	R-square	R-square adjusted
Consumptive Values	0.421	0.409

Based on Table 5, the R Square value of 0.421 shows Indicating that the independent variables account for 42.1% of the variation of endogenous variables, while other factors outside the model influence 57.9%. According to Chin [44], this value belongs to the moderate to high category, so it is good enough to explain the relationships in the model but still needs improvement [43], [45].

In addition to R Square, model evaluation also includes an f-square test to assess the goodness of fit by measuring the effect size of each predictor variable. As shown in Table 6, the f-square value is used to determine the relative contribution of each independent variable to the overall model. Based on the predetermined threshold, an f-square a value of 0.02 signifies a weak effect, 0.15 represents a moderate effect, and 0.35 denotes a strong effect. By analyzing these values, the study can identify which factors have the most significant impact on the dependent variable, thus providing deeper insight into the relationships between variables in the model [43].

Table 6. f-square

Variabel	Consumptive Values	Effect
Visibility Affordance	0.008	Lemah
Guidance Affordance	0.029	Sedang
Safety Affordance	0.056	Besar
Facilitation Conditions	0.123	Besar

Based on Table 6, the *Consumptive Values* variable exhibits varying degrees of influence on different affordance factors. It has a weak influence on *Visibility Affordance*, indicating that visibility plays a minor role in shaping consumptive values. Meanwhile, its influence on *Guidance Affordance* is moderate, suggesting that guidance-related aspects contribute to a certain extent in shaping consumer perceptions. On the other hand, *Consumptive Values* has a strong influence on both *Facilitation Conditions* and *Safety Affordance*, highlighting that factors such as ease of access and perceived safety play a crucial role in determining consumptive

behaviors. These findings emphasize the varying impact of different affordances on consumers' perception of value [43].

As one of the measures of model fit, SRMR (Standardized Root Mean Square Residual) is used to evaluate the difference between the observed data correlation matrix and the correlation matrix estimated by the proposed model. As shown in Table 7, SRMR measures how well the model reflects the actual data by quantifying the residual difference between the two. The lower the SRMR value, the better the model fit, indicating that the model can effectively capture the relationships between variables and minimize estimation errors. Therefore, SRMR becomes an important criterion in assessing the goodness-of-fit of structural models in various research analyses [43].

Table 7. Standardized Root Mean Square Residual (SRMR)

	Saturated model	Estimated model
SRMR	0.074	0.074

A Standardized Root Mean Square Residual (SRMR) value below 0.08 indicates that the model has a good and acceptable level of fit. In this study, based on the data presented in Table 7, the SRMR value obtained is 0.074, which is lower than the maximum threshold of 0.08. This indicates that the proposed model demonstrates a good fit with the data used in the analysis. Therefore, the developed model can be considered appropriate for representing the relationships between variables in this study and provides valid results to support the findings and conclusions drawn [43].

4. DISCUSSION

The results of the SmartPLS test show that the Visibility Affordance variable has no significant effect on the Consumption Values of 5G network affordability with a t-statistic value of 1.312 (t-statistic <1.96) or p-value of 0.270 (p-value> 0.05), so H1 is rejected. This is in line with research by Choi & Jeon [46], which found that visibility affordance has no significant effect on consumer consumptive values, especially in direct interactions. Although visibility affordance can increase the user's ability to use the product, visualization of product use is not enough to encourage strong parasocial interactions. Respondent's awareness of the use of 5G networks by people around them is still limited, with 30% of respondents stating that they disagree or are less aware that they can see other people using the 5G network [47]. This phenomenon shows that visibility is not the main factor in the adoption of this technology, and interest in technology is more dependent on individual needs [46]. This study found that visibility affordance did not have a significant effect on the consumption value of 5G network affordance, in contrast to previous research conducted by Shah *et al.* [23] showing a positive relationship with functional, social, and preference values. These results indicate that although users can see others using 5G, this factor is not strong enough to influence their consumption perceptions. The low awareness of respondents towards the use of 5G around them and differences in the context of technology adoption may be the main factors in the differences in these findings.

The Safety Affordance variable has a significant effect on Consumption Values with a t-statistic of 2.182 (t-statistic > 1.96) or a p-value of 0.015 (p-value < 0.05), so H2 is accepted. This is in line with the research of Shah *et al.* [23], which shows that safety affordance has a significant effect on consumptive value because consumers tend to avoid risks. The safety factor is very important for consumers who are health conscious because they pay more attention to the safety aspects of the technology they use [48]. The presence of safety affordance in 5G products increases consumers' sense of security, which strengthens their perception of the consumptive value of the product [23]. This study found that Safety Affordance has a significant influence on Consumption Values, in contrast to the findings of Nugroho *et al.*, [49] which showed that Safety Affordance did not have a significant influence on Consumption Values in the use of Online Food Delivery Services (OFDS) in Indonesia. This difference may be caused by differences in research context, where this study focuses more on how safety perceptions affect consumption values in general, while the cited journal examines Safety Affordance in the context of food delivery service consumption values. This shows that the influence of safety factors on consumer behavior can vary depending on the industry and consumption patterns studied.

Safety affordance operators and service providers need to educate the public regarding 5G network security, including protection against radiation and security of user data. In addition, regulations related to certification and safety standards must be clarified and socialized in order to increase consumer confidence. Transparency regarding risk mitigation, such as data encryption and network security protection, also needs to be strengthened so that users feel safer in using 5G [23].

The Guidance Affordance variable has no significant effect on Consumption Values with a t-statistic of 1.604 (t-statistic < 1.96) or a p-value of 0.054 (p-value > 0.05), so H3 is rejected. This is in line with Dong & Wang's research [34], which states that guidance affordance does not have a significant effect on consumption value. Guidance affordance, which focuses on directions or guidance in use, may not be relevant or strong enough to directly influence consumption value [50]. In the context of 5G technology, this product does not require much guidance, and other factors such as safety affordance are more dominant in influencing the adoption of this technology [34]. This study found that Guidance Affordance did not have a significant effect on Consumption Values, in contrast to the findings conducted by Shah *et al.*l which showed that Guidance Affordance had a positive and significant effect in the context of 5G technology adoption. This difference may be due to differences in a research context, where the cited journals examine the adoption of new technologies supported by infrastructure and user trust in 5G services, while this study was conducted in an environment that may be more influenced by other factors such as user habits and different market preferences.

The Facilitation Conditions variable has a significant effect on Consumption Values with a t-statistic of 4.140 (t-statistic> 1.96) or a p-value of 0.000 (p-value <0.05), so H4 is accepted. This is in line with Shahzad *et al.*.'s research [27], which shows that facilitation conditions strengthen the relationship between trustworthiness and consumption value among college students in China. Facilitation support, such as infrastructure accessibility and technical support, increases consumer trust in 5G technology [51]. With good facilitation conditions, consumers are more likely to adopt and feel the consumptive value of 5G services. Factors such as technical assistance and privacy protection provided also play an important role in shaping positive perceptions towards 5G technology adoption [27]. Meanwhile, research conducted by Karyoto *et al.* [52] This study found that facilitating conditions did not have a significant influence on use behavior or behavioral intention in using the Gojek application in Balikpapan City, in contrast to the findings in the cited journal, which showed that facilitating conditions had a significant effect on consumptive values in the adoption of 5G services on the island of Java. This difference may be caused by differences in the research context, where the use of the Gojek application is more influenced by user habits, while the adoption of 5G technology is more dependent on infrastructure support and technical assistance that increases consumer confidence.

Facilitation conditions require accelerating network infrastructure development by ensuring the availability of towers, frequency spectrum and compatible devices. Additionally, service providers need to offer easily accessible technical support, such as responsive customer service and 5G usage tutorials. Incentives such as competitively priced internet packages and easy migration from legacy networks can also accelerate adoption of this technology. By strengthening these two factors, consumer confidence and interest in 5G on Java can increase, thereby encouraging accelerated use of this technology more widely [27].

The limitation of this study is the use of samples limited to Java Island, so generalization to all of Indonesia needs to be tested further. Cultural factors, habits, and varying levels of technology adoption outside Java may influence different results. Therefore, further research with a wider sample throughout Indonesia is needed to better understand the influence of various affordances on 5G technology adoption.

5. CONCLUSION

The conclusion of this study aims to examine the effect of Visibility Affordance, Safety Affordance, Guidance Affordance, and Facilitation Conditions on Consumption Values related to the acceptance of 5G network technology in Java, with a sample of 200 respondents who have or have not used this technology. The results indicate that Visibility Affordance and Safety Affordance do not have a significant influence on Consumption Values, suggesting that the visibility and security levels of 5G technology are not sufficient to increase user interest. On the other hand, Guidance Affordance and Facilitation Conditions have a significant influence, where clear usage instructions and adequate facilities in an area can increase users' interest and willingness to adopt 5G network technology. This highlights the importance of effective information and supporting infrastructure in expanding the adoption of 5G technology in society.

However, this study has limitations, as it is confined to the population in Java and uses a survey method, so it does not delve deeper into individual psychological factors. For future research, it is recommended to expand the scope to other regions in Indonesia and consider additional factors such as government regulations or broader infrastructure conditions. Practical implications for service providers include the importance of clarifying usage instructions and ensuring the equitable distribution of 5G infrastructure to enhance the acceptance of this technology in society.

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