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THE EFFECT OF PHYSICAL FACILITIES QUALITY ON TOURIST SATISFACTION AT TAMAN AYUN TEMPLE ATTRACTION BY VITRUVIUS THEORY AS A MODERATING VARIABLE

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Abstract

Tourism activities should be able to be done by all age groups, including the elderly. However, many tourist attractions are not friendly to elderly tourists. Starting from attractions, access and accommodation provided that do not pay attention to the safety and comfort of traveling. This study was conducted to identify and analyze the physical quality of tourist attractions for elderly tourists which is associated with the development of the concept of sustainable tourism. The approach used in this study is a quantitative approach with data collection techniques using questionnaires. Data analysis in this study used the SmartPLS program, which was carried out in two stages, namely testing the outer model and inner model. The results obtained were that the influence of the quality of physical facilities on tourist satisfaction visiting tourist attractions has a positive and significant effect. While the application of the vitruvius theory moderates the influence of the quality of physical facilities on tourist satisfaction is unable to influence significantly. This study could be a reference for those who are interested in the same topic, especially about the relation between vitruvius theory and tourism.

Keywords: Quality of Physical Facilities, Tourist Satisfaction, Vitruvius Theory

1. INTRODUCTION

Tourism development in Indonesia has problems related to innovation and new concepts developed in tourist attractions. According to Alana and Putro (2020), this is due to the regional autonomy policy that gives authority to each district/city to manage its region. Of course, this causes competition for non-specialized products. There are many tourist attractions built carelessly, without considering the quality of the tourist attraction (Riadi, et al., 2023). The lack of specialization or diversification of tourist attractions is a factor that makes tourists reluctant to travel, which the safety aspect is also a factor that causes a lack of interest in visiting (Intan, et al, 2021). Safety assurance is the main factor that determines the growth and development of a tourist attraction and provides superior value that will determine the quality of the tourist attraction.

Jocky (2021) explained that the aspect of tourist comfort in traveling is also one of the determining factors of satisfaction. Tourists who travel to tourist attractions that have good tourist facilities and access will certainly guarantee tourist satisfaction when traveling. However, many tourists still complain about tourist attractions, the majority of tourist attractions are made haphazardly, poorly maintained, and sometimes do not meet the needs and desires of tourists (Mahmud, et al, 2021). This is different from the tourist attraction of Taman Ayun Temple, which has been arranged in the area to provide the best service to tourists. Even in 2012, UNESCO designated Taman Ayun Temple as part of the world cultural heritage sites as the Cultural Landscape of Bali Province: Subak as Manifestation of Tri Hita Karana Philosophy. Of course, this proves that the development of the tourist area has been well planned and managed professionally. Another indicator that proves that Taman Ayun Temple has provided the best service is that the enthusiasm of tourists to carry out tourist activities at Taman Ayun Temple has increased significantly. As proof, tourist visits, both domestic and foreign tourists (*wisman*) to Taman Ayun increased during the 2024 Christmas and New Year holidays. For foreign tourists, the increase was around 50 percent, namely from 200 people per day to an average of 300 people per day. Meanwhile, domestic tourists or Nusantara tourists (*wisnus*) increased by around 10 percent, from an average of around 110 people per day to 120 people per day.

Tourism has become a necessity for people's lives, so that tourism activities are not only enjoyed by a handful of tourist, but have become part of human rights (Sari and Najmudin, 2021). However, in carrying out tourism business activities, many tourism business actors only prioritize profit without paying attention to the safety and comfort of tourists. In fact, many tourist attractions do not provide special facilities for the elderly. The development of health science provides opportunities for the elderly to live longer, so this age group is large in number (Huda, et al, 2022). This causes this age group to become a potential target market in the tourism industry. Elderly tourists travel by doing activities related to passive leisure, such as visiting museums, historical sites, culture and art including activities related to hobbies.

Taman Ayun Temple is one of Bali's cultural heritages that has historical value in the lives of Balinese people. To ensure tourist satisfaction, Taman Ayun Temple must provide safe and comfortable tourist facilities when traveling. Tourist satisfaction is the overall experience that tourists have with the destination given by an unforgettable experience (Wijayanti, et al, 2021). When tourist satisfaction decreases, it will affect the image of tourist attractions, which of course will affect tourists' interest in returning to tourist attractions. Based on tourist visit data, the age group visiting Taman Ayun Temple is mostly the 45-60-year age group.

Larasati (2022) in her research explained that to ensure tourist satisfaction, facilities are needed that pay attention to the comfort of elderly tourists, such as the availability of rest areas, public toilets, special wheelchair lanes, ramps and other facilities. Based on the Badung Regency Government, Taman Ayun Temple has improved tourism facilities through the Taman Ayun Temple Physical Revitalization program. This program is based on the concept of sustainable tourism which aims to have a positive impact on cultural, economic and environmental aspects. According to Peng, et al (2023) sustainable tourism is tourism that can utilize environmental resources optimally while still taking into account the impacts caused now and in the future while still paying attention to the needs of tourists, society, industry and the environment.

The development carried out will certainly damage the authenticity of the site. The Pura building which functions for prayer activities has begun to degrade due to the addition of new activities, namely tourism activities (Suhartapa, 2022). On the other hand, tourism activities must provide infrastructure that is friendly to tourists. So the site must prepare these facilities to ensure the comfort and safety of tourists. Tourism development that only focuses on the economic aspect, namely pursuing the number of tourist arrivals without paying attention to the local environment and culture, will have an impact on the sustainability of tourism activities. In fact, according to Khairi et al. (2021) by developing the concept of sustainable tourism will increase the unforgettable experience and joy so that it can increase tourist satisfaction. The purpose of the concept of sustainable tourism is to avoid excessive consumption, help nature conservation and make a conscious effort to respect local traditions and heritage, and contribute to their preservation (Gilmore, Carson, & Ascensão, 2007; Hamid, Isa, & Kiumarsi, 2021).

Providing safe and comfortable facilities for tourists must certainly pay attention to the concept of sustainable tourism. Therefore, an appropriate model is needed to improve tourist facilities in tourist attractions which are world heritage sites. The development carried out must pay attention to conservation efforts for culture and the environment in tourist attractions. When tourist attractions have implemented it, it will have a direct impact on tourist satisfaction (Alana and Putro, 2020). The problem of this research is to identify and analyze the physical quality of tourist attractions for elderly tourists which is associated with the development of the concept of sustainable tourism. Physical facilities should meet the minimum requirements, namely Utility (Function Aspect), Firmity (Strongness and System Aspect) and Venustas (Beauty Aspect) according to Vitruvius' theory. Vitruvius' theory is an architectural theory that developed in the Greek and Roman eras and is still used in modern architecture. This study is focused to analyse the quality of physical tourism attraction by vitruvius theory as the moderating variable. This study could be a reference for those who are interested in the same research topic, especially about the relation between vitruvius theory and tourism.

2. LITERATURE REVIEW

Vitruvius' theory is an architectural theory based on three main components, namely *firmitas*, *utilitas* and *venustas*. The three basic components of the formation of architecture such as *firmitas*, *utilitas* and *venustas* (Scranton, 1974). Three basic components of the formation of architecture, such as *firmitas* which discusses the system and materials of an object, while *Venustas* discusses beauty or aesthetics. Yulistya (2022) explained that the aspect of *firmitas* has the meaning of distributing the load from the building to the ground and is also related to the selection of the right material. Vitruvius' theory is also related to the aspect of beauty, namely *venustas*, the criteria are obtained from design elements such as lines and shapes. *Venustas* if applied to the design principle, namely paying attention to harmony, balance and proportionality. When talking about *utilitas* it is related to good spatial arrangement, which is based on the relationship between spaces, building functions, lighting, ventilation (Andarini, 2024). The aspects of *firmitas*, *utilitas*, *venustas* can also be used in viewing modern architecture, which can also be used to form good architectural works. The *firmitas* component can be seen from the combination of fabricated materials and structural planning that produces strength. Every form of building in modern architecture has a "use" or utility, which in deeper meaning is having "power" in each of its building elements. Thus, the building can create comfort for users inside and outside the building. The component of *venustas* or beauty

can be seen from the play of geometry on the building façade accompanied by the honesty of materials and structures.

Sustainable tourism is tourism that supports the local economy without damaging the surrounding environment (Riadi, et al, 2023). Butler also said that sustainable tourism must respect the limitations imposed by the ecological community. The goal of sustainable tourism is to be able to maintain its survival in an area for an unlimited period of time. Suhartapa (2022) in his research explained that safety and comfort in tourist attractions can influence and shape the concept of sustainable tourism. B. Liu, Schroeder, Pennington, & Farajat (2021) conveyed that tourists' perceptions regarding safety in tourist attractions can mediate the relationship between the risks perceived by tourists and the desire to travel or tourist satisfaction. The implementation of the concept of sustainable tourism must be supported by the existence of good tourist facilities. To support this, important components in the building must still be there, such as firmness which discusses systems and materials, utilities discuss appearance, and venutas discusses beauty or aesthetics (Nurfadhillah, et al, 2023). So, tourist facilities must have solid, functional and aesthetic value, so that tourists feel comfortable and safe traveling.

3. RESEARCH METHODS

This study adopts a quantitative approach based on the formulated problem. The quantitative approach is a research method that combines deductive and inductive approaches. This approach begins with a theoretical framework, expert views, and understanding obtained by researchers from experience, which are then developed into various problems and solutions proposed to obtain validation. This approach is based on the philosophy of positivism and is used to study certain populations or samples, with data collection through research instruments, as well as quantitative or statistical data analysis, with the aim of analyzing the perceptions of selected respondents. In this study, the survey will use a likert scale with five answer choices, namely: 1) SD (Strongly Disagree), 2) D (Disagree), 3) N (Neutral), 4) A (Agree), and 5) SA (Strongly Agree).

Data analysis in this study used PLS software. Partial Least Squares (PLS) is a multivariate statistical technique that compares several dependent and independent variables. PLS is a statistical method for Structural Equation Modeling (SEM) based on variance designed to handle multiple regression, especially when there are problems with the data. The analysis process begins with model measurement (outer model), model structure (inner model), and hypothesis testing.

4. FINDINGS AND DISCUSSION

4.1 Data Examination and Research Model

4.1.1 Outer Model

The validity test of the research data uses the evaluation of the measurement (outer) model using convergent validity, the magnitude of the loading factor for each must be >0.50 . Based on Figure 1. The PLS Algorithm Model on the loding factor value of each indicator shows a loding factor value greater than 0.5, so that the indicator is declared feasible or valid for use in research and can be used for further analysis. While the reliability test can be declared reliable or meets the cronbach alpha if it has a cronbach alpha value >0.7 . Based on Figure 1. The PLS Algorithm Model on the cronbach alpha value of each variable has a cronbach alpha value greater than 0.7 so that it can be concluded that all variables have a high level of reliability.

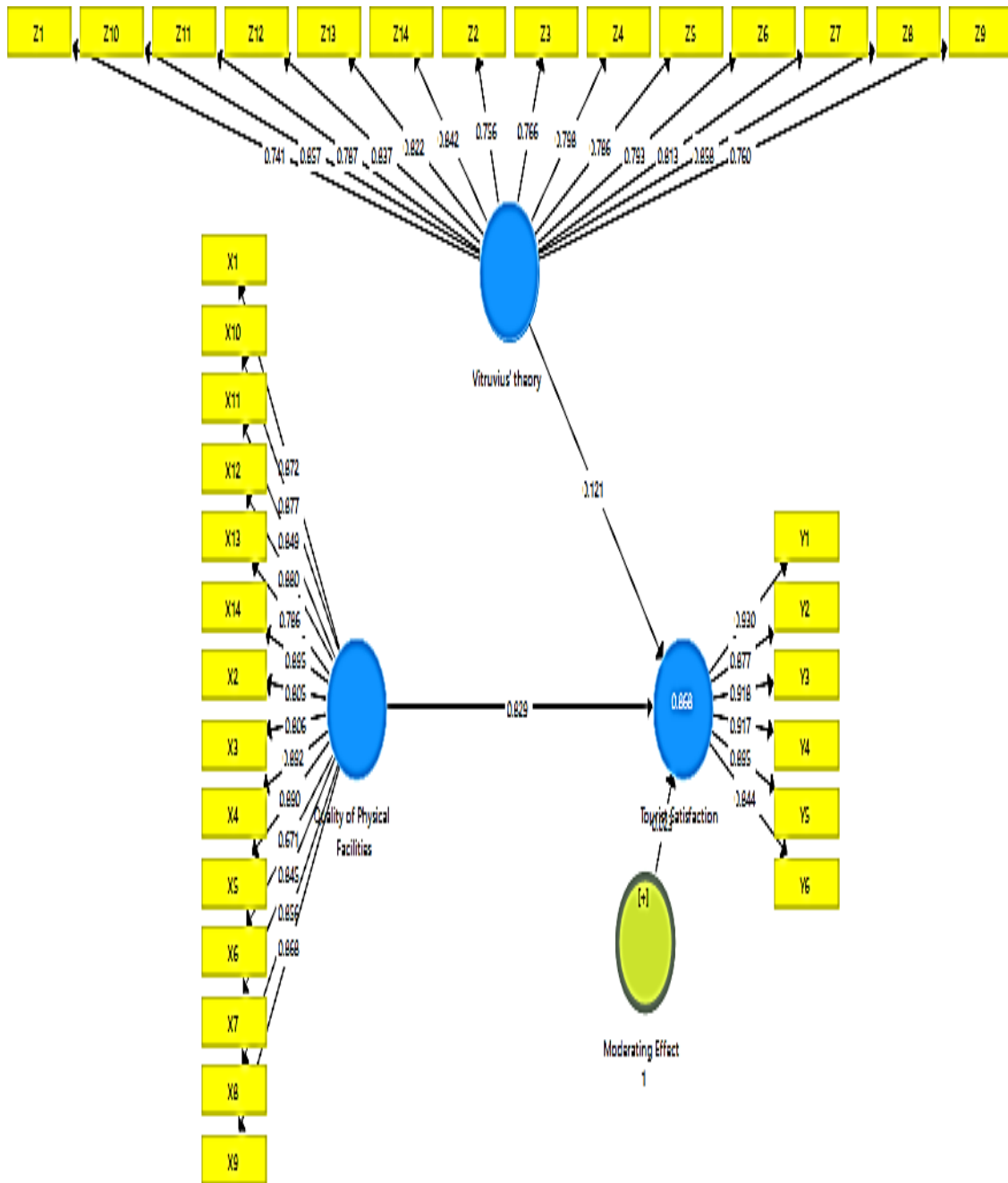


Figure 1. PLS Algorithm Model
Source: Researcher (2024)

4.1.2 Inner Model

The goodness of fit model in this study was measured using the R-Square of the dependent latent variable. According to China (1998) mentions the R Square results for the dependent latent variables in the structural model of 0.67; 0.33; and 0.19 indicating that the models are “good”, “moderate”, and “weak”. Based on Table 1. The R-Square value shows the magnitude of the overall variation given by the Quality of Physical Facilities (X) to Tourist Satisfaction (Y) with Vitruvius Theory (Z) as a moderating variable of 70%. While the remaining 30% is determined by the variation of other variables outside the research model. So it can be said that the modeling formed is categorized as a good model.

Table 1. R Square Value

Variables	R Square	Adjusted R Square
Y (Tourist Satisfaction)	0.868	0.856

Source: Researcher (2024)

In this study, the Adjusted R Square value was obtained at 0.679 or 67.9%. So it can be concluded that 67.9% of the variation that occurs in the Y variable can be explained by the independent latent variable, while the rest can be explained by other variables. The Adjusted R Square value has a value with an interval between 0 and 1. In this study, the Adjusted R Square value is getting closer to 1, indicating that the independent latent variable (X) explains the variation of the dependent latent variable (Y) better.

4.2 Physical Facilities Quality of Tourism Attractions

Taman Ayun Temple provides various facilities to support tourism activities, such as parking lots, toilets, directions, information centers, and night lighting. Parking lots still rely on public parking areas, including along the road, which are also used by local people who are active in the tourist area. Toilet facilities are adequate, with gender separation and equipped with sitting toilets, sinks, rotary taps, tissues, and hand soap. According to Bagiastra (2013), toilets have an important role involving psychological, health, safety, maintenance, and aesthetic aspects, which will increase visitor comfort. However, signage indicating parking locations, parking facilities for the disabled, toilets, and other facilities are still not available. In addition, there are no directions for evacuation routes, so adding signage in certain areas is very necessary. The tourist information center still relies on services provided by the Tourism Office, but these facilities are less than optimal because they do not have good standards and their main role is unclear. Fences have been installed in several areas to protect visitors from potential dangers, although around the riverbanks the installation of fences has not been maximized, which is risky for visitors, especially children under 10 years old. The fence installed on the river is designed with ornamental motifs that also function as aesthetic elements. The lighting has been well arranged to meet the standards set by the Regulation of the Minister of Tourism, with the appropriate height and color of the lights, and provides an aesthetic effect at night. Taman Ayun Temple also has horizontal access via pedestrian paths and vertical access in the form of stairs and ramps. However, the material of the stairs used is easily mossy, so it is at risk of being slippery during the rainy season and can endanger visitors. Therefore, regular cleaning or the use of rubber coatings on the stairs is necessary to avoid accidents.

Based on descriptive statistical analysis, it was found that tourists' perceptions of the quality of physical facilities of tourist attractions were good with an average score percentage of 4.09 which is presented in Table 2. Description of Physical Facility Quality Variables. Although domestic tourists view the Quality of Physical Facilities as being quite good, in reality the percentage score has not yet reached the maximum value, which is very good, which can be interpreted that the Quality of Physical Facilities has not been provided optimally. This is thought to be due to the lack of consistency and supervision from the management in preparing the Quality of Physical Facilities of tourist attractions that are in accordance with the wishes of tourists.

4.3 Moderation of Vitruvius' Theory towards Tourist Satisfaction and the Physical Facilities Quality

Vitruvius' theory as an important element in building architecture. This element is the basic foundation for user satisfaction. If associated with tourism activities, Vitruvius' theory should be able to influence tourists' perceptions of a tourist attraction, especially those that offer the beauty of building architecture.

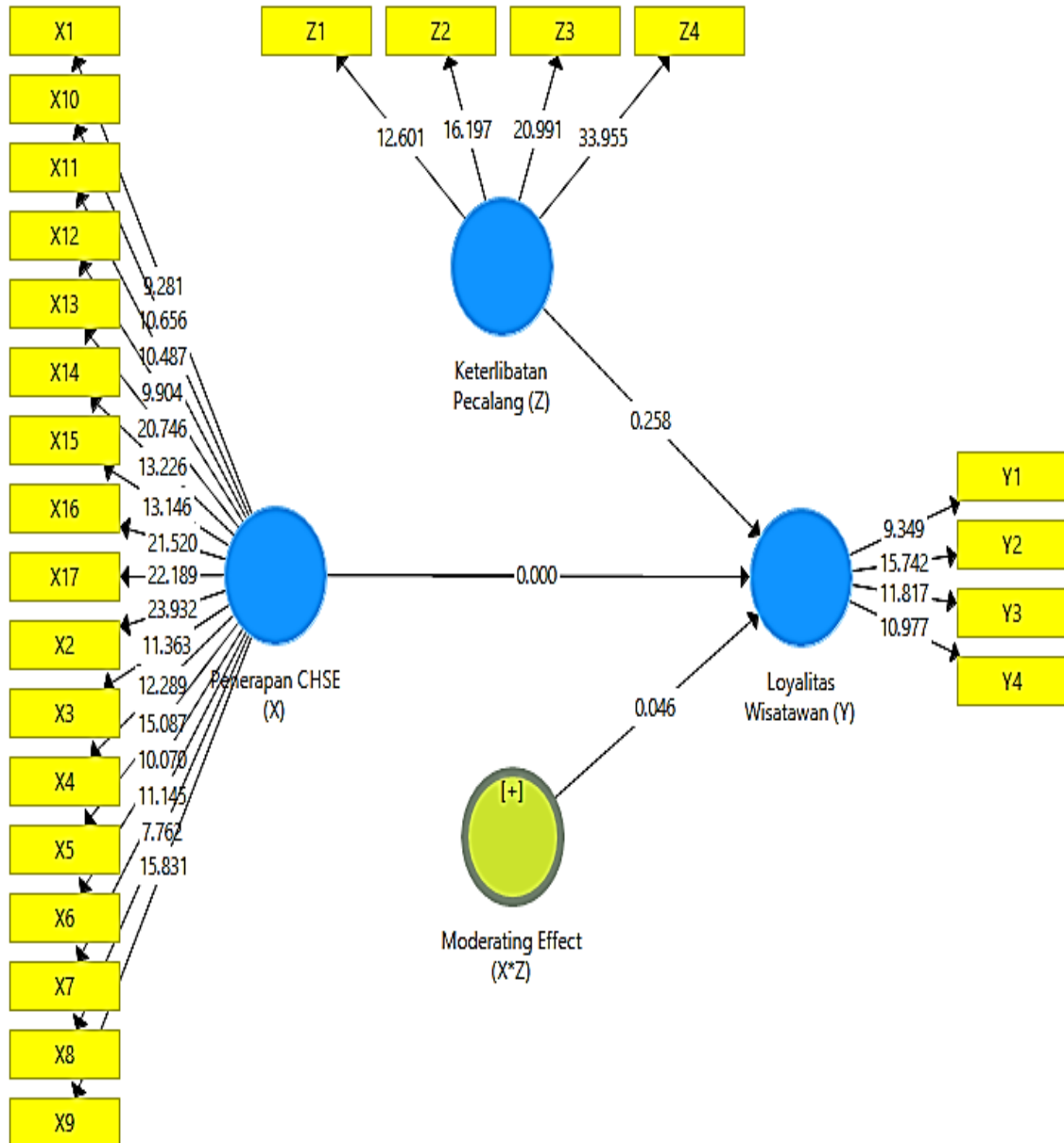


Figure 2. Bootstrapping Model
Source: Researcher (2024)

Based on Figure 2. Bootstrapping Model, it is proven that the quality of physical facilities has a significant effect on tourist satisfaction with a P-Value of 0.000 (<0.05) and has a positive relationship with the original sample value of 0.862 based on Table 2. Path Coefficients. The more the quality of physical facilities of tourist attractions is improved, the more tourist satisfaction will increase, which can be seen from the number of tourist arrivals to DTW.

Table 2. Path Coefficients

	Original Sample	T Statistics	P Values
X→Y	0.829	5,524	0,000
X*Z→Y	-0.023	0.506	0.616

Source: Researcher (2024)

The quality of physical facilities in tourist attractions is apparently not influenced by the application of Vitruvius' theory which consists of the aspects of *firmitas*, *utilitas*, and *venustas*. This can be proven from the application of the vitruvius theory is not able to moderate the influence of the quality of physical facilities on tourist satisfaction with a P-Value of 0.616 (> 0.05) which can be seen in Figure 2. The Bootstrapping Model with a positive relationship direction as seen from the original sample value in Table 3. Path Coefficients of -0.023. This is because the majority of respondents are tourists with the baby boom generation who tend to see tourist attractions based on uniqueness values. When the application of Vitruvius' theory moderates the application of the quality of physical facilities in tourist attractions, baby boom generation tourists will not be affected, and there will be no change in attitude or behavior. Tourists feel satisfied and interested in making repeat visits because of the very high quality tourist attraction facilities. The higher the quality of the physical facilities of the tourist attraction, the greater the loyalty of tourists will be. Tourist loyalty arises because tourists are cared for, appreciated and comfortable with the services available at the tourist attraction (Andiani, et al., 2020). In addition, tourist loyalty according to Frangos et al. (2015) will be obtained if tourists get products, services, culture from the community which are in accordance with tourist expectations. Consumers continue to make purchases because they only want to satisfy their lives, this is similar to tourist behavior that is adequate or inadequate for all forms of tourist expenditure or sacrifice to get something they want.

Taman Ayun Temple as the center of Balinese cultural history has become a very friendly tourist attraction for visitors and is also in demand by all groups. This is because the facilities and quality of service have begun to be improved through revitalization by the district government. According to Alana and Putro (2020) In traveling, of course, tourists are satisfied because they get decent tourism services and facilities according to what each tourist expects. In addition to tourism service and facility factors, tourists are satisfied with traveling if the tourist attractions are interesting. Based on The Pit (2005), states that there are several factors which is encourage someone to travel, such as escape, relaxation, play, strengthening family bonds, prestige, social interaction, romance, educational opportunity, self-fulfillment, and wish-fulfillment.

5. CONCLUSION

Based on the results of the study and discussion, it can be concluded that the influence of the quality of physical facilities on tourist satisfaction of visiting tourist attractions has a positive and significant effect. The better the quality of physical facilities, the more satisfied tourists will be when visiting tourist attractions. Meanwhile, the application of Vitruvius' theory moderates the influence of the quality of physical facilities on tourist satisfaction and is unable to have a significant effect. Vitruvius' theory does not play a role in influencing the relationship between the quality of physical facilities and tourist satisfaction. Tourists come to tourist attractions not because of the *Firmitas*, *Utility*, or *Venustas* aspects but are only influenced by the quality of the physical facilities of the tourist attraction. The better quality of physical facilities of the attraction, the more satisfied tourists will be with their travels and very loyal to come back to visit.

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