



The Influence of Religious Tourism Attractions on Visitors' Perceptions of Graha Maria Annai Velangkanni Medan: PLS-SEM Analysis

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ABSTRACT

This study aims to understand visitor perceptions of the religious tourism attractions at Graha Maria Annai Velangkanni, Medan, which include physical aspects such as architecture, cleanliness, comfort, as well as non-physical aspects such as religious values and spiritual atmosphere. A quantitative approach was used with data collection through a Likert scale questionnaire, non-participant observation, and documentation of a visitor population of approximately 1,000 people per month, with a sample determined by the Cochran technique at a 95% confidence level. Data were analyzed using Partial Least Square-Structural Equation Modeling through SmartPLS software to test the causal relationship between tourism attraction variables and visitor perceptions. The results show that all indicators are valid with outer loadings of 0.813-0.934, a very strong path coefficient of 0.835, and an R-square of 0.697 explaining 69.7% of the variability in perceptions. Indo-Mughal architecture and inclusive facilities are the main drivers of positive perceptions, creating a transformational experience across religions. The conclusion confirms the novelty of the specific model for this destination, recommending the development of pilgrimage events and holistic facilities for managers to increase sustainable visits and enrich the Indonesian religious tourism literature.

Keywords: Religious tourism, Visitor perception, Graha Maria Annai Velangkanni, Tourist attraction, PLS-SEM, Medan

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INTRODUCTION

Religious tourism is growing in Indonesia, offering not only places of worship but also historical, architectural, traditional, and profound spiritual experiences. In this context, the Graha Maria Annai Velangkanni in Medan has become a leading religious tourism destination, with its unique appeal of South Indian architecture, symbolic ornamentation, and strong spiritual atmosphere, attracting visitors from various religious backgrounds, both Catholic and non-Catholic.

Visitor perceptions of religious tourism attractions are crucial to study. According to Robbins (1987), perception is a subjective cognitive process in which individuals observe, evaluate, and assign meaning to environmental stimuli, influenced by experience, culture, values, and personal background. In tourism, visitor perceptions encompass assessments of facilities, comfort, cultural values, and spiritual aspects, which significantly influence

satisfaction, repeat visit intention, and recommendations to others (Bond, Packer, & Ballantyne, 2014). These positive perceptions ultimately support the sustainability of a destination, while negative perceptions can serve as a basis for evaluation by managers to improve facilities, tourism programs, and religious values.

Religious tourism itself is defined as a travel activity for religious or spiritual purposes, seeking spiritual meaning, enlightenment, or peace of mind, including pilgrimages, rituals, and learning religious values (Sallnow, 1987; Novita & Susanto, 1997). Tourist attractions, as explained by Tarlow (1999), are all elements that motivate visits and provide satisfying experiences, including physical aspects such as beautiful architecture and cultural uniqueness, as well as non-physical aspects such as service, hospitality, and spiritual aura. At Graha Maria Annai Velangkanni, this attraction is strengthened by its inherent sacred value, which according to Haryadi (2019) significantly influences satisfaction and revisit intentions.

Specifically, visitor perceptions of religious tourism attractions are a combination of interpretations of spiritual experiences, supporting facilities, and social interactions, forming positive or negative perceptions (Wahyu Ilahi, 2019; Endah Aprilia Haryadi, 2019). Positive perceptions encourage word-of-mouth promotion and destination development. Therefore, research on "Visitor Perceptions of Religious Tourism Attractions at Graha Maria Annai Velangkanni" is relevant to support the development of religious tourism that is not only visually appealing but also spiritually meaningful, with recommendations for targeted improvements for managers.

METHODS

This study aims to deeply understand visitor perceptions of the religious tourism attraction at Graha Maria Annai Velangkanni, starting from physical aspects such as architecture, cleanliness, and environmental comfort, to non-physical aspects such as religious values, spiritual atmosphere, and worship experiences felt during the visit. In addition, this study was also initiated to identify the main factors that influence visitor perceptions of the destination, so as to provide a more comprehensive picture of how this tourist attraction is received and enjoyed by visitors.

The proposed research problem focuses on three main issues: how visitors perceive physical attractions such as architecture and cleanliness; how they perceive non-physical attractions such as spiritual values and atmosphere; and what factors contribute to shaping these perceptions. With this focus, the research hopes to provide important information for tourism managers to develop and improve the quality of destinations that are not only visually appealing but also spiritually meaningful.

The chosen method is a quantitative approach because this study uses numerical data obtained through systematic and structured measurements of visitor perceptions. Data collection was carried out using several complementary techniques, namely questionnaires, observation, and documentation. The questionnaires were distributed directly to visitors to

Graha Maria Annai Velangkanni, containing closed and open-ended questions that explored their reasons for visiting, assessments of the architectural beauty, comfort of the facilities, religious atmosphere, cleanliness and security of the area, and level of satisfaction during their visit. This method allows for the collection of measurable data that can be analyzed quantitatively and qualitatively.

In addition to questionnaires, researchers conducted direct, non-participant observations on-site, meaning they simply observed without participating in visitor activities. These observations aimed to determine how visitors interacted with the

environment, which areas were most popular, and the crowd patterns. Documentation in the form of photos, videos, and field notes was also collected to corroborate the data and provide a visual representation of the physical conditions of the site and visitor behavior throughout the study.

The research location was at Graha Maria Annai Velangkanni in Medan, with a population consisting of Tamil Catholics who regularly use the church as a place of worship and religious tourism destination. This population includes local residents, visitors from outside the area, and religious tourists, with an average of approximately 1,000 visitors per month. The sample was drawn from this population using the Cochran technique, which considers a 95% confidence level, a desired margin of error, and population proportions to ensure a truly representative sample size.

Perception was measured using a Likert scale ranging from 1 to 5, with 1 indicating strongly disagree and 5 indicating strongly agree. The research variables consisted of two main sections: the religious tourism attraction variable, which encompasses aspects of architectural beauty, spiritual and religious values, cleanliness and comfort, supporting facilities, and management friendliness. Meanwhile, the visitor perception variable encompassed satisfaction levels, assessments of services and facilities, perceptions of spiritual and cultural values, intention to revisit, and intention to recommend to others.

After data collection, the next stage was editing to ensure completeness and validity before further processing. This valid data was then coded and entered into SmartPLS statistical software for analysis using descriptive and inferential methods, such as simple and multiple linear regression, as needed. The analysis results were then presented systematically in tables, graphs, and narratives for easier understanding and interpretation.

In addition to SmartPLS, spreadsheet software was also used for initial data processing, such as cleaning and tabulation. This entire process was designed to ensure the research yields valid, reliable findings that will significantly contribute to the development of religious tourism at Graha Maria Annai Velangkanni and its management, which focuses on enhancing the holistic visitor experience.

RESULT AND DISCUSSION

The results of the Partial Least Square-Structural Equation Modeling (PLS-SEM) analysis revealed a robust structural model between the religious tourism appeal of Graha Maria Annai Velangkanni as an independent variable and visitor perception as a dependent variable. The table shown in the figure is a descriptive statistic of indicators (X1–X9, X11, X12, Y1, Y3–Y7) with complete measures of central tendency and data distribution (mean, median, min–max, standard deviation, kurtosis, and skewness) for 279 respondents. The

mean value of all indicators is in the range of 4.37–4.67 with a consistent median of 5,000, indicating that the majority of respondents gave a high assessment of all measured aspects and the data distribution tends to gather in the “agree” to “strongly agree” categories.

Table 1. Statistical Results

	Mean	Median	Observed min	Observed max	No.of observed used	Std Dev	Excess kurtosis	Skewness
X1	4,595	5,000	1,000	5,000	279,000	0,793	5,768	-2,313
X11	4,599	5,000	1,000	5,000	279,000	0,721	4,778	-2,108
X12	4,591	5,000	1,000	5,000	279,000	0,742	4,780	-2,094
X2	4,649	5,000	1,000	5,000	279,000	0,722	6,559	-2,452
X3	4,624	5,000	1,000	5,000	279,000	0,770	5,320	-2,314
X4	4,591	5,000	1,000	5,000	279,000	0,793	5,728	-2,341
X5	4,667	5,000	1,000	5,000	279,000	0,667	6,131	-2,343
X6	4,652	5,000	1,000	5,000	279,000	0,659	6,609	-2,349
X7	4,599	5,000	1,000	5,000	279,000	0,706	5,542	-2,136
X8	4,566	5,000	1,000	5,000	279,000	0,744	3,504	-1,881
X9	4,659	5,000	1,000	5,000	279,000	0,658	5,721	-2,240
Y1	4,373	5,000	1,000	5,000	279,000	0,934	2,437	-1,631
Y3	4,470	5,000	1,000	5,000	279,000	0,862	4,140	-1,945
Y4	4,502	5,000	1,000	5,000	279,000	0,842	3,968	-1,962
Y5	4,556	5,000	1,000	5,000	279,000	0,778	5,735	-2,206
Y6	4,566	5,000	1,000	5,000	279,000	0,782	5,011	-2,145
Y7	4,556	5,000	1,000	5,000	279,000	0,814	5,914	-2,305

In general, the indicators with the highest means were X5 (4.667) and X2/X9 (around 4.65), indicating that respondents were highly satisfied with certain aspects of the tourism experience, such as the religious atmosphere, comfort, and supporting facilities at Graha Maria. Conversely, the indicator with the lowest mean was Y1 (4.373), which also had the largest standard deviation (0.942), indicating that assessments related to this dimension were more varied and relatively weak compared to the other indicators.

The skewness values for all indicators were negative and quite large (around -1.6 to -2.4), indicating a right-skewed distribution with a concentration of responses in the high-value category (4–5), typical of satisfaction research where respondents rarely give very low ratings. The positive and quite large excess kurtosis (around 3.9–6.6) indicated a more conical (leptokurtic) distribution, with most responses concentrated around the mean and relatively few extreme deviations.

The research model consists of two latent variables

Testing the measurement model aims to ensure that the instruments used (indicators) meet the validity and reliability criteria.

Table 2. Independent Variable

	X1	X11	X12	X2	X3	X4	X5	X6	X7	X8	X9
X	0,813	0,859	0,838	0,870	0,867	0,863	0,869	0,844	0,847	0,833	0,858

Table 2. Shows that the Tourism Attractiveness Indicators (X1–X12) have research instruments that have very high reliability, as evidenced by the Composite Reliability value which is above 0.8. This ensures that the measuring instrument used in this study is stable and consistent in the range of 0.813 to 0.870.

Table 3. Variabel Terikat

	Y1	Y3	Y4	Y5	Y6	Y7
Y	0,816	0,839	0,889	0,934	0,890	0,874

Table 3 shows that the Tourism Attractiveness Indicators (X1–X12) have a research instrument with very high reliability, as evidenced by the Composite Reliability value which is above 0.8. This ensures that the measuring instrument used in this study is stable and consistent in the range of 0.813 to 0.870.

Path Coefficient

The path coefficient indicates the strength and direction of the influence of the independent variable on the dependent variable. This value is interpreted using Cohen's (1988) categories of relationship strength.

Table 4. Path Coefficients

Path coefficients	
X -> Y	0,835

Table 4 shows a path coefficient of 0.835. This value is in the very strong category. The interpretation is that Velangkani's religious tourism appeal has a very strong and positive influence on visitor perceptions. This means that the better the tourist attraction perceived by visitors, the higher the positive perception they will form of the destination.

R² (R-Square) Value

The R² value measures the predictive power of the model, namely the percentage of variation in the dependent variable explained by the independent variables.

Figure 1. R- Square

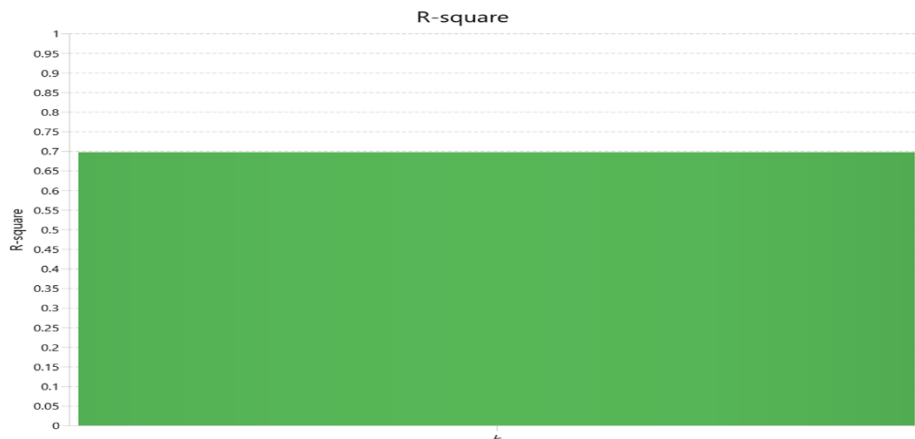


Figure 1 shows an R² value of 0.697. This value is in the strong category ($R^2 > 0.67$). This means that 69.7% of the variation in the Visitor Perception variable in Velangkanni can be explained by the Velangkanni Tourist Attraction variable. This high predictive power confirms the academic basis of the model's reliability.

Indicator Analysis Results

This section presents the results of testing the research instruments, namely the indicators used to measure the latent variables of Religious Tourism Attractiveness (X) and Visitor

Perception (Y) using SmartPLS. This testing is crucial to ensure that the collected data meets validity and reliability requirements.

Figure 2. Indicator

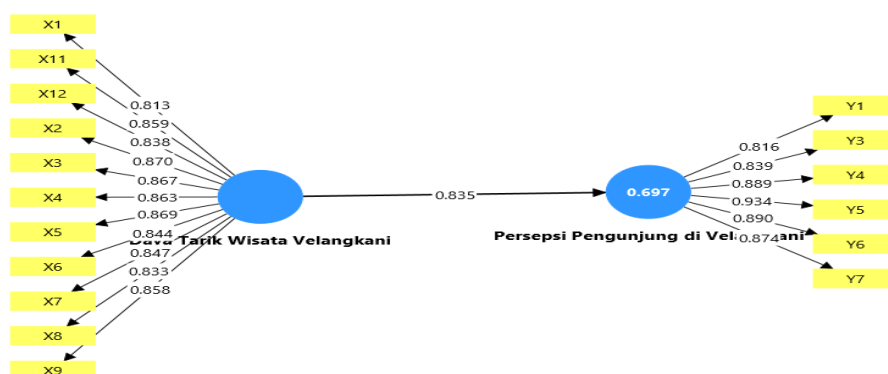


Figure 2 shows that all indicators used in this model are valid. The Tourist Attraction Indicators (X1–X12) have outer loadings in the range of 0.813 to 0.870, and the Visitor Perception Indicators (Y1–Y7) have loadings in the range of 0.816 to 0.934. These high loading values indicate that each indicator successfully measures its latent variable

accurately. Indicator Y5, which relates to experience satisfaction, has the highest value (0.934).

Reliability Test

Instrument reliability is tested using the Composite Reliability (CR) value. An instrument is considered highly reliable if its CR value is above 0.820.

Figure 3. Composite Reliability

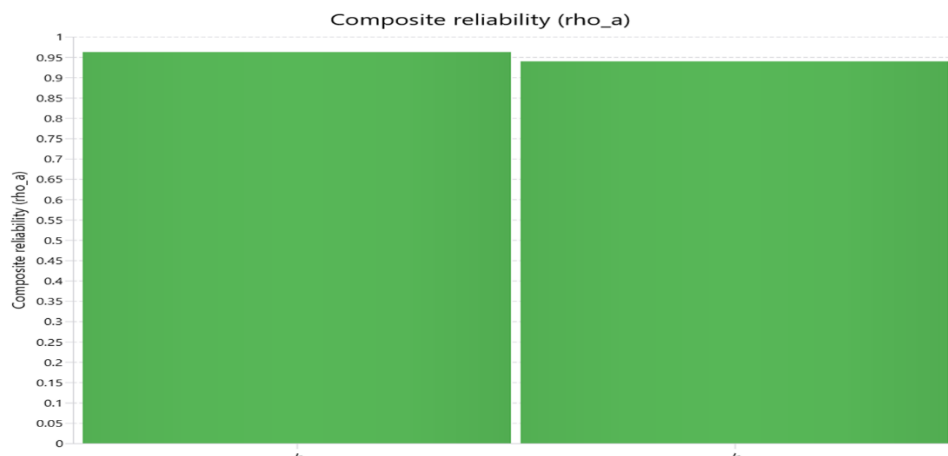


Figure 3. Confirms that the research instrument has very high reliability, as evidenced by the Composite Reliability value which is above 0.827. This ensures that the measuring instrument used in this study is stable and consistent.

The Influence of Tourist Attractions on Visitor Perceptions

The key finding of the study is a positive and significant relationship between Tourist Attractions (X) and Visitor Perceptions (Y), with a path coefficient of 0.835. This very high value indicates that Tourist Attractions are the primary and dominant factor in shaping visitors' positive perceptions of the Graha Maria Annai Velangkanni.

The higher visitors' perceptions of Velangkanni's religious tourist attractions, including architecture, facilities, comfort, spiritual values, and cultural uniqueness, the better their perceptions of their travel experience at the site. This is reinforced by the strong R^2 value (0.697), indicating that tourist attraction management has proven effective in influencing nearly 70% of the variability in perceptions. This finding underscores the importance of sustainable management efforts for all components of tourist attractions to increase tourist satisfaction and loyalty.

Components of Tourist Attractions that Shape Perceptions

The factors influencing visitors' perceptions of Graha Maria Annai Velangkanni Medan are closely related to the unique physical appeal and the strength of the destination's non-physical aspects.

Architectural and Physical: The most dominant component is the church's unique and artistic architecture, blending Indo-Mughal style with local ethnic ornamentation. The building's distinct design and artistic details create a profound visual and emotional experience. Furthermore, the church grounds, gardens, and pedestrian paths are well-maintained, and complete facilities such as ample parking, clean restrooms, and prayer

areas are significant contributing factors. Architectural and facility comfort indicators stand out as the most influential variables.

Spiritual and Non-Physical: Another key strength lies in its spiritual values and the religious atmosphere it maintains. This place is not only a center for Catholic pilgrimage but also a symbol of pluralism and openness, fostering a profound spiritual experience for visitors of all faiths. The sacred atmosphere, peace, and inner reflection offered through various symbolic ornaments are a powerful non-physical attraction.

Positive Perception and Visitor Satisfaction

The Visitor Perception variable indicator shows a high loading factor value (0.816 – 0.934), reflecting a very positive perception. The highest value in the experience satisfaction indicator (Y5) (0.934) indicates that the experience felt by visitors is the most dominant element in shaping their views. The comfortable environment, worship facilities, and staff services are effective, providing spiritual, educational, and recreational benefits. Respondents showed high satisfaction, intention to revisit, and even recommend this place.

CONCLUSION

Overall, this study concludes that the proposed causal model between Religious Tourism Attractions and Visitor Perceptions at Graha Maria Annai Velangkanni is proven to be statistically valid and reliable. The results of hypothesis testing using Partial Least Square-Structural Equation Modeling (PLS-SEM) indicate that Religious Tourism Attractions have a very strong and positive influence on Visitor Perceptions. The strength of this relationship is very substantial, evidenced by the Path Coefficient value of 0.835, which is categorized as a very strong relationship. Furthermore, the structural model shows high predictive power with an R^2 value of 0.697, indicating that almost 70% of the variability in Visitor Perceptions can be explained by the Religious Tourism Attractions variable.

These findings clearly underscore that Tourist Attraction is the primary and dominant factor in shaping visitors' positive views. The most effective attraction component is a combination of unique physical and profound non-physical aspects, namely the artistic Indo-Mughal architecture and the spiritual values and religious atmosphere that are maintained.

All indicators measuring these two constructs, including the experience satisfaction indicator (Y5), show very high Outer Loading (reaching 0.934 on Y5), confirming that the experience felt by visitors is the most dominant element in shaping satisfaction. The success of Graha Maria Annai Velangkanni lies in its ability to present a transformational interfaith experience supported by inclusive facilities and visual uniqueness.

As a theoretical contribution, this study confirms the novelty of a specific model relevant to multicultural religious tourism destinations. The suggested managerial implications include the need for managers to continue focusing on developing pilgrimage events and continuously improving holistic facilities to increase visits and loyalty, as well as enriching the literature on religious tourism in Indonesia.

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