Visitors Perception of Kintamani Agro-ecotourism in Bali During The COVID-19 Pandemic

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Abstract

The COVID-19 pandemic has hampered agro-ecotourism’s economic, social, and environmental benefits. Previous studies have ignored visitor experiences, sustainability, and secondary data. A pandemic-era field assessment of Kintamani agro-ecotourism fills this gap. Purposive sampling was used to select 100 local visitors for the survey. Perceptual class intervals and WarpPLS 7.0 were used to analyze the data. Kintamani agro-ecotourism destination services and guest loyalty scored the highest. Attributes and service quality affected visitor satisfaction and loyalty, whereas the CHSE program measures did not. These findings include improving attributes and service quality, encouraging sustainability, collaborating with local communities and stakeholders, and developing innovative products and services for Kintamani agro-ecotourism. Diverse market segments may be immersed in a region's culture and nature. Kintamani agro-ecotourism requires strong branding, marketing, and data-driven decision-making. Crisis management plans and sustainable infrastructure can help agro-ecotourism to survive unexpected disasters. Agro-ecotourism in Kintamani depends on the adaptation, innovation, and preservation of a region's natural and cultural legacy.

Keyword: Agro-ecotourism attributes, CHSE programme, loyalty, satisfaction, service

1. Introduction

Agro-ecotourism benefits tourists, locals, and the environment. Agro-ecotourism managers and guests have faced many challenges owing to the COVID-19 pandemic. During the COVID-19 epidemic, much research has been conducted regarding agro-ecotourism, but its flaws have not been extensively highlighted. Relying on secondary data makes it difficult to examine the pandemic effects [1]. Therefore, long-term rural economic recovery must be considered during the COVID-19 pandemic [2]. Sustainability must be improved in agro-ecotourism research during the COVID-19 pandemic. Agro-ecotourism can benefit from the COVID-19 pandemic if managed sustainably [3].

Agro-ecotourism research suffered during the COVID-19 epidemic due to a lack of concern for visitor experiences. In agro-ecotourism, tourist satisfaction and loyalty depend on their experience [4] [5] [6]. For instance, (Chua et al., 2020) [8] emphasized the importance of understanding how visitors adapt to the COVID-19 pandemic and how managers can provide visitors with a pleasant and secure experience [9] [10]. This study used a more in-depth and integrated field survey research strategy to address these flaws and better understand agro-ecotourism development during the COVID-19 pandemic.

According to [11], visitor satisfaction, which is a result of attributes and services, determines the viability of tourist industries. The Indonesian Ministry of Tourism's CHSE program (cleanliness, health, safety, and environmental sustainability) had a significant impact on visitor satisfaction during the COVID-19 pandemic [12]. The COVID-19 pandemic has hurt Indonesia's economy, notably Bali [13]. In September 2020, 83 international tourists visited, compared to 590,565 tourists in September 2019. The hotel occupancy rate in September 2020 was 5.28 percent, down by 57.94 points from September 2019. The average length of stay for all guests, foreign and local, dropped 1.10 percentage points from 2.97 days to 1.87 days between September 2019 and September 2020 [14].

Due to COVID-19, almost all Bali tourist attractions have been ordered by 2022, the Indonesian close by the Indonesian government. After operations resumed in the...
government, the CHSE programme was used to foster trust. Along with the destination’s attributes and service quality [11,15]. CHSE program will boost satisfaction with the destination [6]. Even during the COVID-19 pandemic, this will revive Bali’s tourism industry, particularly agro-ecotourism, in Kintamani. During the COVID-19 pandemic, CHSE program adoption was expected to affect visitor satisfaction at tourism sites [16]. Compared to other themed locations, agro-ecotourism and spiritual places, such as Kintamani, appear to have a consistent number of tourists. Agro-ecotourism remains popular in Kintamani. Despite COVID-19, 1,200 visitors per day continue to visit Kintamani, an agro-ecotourism destination [17]. Agro-ecotourism in Kintamani is also one of the largest temples on the island of Bali (Pura Ulundanu, Figure 2), which is routinely visited by local people during the COVID-19 pandemic. This is also why, even though other tourist destinations were closed during the pandemic, agro-ecotourism in Kintamani is still permitted for prayer reasons.

Managing visitor perceptions as a foundation for managing destinations [18] provides long-term benefits for the sustainability of tourism destinations. Despite a 25% decline in visitors during the COVID-19 pandemic, Kintamani agro-ecotourism operators claimed that they had kept coming. In other Bali tourism destinations, visitations might decline by as much as 80%, and companies are compelled to close even after being allowed to reopen due to the COVID-19 pandemic. Agro-ecotourism management in Kintamani is working to revive tourism. Many locals are dependent on tourism and other economic activities. The Republic of Indonesia’s Ministry of Tourism launched a CHSE program to revive places and attract tourists. The successful implementation of the CHSE program is expected to restore the tourism industry without sacrificing travelers’ health, safety, and security [12].

Agro-ecotourism promotes rural agriculture and ecology. Tourism for agricultural practices, cultural traditions, and natural attractions helps preserve local ecosystems and boost rural economies. Agro-ecotourism is defined by Arévalo et al. [19] as a tourism activity that takes place in rural areas, where agricultural and ecological practices are the main attractions and visitors can experience the region’s natural and cultural heritage. They suggest that agro-ecotourism should be founded on environmental, social, and economic sustainability principles. Diamantis [20] defined agro-ecotourism as a type of tourism that blends agricultural and ecological activities, local culture, and traditional traditions in rural areas. They also pointed out that agro-ecotourism can help rural economies while simultaneously protecting ecosystems and cultures. Agro-ecotourism encourages rural development, cultural preservation, and environmental sustainability.

The CHSE Program Implementation Guidelines are based on the decree of the Minister of Health of the Republic of Indonesia, No. HK.01.07/Menkes/382/2020, about health protocols for communities in public places and facilities in the Context of Corona Virus Disease Prevention and control in 2019. The CHSE recommendations match the protocols and rules set by the Government of Indonesia, World Health Organization (WHO), and World Travel & Tourism Council (WTTC) to avoid and deal with COVID-19 [14].

Service quality is probably the most researched topic in the tourism industry and in service marketing in general. People often say that the quality of a service has two parts: the technical part, which includes the basic services provided, and the functional part, which includes how the service is delivered [21]. Service quality is defined as an attitude resulting from a comparison of expectations and performance [21–23]. There are five elements of service quality, according to Parasuraman [24]: physical proof, dependability, responsiveness, assurance, and empathy.

Visitor satisfaction is seen as one of the most important ways for businesses in the tourism industry to stay competitive, since it affects how people choose destinations and how much they use the products and services those destinations offer [25]. Rajesh states that satisfaction is how a person feels when he compares the performance (or outcome) of a product to what he expected. Tourist satisfaction can be defined as how tourists feel after using a product or service or how much they enjoy their trip because the destination meets all of their wants, needs, and expectations [26].

According to the previous description, the objectives of this study were to (1) analyze visitor perceptions of attributes, CHSE program implementation, service quality, and visitor
satisfaction in Kintamani agro-ecotourism during the COVID-19 pandemic; (2) analyze the influence of attributes, CHSE program implementation, and destination service quality on visitor satisfaction; and (3) analyze future opportunities for agro-ecotourism development.

2. Research Methodology

Kintamani’s agro-ecotourism is in Bangli Regency, Bali (Figure 1), based on the decree of Bangli Regency Government Number 15 of 1991 [27]. Agro-ecotourism in Kintamani is still permitted during the COVID-19 pandemic, considering that it is the location of one of the main temples in Bali Province, namely Pura Ulundanu Batur (Figure 2). Therefore, during the COVID-19 pandemic, local Balinese visitors visited this destination, apart from praying and traveling. The area of the Kintamani tourist destination is 366.92 square kilo meters.

Kintamani agro-ecotourism’s comprehensive tourist attraction consists of (a) the natural landscape of Lake Batur and Mount Batur; (b) farmland of vegetable crops around Lake Batur, including red onions, garlic, potatoes, tomatoes, carrots, corn, and cabbage; (c) the Kintamani Mountains; and (d) freshwater fishing in Lake Batur. (e) religious sites, including Ulundanu Songan Temple, Tirta Pancoran Solas Temple, Dalem Balingkang Temple, and Perapen Pingit Temple; (f) old villages of Bali, including Songan Village, Trunyan Village, Pinggan Village, Kedisan Village, and Batur Village.

![Figure 1. Research location in Kintamani agro-ecotourism](image)
This study uses quantitative and qualitative approaches. Purposive sampling of 100 visits was employed to estimate the sample size, following the variant-based structural equation model (SEM) or partial least squares (PLS), which suggests 30 to 100 respondents. Convenience sampling determined the number of visitors at the research site. This study was conducted from April to October 2022 at Kintamani Bali Agro-ecotourism. Visitors’ perceptions of agro-ecotourism attributes, services, CHSE program implementation, satisfaction, and loyalty in Kintamani were collected as the primary data.

Qualitative descriptors and class intervals were used to examine the first research objective (Table 1).

Table 1. Categories of respondents' perception levels

<table>
<thead>
<tr>
<th>Percentage of achievement score to maximum score</th>
<th>Category of perception</th>
</tr>
</thead>
<tbody>
<tr>
<td>84&lt;100</td>
<td>very good/very appropriate/very satisfied/very loyal</td>
</tr>
<tr>
<td>68&lt;84</td>
<td>good/appropriate/satisfied/loyal</td>
</tr>
<tr>
<td>52&lt;68</td>
<td>moderate</td>
</tr>
<tr>
<td>36&lt;52</td>
<td>bad/inappropriate/dissatisfied/disloyal</td>
</tr>
<tr>
<td>20&lt;36</td>
<td>very bad/very inappropriate/very dissatisfied/very disloyal</td>
</tr>
</tbody>
</table>

WarpPLS 7.0 statistical software [28] was used to test 10 hypotheses (H1 to H10) for the second study objective: (1) H1: the agro-ecotourism attributes of Kintamani have a significant effect on visitor satisfaction, (2) H2: the agro-ecotourism attributes of Kintamani have a significant effect on visitor loyalty, (3) H3: the implementation of CHSE program has a significant effect on visitor satisfaction, (4) H4: CHSE program has a significant effect on visitor loyalty, (5) H5: the quality of agro-ecotourism services in Kintamani has a significant effect on visitor satisfaction, (6) H6: the quality of agro-ecotourism services in Kintamani has a significant effect on visitor loyalty, (7) H7: visitor satisfaction has a significant effect on visitor loyalty, (8) H8: the agro-ecotourism attributes of Kintamani have a significant effect on visitor loyalty through visitor satisfaction, (9) H9: CHSE program has a significant effect on visitor loyalty through visitor satisfaction, and (10) H10: the quality of agro-ecotourism services in Kintamani has a significant effect on visitor loyalty through visitor satisfaction.

3. Results and Discussion

3.1. Visitor Characteristics

This study collected information regarding the characteristics of respondents from 100 visitors, as shown in Table 2. Interestingly, this study revealed that all 100 visitors expressed a desire to return to Kintamani's agro-ecotourism, demonstrating the destination's popularity and appeal.
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Table 2. Characteristics of research respondents (N=100)

<table>
<thead>
<tr>
<th>No</th>
<th>Characteristics</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
<td>the average: 31.52 years, range: 18 to 57 years</td>
</tr>
<tr>
<td>2</td>
<td>Sex</td>
<td>55% men, 45% women</td>
</tr>
<tr>
<td>3</td>
<td>Number of visits</td>
<td>the average: 3.03 times, range: 1 to 8 times</td>
</tr>
<tr>
<td>4</td>
<td>Education level</td>
<td>high school: 54%, bachelor's degree: 42%, master's degree: 3%, diploma: 1%</td>
</tr>
<tr>
<td>5</td>
<td>Occupations</td>
<td>private employees: 48%, students: 23%, entrepreneurs: 18%, public servants: 11%</td>
</tr>
<tr>
<td>7</td>
<td>The average group size of visitors</td>
<td>the average: 4.5, range: 2 to 15.</td>
</tr>
<tr>
<td>8</td>
<td>Monthly income (IDR)</td>
<td>IDR 0–1 million: 7%, IDR 1-2 million: 18%, IDR 2–3 million: 25%, IDR 3–4 million: 35%, IDR 4-5 million: 6%, more than IDR 5 million: 9%</td>
</tr>
</tbody>
</table>

3.2. Visitor Perception of Agro-ecotourism

Table 3 shows that Kintamani visitors believe that agro-ecotourism is beneficial. This favorable perception comes from two variables with extremely high perception levels, agro-ecotourism services and visitors’ loyalty to Kintamani, as well as three variables with high perception levels, agro-ecotourism attributes, CHSE program implementation, and visitor satisfaction.

Table 3. Visitors’ perception of agro-ecotourism in Kintamani

<table>
<thead>
<tr>
<th>No</th>
<th>Notation</th>
<th>Measurement variables of agro-ecotourism in Kintamani</th>
<th>Percentage of achievement score to maximum score</th>
<th>Category of perception</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>(X1)</td>
<td>attributes of agro-ecotourism</td>
<td>77.60</td>
<td>good</td>
</tr>
<tr>
<td>2.</td>
<td>(X2)</td>
<td>implementation of CHSE program</td>
<td>74.20</td>
<td>appropriate</td>
</tr>
<tr>
<td>3.</td>
<td>(X3)</td>
<td>agro-ecotourism services</td>
<td>84.40</td>
<td>very good</td>
</tr>
<tr>
<td>4.</td>
<td>(Y1)</td>
<td>satisfaction with agro-ecotourism</td>
<td>79.20</td>
<td>satisfied</td>
</tr>
<tr>
<td>5.</td>
<td>(Y2)</td>
<td>loyalty to agro-ecotourism</td>
<td>84.40</td>
<td>very loyal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>perception conclusion</td>
<td>79.80</td>
<td>good</td>
</tr>
</tbody>
</table>

Table 4 displays the primary indicators comprising each variable of visitors’ perceptions of agro-ecotourism in Kintamani. Table 4 shows that good recreational places, beautiful natural landscapes, such as lakes and mountains, a variety of vegetable farms, diverse Hindu temples with religious rituals, and convenience during visits are the most important factors influencing visitors’ positive perceptions of agro-ecotourism in Kintamani.

Table 4. Dominant indicators shaping visitor perception for each variable in the agro-ecotourism of Kintamani

<table>
<thead>
<tr>
<th>No</th>
<th>Measurement variable of agro-ecotourism</th>
<th>Notation</th>
<th>Dominant indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>agro-ecotourism attributes (ATR)</td>
<td>(X1.4)</td>
<td>availability of attractive recreational and relaxation spots</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(X1.1)</td>
<td>beautiful landscapes and nature (Instagram-able)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(X1.9)</td>
<td>adequate rest facilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(X1.3)</td>
<td>existence of religious rituals that still take place</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(X1.15)</td>
<td>comfort during the visit to the destination</td>
</tr>
<tr>
<td>2</td>
<td>implementation of CHSE program</td>
<td>(X2.7)</td>
<td>arrangements have been made to prevent crowds of visitors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(X2.13)</td>
<td>provision of covered and non-disruptive waste disposal facilities for tourism activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(X2.10)</td>
<td>the agro-ecotourism landscape has implemented environmental sustainability principles in its management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(X2.12)</td>
<td>agro-ecotourism is in a pristine and comfortable condition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(X2.4)</td>
<td>standard health protocols have been implemented during the COVID-19 pandemic</td>
</tr>
<tr>
<td>3</td>
<td>destination services (LAYAN)</td>
<td>(X3.4)</td>
<td>providing excellent services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(X3.6)</td>
<td>responsivenes of the management to visitor complaints is excellent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(X3.9)</td>
<td>effective communication between management and visitors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(X3.10)</td>
<td>friendly management towards visitors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(X3.7)</td>
<td>always trying to help when visitors encounter problems</td>
</tr>
</tbody>
</table>
Health measures during the COVID-19 pandemic, population management, closed waste sites, and positive management-visitor dialogue are also vital. In conclusion, Kintamani’s agro-ecotourism is most influenced by the availability of appealing and high-quality facilities that prioritize visitor health and safety during the COVID-19 pandemic and provide excellent hospitality. These indicators boost Kintamani agro-ecotourism visitor satisfaction and brand loyalty.

### 3.3. Feasibility Test of the Research Model

The structural equation model’s feasibility when using WarpPLS are the coefficient of determination ($R^2$), reliability of the instruments, discriminant validity, full collinearity test, and predictive validity ($Q^2$).

Table 5. Latent variable coefficients

<table>
<thead>
<tr>
<th>No</th>
<th>Feasibility items</th>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ATR (attributes)</td>
</tr>
<tr>
<td>1</td>
<td>R-squared</td>
<td>0.569</td>
</tr>
<tr>
<td>2</td>
<td>Composite reliab.</td>
<td>0.970</td>
</tr>
<tr>
<td>3</td>
<td>Cronbach’s alpha</td>
<td>0.966</td>
</tr>
<tr>
<td>4</td>
<td>Avg. var. extrac. (AVE)</td>
<td>0.732</td>
</tr>
<tr>
<td>5</td>
<td>Full collin. VIF</td>
<td>3.048</td>
</tr>
<tr>
<td>6</td>
<td>Q-squared</td>
<td>0.556</td>
</tr>
</tbody>
</table>

Table 5 shows that 56.9% of the variation in visitor satisfaction in agro-ecotourism in Kintamani can be explained by the variation in attributes, CHSE program implementation, and services, while the rest come from variables not included in the model. The variance in visitor loyalty in agro-ecotourism in Kintamani can be explained by 21.5% of the variance in attributes, CHSE program implementation, services, and satisfaction. The remainder of the variance comes from the variables not included in the model. Ghosezi [29] defines weak R-squared values as 0.19–0.32, moderate as 0.33-0.66, and strong as >0.67. Based on these criteria, the R-squared analysis results of the visitor loyalty variable of 21.5% were weak, and visitor satisfaction (variable of 56.9% were strong).

$Q^2$-Squared is greater than 0, indicating strong predictive validity. The studied model is good because the Cronbach’s alpha and composite reliability of all variables were greater than 0.70. The proposed model is good because all variables’ AVE (average variant extracted) values are greater than 0.5. The suggested model is collinearity-free because all measurement models have full collin. VIF values of less than 3.3.
3.4. Measurement Model Analysis and Structural Model Analysis

The measurement analysis of the agro-ecotourism attribute variable shows that 12 out of 17 indicators are significant, 6 out of 13 indicators of the CHSE program implementation variable are significant, 7 out of 11 indicators of the service variable are significant, 9 out of 14 indicators of the satisfaction variable are significant, and 5 out of 6 indicators of the loyalty variable are significant. A confirmatory study of the model’s output was conducted before the structural model analysis, as shown in Figure 3.

Figure 3. Structural equation model output of the study

3.5. Direct Effects of Exogenous Variables on Endogenous Variables

As hypothesized earlier, the research model has seven measurements of the direct effects of exogenous variables on endogenous variables; the results are shown in Table 5. Of the seven hypotheses, four hypotheses were accepted (H1, H2, H5, and H6) while three hypotheses were rejected (H3, H4, and H7) as can be seen in Table 6.

Table 6. Direct effects of exogenous variables on endogenous variables

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Exogenous variable &gt; endogenous variable</th>
<th>Path coefficient</th>
<th>Effect size</th>
<th>Standard error</th>
<th>P value</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>ATR (X1) &gt; PUAS (Y1)</td>
<td>0.292</td>
<td>0.121</td>
<td>0.078</td>
<td>&lt;0.001</td>
<td>significant/accepted</td>
</tr>
<tr>
<td>H2</td>
<td>ATR (X1) &gt; LOYAL (Y2)</td>
<td>0.184</td>
<td>0.048</td>
<td>0.108</td>
<td>0.046</td>
<td>significant/accepted</td>
</tr>
<tr>
<td>H3</td>
<td>CHSE program (X2) &gt; PUAS (Y1)</td>
<td>-0.059</td>
<td>0.014</td>
<td>0.099</td>
<td>0.275</td>
<td>not significant/not accepted</td>
</tr>
<tr>
<td>H4</td>
<td>CHSE program (X2) &gt; LOYAL (Y2)</td>
<td>-0.018</td>
<td>0.003</td>
<td>0.164</td>
<td>0.455</td>
<td>not significant/not accepted</td>
</tr>
<tr>
<td>H5</td>
<td>LAYAN (X3) &gt; PUAS (Y1)</td>
<td>0.645</td>
<td>0.448</td>
<td>0.046</td>
<td>&lt;0.001</td>
<td>significant/accepted</td>
</tr>
<tr>
<td>H6</td>
<td>LAYAN (X3) &gt; LOYAL (Y2)</td>
<td>0.383</td>
<td>0.163</td>
<td>0.098</td>
<td>&lt;0.001</td>
<td>significant/accepted</td>
</tr>
<tr>
<td>H7</td>
<td>PUAS (Y1) &gt; LOYAL (Y2)</td>
<td>0.009</td>
<td>0.003</td>
<td>0.132</td>
<td>0.472</td>
<td>not significant/not accepted</td>
</tr>
</tbody>
</table>

3.5.1. The influence of agro-ecotourism attributes on visitor satisfaction

The path coefficient of the influence of ATR on PUAS was 0.292 (p < 0.001), indicating a significant effect. The effect size of 0.121 shows that the influence of the ATR as a predictor variable is moderately strong in determining PUAS. This study confirms Kozak [30]...
observation that the tourist's positive experiences with products, among other resources provided by tourism destinations, positively affect overall satisfaction [15], and found that destination attributes increased tourist satisfaction in tourism locations. This study also confirms Albayrak’s [31] claim that “a combination of various attributes of the destination creates visitor satisfaction.” Kozak [30] and Ragavan [32] discovered that religious/spiritual, natural/ecological, and cultural/historical facilities and services improve tourist satisfaction. This study advises destination managers and policymakers to consider these attributes when developing successful marketing strategies to improve tourist satisfaction in agro-ecotourism locations. The above studies show that multiple destination attributes affect tourist satisfaction. Visitors are more satisfied with a destination if their attributes meet expectations.

Kintamani's agro-ecotourism attributes can boost visitor satisfaction. These include the destination's sustainability, natural surroundings, cultural authenticity, spiritual activities, and involvement of the local community. This study indicates that Kintamani agro-ecotourism visitors are satisfied when they feel connected to nature and can participate in spiritual activities that match their beliefs. Agro-ecotourism in Kintamani allows visitors to experience the local culture and customs. When a place is environmentally conscious, visitors are satisfied. This may include using eco-friendly practices in destination operations, supporting local conservation efforts, and educating visitors on environmental preservation.

3.5.2. The influence of agro-ecotourism attributes on visitor loyalty

The path coefficient of the influence of the ATR on LOYAL was 0.184 (p = 0.046), indicating a significant effect. The effect size is 0.048, which shows that the strength of the influence of the ATR as a predictor variable is moderate in determining LOYAL. This study supports Schlesinger et al., 2020 [33] finding that the attributes—attractions, locals' attitudes, and activities—significantly affect overall destination satisfaction and destination loyalty. According to [34], destination attributes influence visitor loyalty. The agro-ecotourism attribute in Kintamani has a significant effect on visitor loyalty, as shown in both studies.

Several studies have investigated the effect of agro-ecotourism attributes on visitor loyalty. Indrayanti et al. [35] and Bi el al [36] found that visitor loyalty is increased by destination attributes including authenticity and satisfaction. Astari et al. [37] and Schlesinger et al. [33] discovered that destination attributes positively affect tourist satisfaction and destination loyalty. [38] found that agro-ecotourism affects destination loyalty through perceived authenticity and image. Finally, [39] [40] observed that authenticity and destination image affect the destination experience and visitors' loyalty. The overall findings of all studies discussed are highly consistent with this research, confirming the notion that destination attributes have a significant impact on visitor loyalty.

Kintamani's agro-ecotourism meets visitors' expectations, which results in loyalty. The average number of visits by visitors was 3.03, indicating repeat visitors who were satisfied and loyal. Kintamani's agro-ecotourism managers' superb services and hospitality encourage customer loyalty. Local cultural and daily activities are easy to locate, giving visitors a memorable rural feeling that is becoming impossible to obtain in urban settings. Visitors can relax during their spiritual and natural activities in Kintamani through trekking and eating local food. Visitors' willingness to return during the COVID-19 pandemic shows their belief in God's protection, their understanding of how to avoid COVID-19 transmission, and Kintamani's agro-ecotourism steps to prevent the spread of the virus. The unique ambiance and romanticism of old Bali makes visitors desire to return to Kintamani's agro-ecotourism, strengthening their loyalty to the destination.

3.5.3. The influence of CHSE program implementation on visitor satisfaction

The path coefficient of the influence of the CHSE program on the PUAS is -0.059 (p=0.275), which means that the CHSE program did not have a significant effect on PUAS. This finding contradicts the results of a previous study [12] that CHSE program implementation in Melasti Beach, Badung, Bali, satisfies visitors. Several studies conducted in diverse settings have revealed a trend that contradicts the results of this study. For example, CHSE program implementation in hotels improves guest satisfaction in terms of cleanliness and health. Customer satisfaction, especially cleanliness and safety, is affected by the implementation of
the restaurant’s CHSE program (Peco-Torres et al., 2021). According to (Diarta & Sarjana, 2021) (Diarta and Artini, 2022) (Diarta & Sukendar, 2021), destination should prioritize CHSE program measures to improve customer satisfaction and retention.

This study examines how the COVID-19 epidemic affected agro-ecotourism visitors to Kintamani, a prominent Bali tourist destination. Tourists’ lack of COVID-19 concern is due to numerous factors. First, the Enforcement of the Community Activity Restrictions Program relaxed restrictions, allowing people to travel and participate in activities while following health procedures. Second, the strong belief in God’s protection during worship and ritual activities at temples around agro-ecotourism makes visitors feel safe. Finally, prolonged activity and movement constraints caused a euphoric sense, resulting in a lack of COVID-19 awareness. Despite Kintamani’s commitment to environmental sustainability, CHSE program implementation did not statistically affect visitor satisfaction. These findings suggest that authorities addressing COVID-19 transmission hazards in prominent tourist areas should include psychological and cultural elements that affect tourist behavior.

3.5.4. The influence of CHSE program implementation on visitor loyalty

CHSE program does not significantly affect LOYAL in Kintamani’s agro-ecotourism, with a path coefficient of -0.018 (p = 0.455). This study contradicts the results of a previous study (Sato et al., 2018) [45] [46] (Diarta & Sarjana, 2021) (Diarta & Sukendar, 2021), examined hotel customer loyalty and CHSE program implementation. Implementation of the CHSE program improved customer satisfaction, trust, and loyalty. All previous studies above observed that CHSE program implementation increased consumer satisfaction and loyalty in theme park attractions.

In Kintamani’s agro-ecotourism, visitors are drawn to the opportunity to practice religion while enjoying the scenery. Visitors’ main concerns are the spiritual and natural components of their journey; hence, the presence or absence of CHSE programme protocols has little impact on their decisions. Several temples, such as Pura Ulundanu Songan, Tirta Pancoran Solas, Pura Pasar Agung, and Pura Dalem Balingkang, as well as the lake, farms, mountains, hills, and Kintamani forest, lure visitors to Kintamani’s agro-ecotourism. Kintamani’s agro-ecotourism visitors prefer religious rites and nature over CHSE program compliance. Although some visitors may carry masks, hand sanitizers, and tissues, these precautions are not the main reason for their visit. Visitor loyalty to Kintamani’s agro-ecotourism is more likely to be affected by the attributes and services given than by the CHSE program protocol implementation. Thus, Kintamani tourism companies must improve their guests’ experiences while ensuring health and safety.

3.5.5. The effect of agro-ecotourism services on visitor satisfaction

The path coefficient of the influence of LAYAN on PUAS was 0.645 (p < 0.001), showing a significant effect. An effect size of 0.448 indicated a substantial influence. This study confirms (Jahanshahi et al., 2009) [48] and (Bell et al., 2005) in that service affects customer satisfaction. [35] [43] (Albacete-Sáez et al., 2007) discovered that agro-ecotourism services improved visitor satisfaction. The analysis indicated that the majority of visitors who visited the site had positive experiences. The study also indicated that visitors who were satisfied with the spiritual aspects of agro-ecotourism services were more inclined to endorse them and return.

Visitors to Kintamani’s agro-ecotourism service consistently express high levels of satisfaction with management’s friendliness, responsiveness to complaints, and devotion to safety and comfort throughout religious and environmental activities. The agro-ecotourism service experience affects visitor satisfaction as much as attribute variables. Visitors who want to hike around Lake or Mount Batur Kintamani can use guides, parking is available, and there are changing facilities at temples for self-purification. Even during the COVID-19 outbreak, visitors found services trustworthy and accommodating. Kintamani’s agro-ecotourism service is ideal for quiet and pleasant travels.

3.5.6. The influence of agro-ecotourism services on visitor loyalty

The path coefficient of the LAYAN on LOAYAL was 0.383 (p 0.001), which indicates a significant effect. An effect size of 0.163 was moderately influential in determining visitor satisfaction.
loyalty. This is consistent with the findings of [33] [21], who suggested that good destination services can create visitor loyalty to the destination.

Visitors to Kintamani agro-ecotourism were satisfied. They were happy to convey nice things about their vacations to Kintamani, an agro-ecotourism spot. All the visitors wanted to return to Kintamani. Agro-ecotourism service quality can also affect visitor loyalty. Positive visitors are more inclined to return, recommend services, and post positive reviews. High-quality services may include skilled and hospitable employees, well-maintained facilities, and activities that allow visitors to connect with nature and spirituality. The level of environmental stewardship that agro-ecotourism services exhibit can affect visitor loyalty. Visitors who care about sustainability and environmental protection are more inclined to return to the service that cares. Examples include reducing waste, preserving energy, and supporting local conservation programmes.

3.5.7. The influence of satisfaction on visitor loyalty

The path coefficient of the influence of PUAS on LOYAL in Kintamani agro-ecotourism is 0.009 (p = 0.472), which means that it is not significant. This study found that the attributes and services of agro-ecotourism in Kintamani significantly influenced visitor satisfaction and loyalty. However, this study showed an insignificant effect of satisfaction on visitor loyalty. This result contradicts the findings of [51], [4], (Guerreiro et al., 2006) who found that satisfaction is a key factor in determining how loyal visitors are. Visitor satisfaction is generally considered to be a significant determinant of visitor loyalty. However, the relationship between satisfaction and loyalty is complex and influenced by several factors. The perceived quality of facilities, destination image, and prior experiences can impact the strength of the relationship (Valle et al., 2006). Additionally, the level of involvement and type of visitor can affect the relationship, as some visitors may be more loyal due to habit or convenience than simple satisfaction [54] (Romão et al., 2014) [53]. However, in Kintamani, an agro-ecotourism destination, visitor loyalty is not determined by visitor satisfaction. Agro-ecotourism visitors to Kintamani have the purpose of worship and religious rituals, followed by nature tourism. Although there are aspects of dissatisfaction, visitors still intend to revisit the Kintamani agro-ecotourism in the future. Thus, in Kintamani, visitor satisfaction does not seem to play a significant role in fostering visitor loyalty, but agro-ecotourism attributes and services do.

3.6. Indirect Effects of Exogenous Variables on Endogenous Variables

This study examined three indirect influences between endogenous and exogenous variables, as shown in Table 7. Table 7 shows that all hypotheses, including H8, H9, and H10, are rejected (p-values 0.474, 0.489, and 0.472). This shows that the independent variables, ATR, CHSE program, and LAYAN, did not significantly affect LOYAL in Kintamani through PUAS.

This finding suggests that visitor satisfaction with agro-ecotourism has not affected visitor loyalty during the COVID-19 pandemic. Instead, visitor loyalty was more likely to be driven by other attributes of agro-ecotourism in Kintamani, such as the unique agro-ecotourism landscape (farmland, lakes, mountains, temples, and culture). Additionally, the lush forests and hills of Kintamani, exotic Lake Batur, and stunning lava formations in the area are other features that attract visitors and contribute to their loyalty. Furthermore, the good services provided by agro-ecotourism managers in Kintamani also play a vital role in influencing visitor loyalty to agro-ecotourism. The findings of this study suggest that agro-ecotourism managers in Kintamani should focus on these factors to maintain and enhance visitor loyalty during and after the pandemic. This study contributes to the body of knowledge on visitor loyalty to agro-ecotourism during the COVID-19 pandemic and highlights the critical factors that influence visitor loyalty.

Table 7. Indirect effect of exogenous variables on endogenous variables

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Exogenous variable &gt; Endogenous variable</th>
<th>Path coefficient</th>
<th>Effect size</th>
<th>Standard error</th>
<th>P-value</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>H8</td>
<td>ATR (X1) &gt; PUAS (Y1) &gt; LOYAL (Y2)</td>
<td>0.003</td>
<td>0.001</td>
<td>0.040</td>
<td>0.474</td>
<td>not significant/not accepted</td>
</tr>
<tr>
<td>H9</td>
<td>CHSE program (X2) &gt; PUAS (Y1) &gt;</td>
<td>-0.001</td>
<td>0.000</td>
<td>0.019</td>
<td>0.489</td>
<td>not significant/not accepted</td>
</tr>
</tbody>
</table>
This finding suggests that visitor satisfaction with agro-ecotourism has not affected visitor loyalty during the COVID-19 pandemic. Instead, visitor loyalty was more likely to be driven by other attributes of agro-ecotourism in Kintamani, such as the unique agro-ecotourism landscape (farmland, lakes, mountains, temples, and culture). Additionally, the lush forests and hills of Kintamani, exotic Lake Batur, and stunning lava formations in the area are other features that attract visitors and contribute to their loyalty. Furthermore, the good services provided by agro-ecotourism managers in Kintamani also play a vital role in influencing visitor loyalty to agro-ecotourism. The findings of this study suggest that agro-ecotourism managers in Kintamani should focus on these factors to maintain and enhance visitor loyalty during and after the pandemic. This study contributes to the body of knowledge on visitor loyalty to agro-ecotourism during the COVID-19 pandemic and highlights the critical factors that influence visitor loyalty.

3.7. Future Opportunities for Agro-ecotourism Development in Kintamani

The COVID-19 pandemic has presented several opportunities for the growth of agro-ecotourism in Kintamani, including:

(1) Kintamani agro-ecotourism can capitalize on local and domestic tourism by promoting local products and experiences that highlight the region’s distinctive culture and natural environment. (2) The COVID-19 pandemic has raised awareness of the significance of sustainable tourism. Kintamani agro-ecotourism can capitalize on this by promoting practices that protect the environment and benefit local communities. (3) Kintamani agro-ecotourism can diversify its products and services to attract a broader range of tourists. For instance, they can introduce digital services and goods, such as online workshops, virtual tours, and online marketplaces, to sell local goods. (4) Promoting agro-ecotourism in Kintamani can be facilitated by collaboration with local communities, government agencies, and other stakeholders. Collaboration may include the development of tourism strategies, the improvement of infrastructure, and the promotion of the region’s distinctive culture and natural environment.

Furthermore, (5) Effective branding and marketing can assist in promoting Kintamani agro-ecotourism as a distinctive and attractive destination. Agro-ecotourism operators can develop innovative branding and marketing strategies that promote sustainable tourism practices and highlight an area’s distinctive culture and natural environment. (6) Agro-ecotourism in Kintamani can integrate technology to enhance the visitor experience and offer contactless and secure services. To reduce physical codes can be used for menu items, online booking systems, and digital payment options to reduce physical contact. (7) Kintamani agro-ecotourism can develop community-based tourism programs that engage locals in agro-ecotourism activities such as homestays, farm tours, and cooking classes. (8) Kintamani agro-ecotourism can develop products and services that appeal to various market segments. For instance, they can create organic food tours for health buffs, adventure tours for outdoor enthusiasts, and cultural tours for those interested in local tradition. (9) Kintamani agro-ecotourism can offer training programs in sustainable agriculture, hospitality management, marketing, and other pertinent areas to support the growth of agro-ecotourism. (10) Developing a crisis management plan to respond to unforeseen events, such as natural disasters, disease outbreaks, and economic crises, can increase the resilience of Kintamani agro-ecotourism. This will aid in minimizing the effects of such occurrences on agro-ecotourism and expediting recovery.

Other opportunities, such as (11) the rich cultural heritage of Kintamani agro-ecotourism, can be preserved and promoted through agro-ecotourism. Visitors can learn about traditional farming techniques, engage in cultural activities, and visit local temples and historical sites. (12) Due to the COVID-19 pandemic, health and wellness tourism has gained popularity, with visitors seeking activities that promote physical and mental health. Kintamani agro-
4. Conclusion and Recommendations

4.1. Conclusion

Based on the results of the analysis, it can be inferred that Kintamani agro-ecotourism is positively perceived by visitors. Among the variables measured, destination services and visitor loyalty to agro-ecotourism were found to have very high perception levels, whereas the attributes of Kintamani agro-ecotourism, CHSE program implementation, and visitor satisfaction with Kintamani agro-ecotourism were perceived at high levels. These findings suggest that visitors have a positive impression of Kintamani agro-ecotourism.

This study identified four significant direct influences of exogenous variables on the endogenous variable of agro-ecotourism in Kintamani. This includes the influence of Kintamani agro-ecotourism attributes and services on visitor satisfaction and loyalty. These results suggest that the quality of Kintamani agro-ecotourism attributes and services is a critical factor that influences visitor satisfaction and loyalty at the destination. In contrast, this study found that CHSE program implementation had no significant impact on visitor satisfaction or loyalty, nor did visitor satisfaction have a direct influence on visitor loyalty to Kintamani agro-ecotourism. Additionally, the study found that the indirect influences of exogenous variables on endogenous variables, specifically the influence of Kintamani agro-ecotourism attributes, CHSE program implementation, and services, on visitor loyalty through visitor satisfaction, were not significant.

4.2. Recommendations

Based on the positive perception levels among visitors and the identified significant direct influences of exogenous variables on agro-ecotourism in Kintamani, it is recommended that Kintamani agro-ecotourism concentrate on improving the quality of its attributes and services to increase visitor satisfaction and loyalty. Moreover, promoting sustainable tourism practices, collaborating with local communities and stakeholders, and developing innovative agro-ecotourism products and services can attract and retain tourists. Consider implementing technology to improve visitors’ experiences while maintaining safety. Effective branding and marketing strategies coupled with data-driven decision-making can aid in promoting Kintamani agro-ecotourism as a unique and attractive tourist destination. Developing a crisis management plan and sustainable infrastructure can bolster agro-ecotourism resilience and mitigate the negative effects of unanticipated events. Overall, the success of Kintamani agro-ecotourism depends on its ability to continuously adapt and innovate, while preserving the natural and cultural heritage of the region.

Author Contributions

IKSD: Conceptualization, Methodology, Software, Investigation, Writing - Review & Editing and NWPA: Writing - Review & Editing, Supervision.

Conflicts of interest

There are no conflicts to declare.
Acknowledgements

The author would like to express gratitude to the Research and Community Service Institute (LPPM) of Udayana University for funding this research through the 2022 Udayana University Research Grant with contract number DIIPA PNBP Udayana University TA 2022, in accordance with the Research Implementation Assignment Letter No. B/78.424/UN14.4.A/PT.01.03/2022 dated 19 April 2022. The author would also like to extend the same appreciation to the Pengempon or Manager of DTW Pura Hulundanu in Songan and Tirta Pancoran Solas Seked, Batur, as well as to all the respondents and informants.

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