

# Socio-demographic analysis of tourist's social return through social media posts

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## Abstract

The development of social media has changed the way tourists express their travel experiences, including in shaping post-visit digital social value. This study aims to analyze the Social Return (SR) of tourists through posts on social media after visiting Borobudur Temple, taking into sociodemographic account factors. This study uses a quantitative approach involving 387 tourists obtained through accidental sampling. Data analysis was conducted using Jamovi software with the Mann-Whitney U and Kruskal-Wallis tests to examine differences in SR levels based on respondent characteristics. The results show that the level of tourists' SR is in the moderate category with an average value of 3.21. Gender does not show a significant difference in SR, while nationality, age, and type of social media are significant differentiating factors. Domestic tourists have a higher level of SR ( $p = 0.004$ ), and visual-based platforms such as YouTube and Instagram are proven to be more effective in shaping social awareness. In addition, younger age groups who are active on visual social media show higher digital social awareness. These findings confirm that cultural factors and social media usage patterns play a dominant role in shaping the digital social values of tourists. The implication is that the management of tourist destinations such as Borobudur needs to develop electronic strategies, Adaptive word-of-mouth (e-WOM), focusing on visual platforms and specific nationality segmentation to reinforce the message of sustainable tourism.

## Keywords

Social return, Media social, Digital social value

## Introduction

The rapid expansion of social media has fundamentally transformed how tourists document, communicate, and assign meaning to their travel experiences. Social media is now viewed in modern tourism studies as a digital platform where travelers create and share social, cultural, and environmental values following their travels rather than just as a promotional tool (Kaplan & Haenlein, 2010; Xiang & Gretzel, 2010). By influencing broader perceptions of destinations, especially cultural heritage sites, and forming collective consciousness, these post-visit expressions add to what can be called digital social value (Gretzel et al., 2007).

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Previous tourism research has extensively examined tourist satisfaction, motivation, destination image, and behavioral intention in the context of digital platforms (Richards, 2018; Nugroho et al., 2025). Studies have also highlighted the role of social media in electronic word-of-mouth (e-WOM), visitor engagement, and the dissemination of cultural narratives (Jain, 2018; Smith, 2024). More recently, scholars have begun to explore the social dimensions of tourism, including responsible tourism behaviour, community awareness, and sustainability-oriented communication (Minnaert, 2020; Leonidova, 2021). However, these studies often focus on marketing effectiveness or individual behavioural outcomes, rather than on the broader social value generated and communicated by tourists after their visits.

The concept of Social Return (SR) offers a relevant analytical lens to understand these intangible social outcomes. Social Return refers to the perceived social and cultural benefits that tourists internalize and subsequently express, particularly through digital media (Ariza-Montes et al., 2021; Amelia, 2024). While Social Return has been discussed in the context of community development and sustainable tourism, its application to post-visit digital expressions especially through social media content remains limited (Ariza-Montes & Sianes, 2021). Existing studies tend to treat tourists as homogeneous actors, paying insufficient attention to how sociodemographic characteristics shape variations in digital social awareness and expression.

This limitation is particularly evident in heritage tourism contexts such as Borobudur Temple, one of Indonesia's most prominent cultural heritage sites and a UNESCO World Heritage monument (UNESCO, 2025). Despite its massive digital exposure and diverse visitor profile, little empirical research has examined how different groups of tourists generate and communicate Social Return through social media after visiting the site. Factors such as nationality, age, gender, and the type of social media platform used may influence how tourists interpret cultural meaning and express social responsibility, yet these dimensions have not been systematically explored (Susanto, 2023; Balomenou et al., 2022).

To address this gap, this study adopts a sociodemographic perspective to analyze Social Return as reflected in tourists' social media posts after visiting Borobudur Temple. By integrating Social Return theory with digital tourism behaviour, this research offers a structured approach to understanding how social values are constructed and differentiated across demographic groups and media platforms. Rather than emphasizing promotional outcomes, the study focuses on social awareness, cultural attachment, and the digital articulation of sustainability-related values.

## Method

This study employed a quantitative research approach designed to identify and compare differences in tourists' Social Return (SR) levels according to sociodemographic characteristics. The population consisted of visitors to Borobudur Temple, with a sample of 387 respondents obtained through accidental sampling. Both offline and online

questionnaire distributions were conducted to capture responses from a wide range of visitors.

The research instrument was adapted from the Social Return scale developed by [Boley et al. \(2018\)](#), consisting of several indicators assessing post-visit social awareness and perceived social contribution through digital expressions. Respondents were asked to rate their agreement on a Likert scale.

Data were analyzed using Jamovi software, employing Mann-Whitney U and Kruskal-Wallis tests to identify statistically significant differences in SR levels across sociodemographic variables, including gender, nationality, age, and type of social media used. These non-parametric tests were chosen due to the ordinal nature of the data and the non-normal distribution of responses. This method allows a robust comparison of how different demographic factors contribute to variations in digital social behavior after visiting Borobudur Temple, thereby strengthening the empirical basis of Social Return analysis.

## Result and discussion

### Results

This section presents the representative findings of the study regarding tourists' Social Return (SR) after visiting Borobudur Temple. The results are organized according to the sociodemographic variables examined in the method section, namely gender, nationality, age, and type of social media platform. Descriptive statistics and non-parametric test results are summarized in [Table 1](#), [Table 2](#), [Table 3](#), and [Table 4](#).

#### 1. Social return based on gender

The results show that there is no statistically significant difference in Social Return between male and female tourists. As presented in [Table 1](#), the overall mean SR score for male respondents is 3.21, while female respondents show a mean score of 3.19. The Mann-Whitney U test indicates that the difference is not significant ( $p = 0.772$ ). Based on the results of data analysis, it was found that there was no statistically significant difference in the Social Return (SR) variable from the perspective of tourist gender. Descriptively, male tourists had an average score of 3.21, while female tourists showed a similar average score of 3.19. The small difference in these figures is reinforced by the results of the Mann-Whitney U test, which produced a significance value of  $p = 0.772$ . Because the value of  $p > 0.05$ , it can be concluded that the hypothesis stating that there is a difference in Social Return between men and women is rejected.

Table 1. Sex analysis

Variable	Mean		P-value	Result
	Man	Woman		
SR_1	3.31	3.29	0.968	no different
SR_2	3.10	3.04	0.660	no different
SR_3	3.21	3.25	0.587	no different
SR	3.21	3.19	0.772	no different

## 2. Social return based on nationality

Significant differences in Social Return are found between domestic and foreign tourists. As shown in Table 2, domestic tourists report a higher overall SR mean score (3.33) compared to foreign tourists (3.08). The Mann–Whitney U test results indicate statistically significant differences for SR\_2 ( $p = 0.0005$ ), SR\_3 ( $p = 0.003$ ), and total SR ( $p = 0.004$ ). However, SR\_1 does not show a significant difference between the two groups ( $p = 0.057$ ). The results of the analysis show a statistically significant difference in the level of Social Return (SR) when viewed from the origin of tourists. Based on the data presented in Table 2, domestic tourists consistently reported a higher average score of 3.33 compared to foreign tourists, who only achieved a score of 3.08. This difference was validated through the Mann–Whitney U test, which produced a significance value for the total SR of  $p = 0.004$  ( $p < 0.05$ ), meaning that the difference in perception between the two groups was statistically significant and not coincidental. When examined more deeply by indicator, very striking differences were found in the SR\_2 ( $p = 0.0005$ ) and SR\_3 ( $p = 0.003$ ) indicators. This indicates that domestic tourists feel they gain much stronger social recognition or self-image from these tourism activities compared to foreign tourists. However, a different phenomenon was found in the SR\_1 indicator, where the test results showed a value of  $p = 0.057$ . Since this value is above the threshold of 0.05, it can be concluded that for the SR\_1 indicator, there is no significant difference in opinion between domestic and foreign tourists. Overall, these findings indicate that domestic tourists tend to feel greater social returns than foreign tourists in the context of this destination.

Table 2. Nationality analysis

Variable	Mean		P-value	Result
	Domestic	Foreign		
SR_1	3.39	3.21	0.057	No different
SR_2	3.20	2.94	0.0005	different
SR_3	3.39	3.09	0.003	different
SR	3.33	3.08	0.004	different

## 3. Social return based on age group

The Kruskal–Wallis test reveals significant differences in Social Return across age groups, as presented in Table 3. The overall SR variable shows a statistically significant difference ( $p = 0.031$ ). Significant differences are also observed in SR\_1

( $p = 0.026$ ) and SR\_3 ( $p = 0.027$ ), while SR\_2 does not show a significant difference ( $p = 0.091$ ). The highest SR mean values are observed among respondents under 19 years and those above 60 years, whereas the lowest SR values are found in the 40–49 years age group. Based on the results of the Kruskal–Wallis test, it was found that age significantly influenced tourists' perception of Social Return (SR).

The data in Table 3 shows that the SR variable as a whole has a significance value of  $p = 0.031$ , which means that there are significant differences in opinion between different age groups. More specifically, these significant differences were found in the SR\_1 ( $p = 0.026$ ) and SR\_3 ( $p = 0.027$ ) indicators. However, for the SR\_2 indicator, no statistically significant differences were found between age groups because the  $p$  value reached 0.091 ( $p > 0.05$ ). Interestingly, this Social Return trend forms a unique pattern where the highest average values are found in the extreme age groups, namely respondents under 19 years of age (adolescents) and those over 60 years of age (elderly). Conversely, the lowest Social Return values were reported by the mature age group, namely those aged 40–49 years. This indicates that younger and elderly age groups tend to feel more social benefits or recognition from these tourism activities compared to middle-aged groups who may have different expectations or priorities in their travels.

Table 3. Age analysis

Variable	Mean						P-value	Result
	(1)	(2)	(3)	(4)	(5)	(6)		
SR_1	3.52	3.29	3.44	2.98	3.09	3.40	0.026	different
SR_2	3.19	3.04	3.26	2.75	3.00	3.10	0.091	no different
SR_3	3.41	3.30	3.25	2.89	2.91	3.60	0.027	different
SR	3.37	3.21	3.32	2.87	3.00	3.37	0.031	different

#### 4. Social return based on type of social media platform

The results indicate statistically significant differences in Social Return across different types of social media platforms. As shown in Table 4, all SR indicators and total SR demonstrate significant variation ( $p < 0.001$ ). YouTube users record the highest overall SR mean score (3.47), followed by Instagram (3.26) and TikTok (3.24). In contrast, WhatsApp users show the lowest overall SR mean score (2.44). Facebook users fall within a moderate range with an SR mean score of 3.00. Based on the results of data analysis in Table 4, the type of social media used by tourists has been proven to have a very significant influence on their perception of Social Return (SR). This is confirmed by the significance value on all SR indicators and total SR, which shows a value of  $p < 0.001$ . This value, which is well below the threshold of 0.05, confirms that there is a very clear difference in social gains (such as recognition or self-image) based on the platform used to share travel experiences. In terms of average scores, YouTube users recorded

the highest SR value of 3.47, followed by Instagram users (3.26) and TikTok users (3.24). The high scores on these three visual and video-based platforms indicate that the feature of publicly sharing content has a greater social impact on its users. Meanwhile, Facebook users were in the moderate category with a score of 3.00. On the other hand, WhatsApp users showed the lowest SR value with an average score of only 2.44. This contrasting difference is most likely due to the nature of the WhatsApp platform, which is more private and limited to personal circles of friends, so that the space to gain broader “social recognition” is limited compared to public platforms such as YouTube or Instagram.

Table 4. Social media analysis

Variable	Mean					P-value	Result
	Facebook	Instagram	Tik Tok	WA	YT		
SR_1	3.06	3.35	3.48	2.50	3.80	<.001	Different
SR_2	2.91	3.12	3.03	2.44	3.30	<.001	Different
SR_3	3.02	3.32	3.21	2.39	3.30	<.001	Different
SR	3.00	3.26	3.24	2.44	3.47	<.001	Different

### Discussion

The findings of this study provide a comprehensive picture of how digital social value or Social Return (SR) is constructed by tourists after visiting Borobudur Temple. The main finding, which shows an average SR value of 3.21, places tourists' perceptions in the moderate category, indicating that although tourists feel they gain social value from their posts, there is still significant room to optimize emotional engagement and deeper cultural narratives in the digital space. Regarding the gender variable, the results showing no significant difference between men and women ( $p = 0.772$ ) prove that in the context of world cultural heritage such as Borobudur, the urge to build self-image through digital “showing off” or social signaling has become a universal behavior that transcends gender boundaries. This finding corrects several traditional views that often position women as a group that is more emotionally expressive on social media, and instead reinforces the theory that the need for social recognition in today's digital era is gender neutral.

Furthermore, the significant difference between domestic and foreign tourists ( $p = 0.004$ ) provides new insights into the influence of cultural attachment on social values. Higher scores among domestic tourists, particularly on indicators of social recognition and self-image, make it clear that for local communities, visiting Borobudur is not just a tourist trip, but a form of validation of national identity and social status in their environment. This is different from foreign tourists who may see the visit more as an educational experience, so the drive to gain “social capital” in their home communities is not as strong as that of domestic tourists. This phenomenon is complicated by an age pattern that forms a “U-shape” curve, where the youth (under 19 years old) and elderly (over 60 years old) groups recorded the highest SR values. For the younger generation,

social media is the main instrument of self-existence, while for the elderly, sharing travel experiences is a form of achievement in their retirement that enhances their social self-esteem. Conversely, the low scores among the 40–49 age group confirm that the productive group has more pragmatic priorities and is less focused on digital recognition than other age groups.

The most crucial finding in this study lies in the dominance of visual-based social media platforms, which are clearly more effective in shaping digital social awareness. The sharp difference between YouTube users, who scored the highest (3.47), and WhatsApp users, who scored the lowest (2.44), proves that Social Return is highly dependent on the digital “stage” used. The more public and visual a platform is, the higher the social value it generates due to its public interaction features that enable widespread recognition. Theoretically, these results support the Social Presence theory, which states that media with high information richness, such as videos, allow individuals to feel more socially present. As an implication, Borobudur Temple management needs to shift its strategy from general promotion to a segmentation strategy based on visual and national platforms to strengthen the message of sustainable tourism. Although this study has limitations in terms of sampling, these findings make an important contribution to the literature on cultural destination management in understanding how social values are constructed and differentiated in the digital age.

## Conclusion

This study successfully answered its main objective of mapping the level and differentiation of tourists' Social Return (SR) at Borobudur Temple through a sociodemographic perspective. Overall, these findings conclude that although digital Social Return is in the moderate category, the construction of social value is not uniform but is greatly influenced by nationality, age, and the type of social media platform used. Contrary to the common view that often differentiates digital behavior based on gender, this study proves the universality of the drive to build a digital self-image among male and female tourists. A crucial point from this discussion emphasizes that cultural attachment is the main driver for domestic tourists to achieve higher social value, while social media usage patterns show that visual-based platforms such as YouTube and Instagram are far superior in facilitating the need for social presence compared to private messaging platforms.

This finding contributes significantly to the development of tourism management science, particularly in expanding the understanding of digital social value. This research goes beyond conventional satisfaction studies by showing how a world heritage destination transforms into “social capital” for tourists in cyberspace. The latest knowledge offered is the identification of a “U-shape” curve pattern in the age variable and the effectiveness of visual platforms that dominate the formation of digital social value. The scientific findings confirm that the digital communication strategy of cultural heritage destinations must be adaptive to platform characteristics and nationality

segmentation in order to convert physical visits into positive digital social impact. As a suggestion for future research, it is recommended to conduct a longitudinal study to observe the stability of this Social Return over time, as well as to involve more in-depth psychographic variables to uncover the emotional motives behind tourists choice of visual content.

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