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Cultural Alienation Among Siargao Residents Amid Rapid Tourism Development

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Abstract

This study examined the perceived effects of rapid tourism growth on residents' daily lives and cultural identity and assessed the extent of cultural alienation across demographic groups in Siargao Island, Philippines. A mixed-methods design was employed involving 200 residents selected through convenience sampling from Dapa, General Luna, and Pilar, with 10 selected informants providing qualitative insights. Data were collected using a researcher-made questionnaire and interviews and analyzed through descriptive statistics, Mann–Whitney U tests, Kruskal–Wallis tests, and thematic analysis. Findings revealed high perceived effects of tourism growth on cost of living (M = 3.61), local culture (M = 3.59), green economy (M = 3.54), and residents' values (M = 3.54). Cultural alienation was also high, particularly in cultural identity (M = 3.56) and manner of speaking (M = 3.55). Significant differences in cultural alienation were identified across municipalities ($p < 0.05$), but not according to age, sex, civil status, educational attainment, or occupation. The findings indicate that tourism development is associated with perceived cultural transformation and socioeconomic pressures that vary geographically. Strengthening municipality-specific heritage preservation, community participation, and sustainable tourism initiatives is recommended. Convenience sampling, self-reported perceptions, and limited geographic coverage constrain generalizability. The study contributes localized evidence to culturally responsive tourism planning and supports Sustainable Development Goals 8, 11, and 12 by informing approaches that balance economic development, cultural heritage protection, and environmental sustainability.

Keywords: Cultural Alienation; Cultural Identity; Heritage Preservation; Siargao Island; Sustainable Tourism; Tourism Development

1. Introduction

Tourism is a major driver of economic growth, employment, and infrastructure development, particularly in island destinations. Siargao Island in the Philippines has experienced rapid tourism expansion due to its natural attractions, surfing culture, and international recognition. This growth has created employment opportunities, increased local income, and encouraged the development of tourism-related businesses and infrastructure (Hansen, 2021). However, tourism expansion also presents challenges to cultural preservation as residents encounter foreign lifestyles, values, and practices. The growing influence of international visitors and global media has contributed to changes in traditional clothing, social behavior, and cultural expression (Hansen, 2021). Hansen (2021) observed that the interaction between global surfing culture and local traditions in Siargao creates

tensions between cultural adaptation and the preservation of established identities. These developments raise concerns about cultural alienation, particularly when residents experience disconnection from their traditional practices, cultural identity, and sense of belonging.

Related literature indicates that rapid tourism development can transform local traditions through commercialization, cultural adaptation, and changing social expectations. Zhang and Lee (2021) found that tourism pressures may encourage communities to modify traditional practices to satisfy visitors, potentially weakening cultural authenticity and social cohesion. Similarly, Rise (2025) emphasized that tourism-driven changes in language, festivals, and everyday practices can create tensions between economic opportunities and cultural preservation. Ernando, Susilo, and Kholifah (2025) identified limited community participation in tourism decisions as a contributing factor to cultural alienation, while Wang, Zhang, and Liu (2024) highlighted the commercialization of sacred traditions and cultural spaces. Li, Feng, Gao, and Zhao (2024) further demonstrated that tourism-related changes in traditional communities can weaken cultural attachment and social relationships. Beyond tourism settings, Liu (2026) established that cultural alienation may emerge from conflicts between traditional identities and dominant social expectations. Collectively, these studies demonstrate that cultural alienation involves changes in traditional practices, cultural identity, social participation, and community belonging.

The effects of tourism development also extend to clothing traditions, language, and cultural representation. Arif et al. (2019) examined community perceptions of tourism-related changes, while Hansen (2021) explored how surfing tourism in Siargao intersects with local identity, masculinity, and social hierarchies. Tourism may create opportunities for cultural exchange but also raises questions about whose cultural expressions are represented and valued. Zhang and Lee (2021) examined alienation and authenticity in intangible cultural heritage tourism, providing a relevant perspective on the tensions between cultural expression and tourism production. Together, these studies suggest that cultural continuity warrants attention as communities adapt to tourism development.

Globally, tourism-dependent communities experience both economic opportunities and cultural pressures as external influences reshape local practices. In Siargao, tourism expansion has become particularly evident in General Luna, Dapa, and Pilar. Municipal tourism records indicated approximately 252,416 tourist arrivals in General Luna (MTO General Luna, 2026), 11,333 in Dapa (MTO Dapa, 2026), and 115,554 in Pilar (MTO Pilar, 2026) during the first two quarters of 2024. These developments highlight the economic importance of tourism while raising concerns about its implications for local culture, living expenses, environmental sustainability, and residents' values. Tuttle (2021) explained that rapid economic and social transformation can produce cultural displacement when residents become disconnected from the meanings and traditions associated with their communities. Similarly, Li, Wang, Wang, Xu, Chen, and Yao (2024) demonstrated that tourism-related livelihood transitions may affect traditional economic activities, ecological resilience, and community continuity. These concerns are particularly relevant to Siargao, where tourism development intersects with cultural preservation and sustainable community development.

The study drew on perspectives concerning cultural alienation, place attachment, and sustainable development. Tuttle (2021) examined alienation from place and cultural displacement in changing communities, offering a lens for considering how social and economic transformation may affect residents' sense of belonging. The study also incorporated the Triple Bottom Line (Elkington, 1997), which emphasizes the interconnected economic, social, and environmental dimensions of sustainable development. These perspectives informed the examination of perceived tourism effects on local culture, cost of living, green economy, and residents' values, alongside cultural alienation in traditional practices, local mode of dressing, cultural identity, and manner of speaking.

Although previous studies have examined tourism-related cultural transformation, commercialization, and identity displacement, the reviewed literature provides limited integrated evidence concerning the extent of cultural alienation among residents of Siargao, particularly across municipalities experiencing different tourism conditions. Existing research has emphasized cultural commodification (Hansen, 2021), community participation (Ernando et al., 2025), changing cultural practices (Wang et al., 2024), and linguistic adaptation (Zhang & Lee, 2021), but these dimensions require further examination within Siargao's local context. Accordingly, the present study examined the perceived effects of rapid tourism growth on residents' daily lives and cultural identity, determined the extent of cultural alienation, and assessed differences according to age, sex, civil status, educational attainment, occupation, and municipality. By focusing on residents of Dapa, General Luna, and Pilar, the investigation sought to provide evidence for culturally responsive and sustainable tourism recommendations.

The study aligns primarily with Sustainable Development Goal (SDG) 8, Decent Work and Economic Growth; SDG 11, Sustainable Cities and Communities; and SDG 12, Responsible Consumption and Production. SDG 8 is relevant to balancing tourism-related employment and economic opportunities with the protection of local culture and community welfare. SDG 11 emphasizes safeguarding cultural heritage, strengthening community identity, and promoting inclusive development amid tourism expansion. SDG 12 relates to responsible tourism practices,

resource efficiency, and the reduction of environmental pressures associated with tourism activities. These goals reflect the Triple Bottom Line (Elkington, 1997), which recognizes that sustainable development requires consideration of economic benefits, social well-being, and environmental responsibility.

From a multidisciplinary sustainability perspective, the study contributes to cultural, socio-economic, environmental, and community sustainability by examining how rapid tourism development influences residents' cultural identity, traditional practices, economic conditions, and values. Its emphasis on cultural alienation highlights the importance of preserving local heritage while supporting tourism-related livelihoods. The findings may inform community-centered tourism planning, cultural heritage activities, traditional skills development, environmental awareness initiatives, and responsible resource management. By integrating cultural preservation with economic and environmental considerations, the study provides a basis for promoting tourism development that respects local identity, strengthens community participation, and supports the long-term sustainability of Siargao.

2. Material and methods

2.1 Research Design

The study utilized a mixed-methods research design combining quantitative and qualitative approaches to examine residents' perceptions and experiences regarding rapid tourism growth and cultural alienation in Siargao Island. Quantitative data were collected through structured questionnaires, while qualitative information was obtained through interviews to provide contextual explanations of the survey findings. This approach enabled the researchers to assess perceived tourism effects through descriptive and inferential statistics while using thematic insights from selected informants to contextualize the results. Slater and Hasson (2025) discuss quantitative research design and validity, which are relevant to evaluating the survey component; their article is not presented here as a source for mixed-methods integration.

2.2 Locale of the Study

The study was conducted in three municipalities of Siargao Island, Surigao del Norte, Philippines: Dapa, General Luna, and Pilar. General Luna serves as the island's primary tourism and commercial center, while Dapa functions as an important economic and transportation hub. Pilar represents another municipality with tourism-related activities. These locations were selected to gather perspectives from residents living in different areas affected by tourism development and to examine variations in cultural alienation across the three municipalities.

2.3 Respondents of the Study

The study involved 200 residents of Siargao Island, comprising 65 respondents (32.5%) from Dapa, 67 (33.5%) from General Luna, and 68 (34.0%) from Pilar. Respondents were profiled according to age, sex, civil status, highest educational attainment, occupation, and municipality. Among the 200 respondents, 10 informants were selected for qualitative interviews to provide additional insights into cultural changes associated with tourism development. These informants were residents aged 50–70 years who had lived on Siargao Island for approximately 30–40 years before the period of rapid tourism development.

2.4 Sample and Sampling Procedure

Convenience sampling was employed to select 200 respondents from the three municipalities based on their availability and willingness to participate. The sample consisted of 32.5% from Dapa, 33.5% from General Luna, and 34.0% from Pilar, providing representation from the selected study locations. For the qualitative component, 10 informants were chosen from the respondents based on established age and residency criteria. This selection allowed the researchers to obtain additional perspectives from long-term residents familiar with the island's cultural practices before rapid tourism expansion.

2.5 Research Instrument

The study utilized a researcher-made questionnaire and interview guide to collect quantitative and qualitative data. The questionnaire consisted of three parts. The first gathered respondents' demographic information, including age, sex, civil status, highest educational attainment, occupation, and municipality. The second assessed the perceived effects of rapid tourism growth on local culture, cost of living, green economy, and residents' values. The third measured cultural alienation in terms of traditional practices, local mode of dressing, sense of cultural identity, and manner of speaking. A four-point Likert scale was used for the second and third parts, with responses ranging from 4 (Strongly Agree) to 1 (Strongly Disagree). Mean scores were interpreted as highly affected (3.25–4.00), affected (2.50–3.24), slightly affected (1.75–2.49), and not affected (1.00–1.74). Interview guide questions were also used to obtain qualitative insights supporting the survey findings. Respondents were informed about the study and their consent was obtained before participation.

2.6 Data Gathering Procedure

Data collection began with securing approval from the Siargao Island Institute of Technology (SIIT) Research Director and obtaining permission from the Municipal Mayors of Dapa, General Luna, and Pilar through their respective Municipal Tourism Office (MTO) officers. Following approval, printed questionnaires were prepared and distributed to available and willing residents in the selected municipalities. The researchers explained the study's purpose and provided respondents with sufficient time to complete the questionnaires based on their perceptions and experiences. Completed questionnaires were retrieved on the same day, checked for completeness, and organized for statistical processing. Additionally, interviews were conducted with 10 selected informants to obtain qualitative information supporting the quantitative findings. The collected data were subsequently prepared for statistical and thematic analysis.

2.7 Data Analysis Techniques

The collected data were analyzed using descriptive and inferential statistical techniques alongside thematic analysis. Frequency counts and percentages were used to describe respondents' demographic characteristics, while means and standard deviations assessed the perceived effects of rapid tourism growth and the extent of cultural alienation. The Mann-Whitney U test was employed to determine significant differences in cultural alienation between male and female respondents. The Kruskal-Wallis test was used to examine differences according to age, civil status, highest educational attainment, occupation, and municipality. Thematic analysis was applied to the qualitative interview responses through coding to identify insights that supported and contextualized the quantitative findings.

2.8 Ethical Considerations

The study observed ethical principles to protect participants' rights, privacy, and welfare. Necessary institutional and municipal permissions were secured before data collection. Respondents were informed about the nature and purpose of the research, and participation was voluntary. The researchers maintained confidentiality, collected only information relevant to the study, and handled completed questionnaires appropriately. All collected information was used exclusively for research purposes, and participants' privacy was respected throughout data gathering and analysis.

3. Results and Discussion

3.1 Demographic Profile of the Respondents

3.1.1 Age

The findings revealed that 76 respondents (38.0%) were aged 30 years and above, followed by 41 (20.5%) aged 27–29, 37 (18.5%) aged 24–26, 26 (13.0%) aged 21–23, and 20 (10.0%) aged 18–20. Respondents aged 27 years and above accounted for 58.5% of the sample, indicating greater representation of relatively mature residents. The age distribution provided perspectives from different generations regarding cultural changes associated with tourism development. Timothy and Said (2023) emphasized that generational differences influence perceptions of traditional livelihoods, tourism opportunities, and cultural preservation. However, the present study found no significant differences in cultural alienation according to age, suggesting comparable perceptions across age groups.

3.1.2 Sex

The respondents were equally distributed by sex, comprising 100 males (50.0%) and 100 females (50.0%). This distribution provided balanced representation of male and female residents in assessing tourism-related cultural changes. The equal representation allowed the study to consider perspectives from both sexes regarding cultural transformation and tourism development. Gutierrez (2025) emphasized that women's participation in Philippine tourism creates opportunities for economic empowerment, although employment inequalities and gender stereotypes remain. These considerations highlight the importance of inclusive participation in tourism development.

3.1.3 Civil Status

Most respondents were single, accounting for 128 individuals (64.0%), followed by 68 married respondents (34.0%). Widowed and separated respondents accounted for two individuals (1.0%) each. Thus, single residents constituted the majority of the sample. The distribution reflected the participation of residents with different household responsibilities and social circumstances. Blanco et al. (2024) examined tourism-related quality-of-life perceptions across demographic groups and identified variations in how residents experienced tourism development. Civil status therefore provided a relevant demographic characteristic for examining cultural alienation, although no significant differences were established in the present study.

3.1.4 Highest Educational Attainment

The findings showed that 55 respondents (27.5%) had reached college level, while 54 (27.0%) were college graduates. Another 43 (21.5%) were high school graduates, 26 (13.0%) had reached high school level, 13 (6.5%)

had reached elementary level, and seven (3.5%) were elementary graduates. Graduate and postgraduate studies were represented by one respondent (0.5%) each. The findings indicated that respondents came from varied educational backgrounds, with substantial representation at the secondary and tertiary levels. Basallo (2025) associated tourism-related educational opportunities with employment, business development, household income, and cultural well-being. This highlights the relevance of educational attainment in understanding residents' participation in tourism-related activities and cultural preservation.

3.1.5 Occupation

Tour guides represented the largest occupational group, comprising 52 respondents (26.0%), followed by 51 unemployed individuals (25.5%) and 24 business owners (12.0%). Government employees accounted for 19 respondents (9.5%), while fishermen and carpenters represented 16 (8.0%) each. Teachers comprised 12 respondents (6.0%), and farmers accounted for 10 (5.0%). The occupational distribution reflected the prominence of tourism-related employment alongside traditional livelihoods and other economic activities. The considerable representation of tour guides demonstrated the importance of tourism within the surveyed population, while the presence of unemployed respondents highlighted employment-related concerns. These findings suggest the importance of considering livelihood diversity and economic stability in sustainable tourism planning.

3.1.6 Municipality

The respondents were distributed across three municipalities, with 68 (34.0%) from Pilar, 67 (33.5%) from General Luna, and 65 (32.5%) from Dapa. The relatively balanced distribution provided perspectives from different tourism settings within Siargao. The geographic distribution was relevant because tourism development differs across municipalities. General Luna functions as a major tourism center, Dapa serves as a commercial and transportation hub, and Pilar maintains strong connections with ecotourism and traditional community activities. Tuntipisitkul et al. (2021) emphasized the influence of community characteristics and tourism development on residents' perceptions, while Olivar et al. (2024) highlighted the importance of local community experiences in assessing tourism impacts. These perspectives support examining cultural alienation across different municipalities.

3.2 Perceived Effects of Rapid Tourism Growth on Residents' Daily Lives and Cultural Identity

3.2.1 Local Culture

The findings revealed that rapid tourism growth had a high perceived effect on local culture, with a mean of 3.59 (SD = 0.494). Respondents reported noticeable changes in traditional customs, community practices, and cultural expressions. Qualitative accounts further described changes in younger residents' behavior and the declining visibility of some traditional practices. The findings suggest that increasing interaction with tourists and foreign cultural influences may contribute to changes in local customs and cultural identity. Pontillas et al. (2025) emphasized the interconnected sociocultural, environmental, and economic effects of tourism development. The present findings similarly highlight the importance of maintaining cultural continuity while accommodating tourism growth.

3.2.2 Cost of Living

Cost of living obtained the highest mean of 3.61 (SD = 0.406), indicating a high perceived effect of rapid tourism development. Respondents identified increasing prices of basic commodities, housing, and daily necessities as major concerns. Informants similarly described the rising cost of goods and the financial pressures experienced by local households. The findings indicate that economic growth associated with tourism may coincide with increased household expenses. Pontillas et al. (2025) examined the economic, environmental, and sociocultural effects of tourism on residents' quality of life, emphasizing the importance of evaluating development from the community's perspective. The present findings underscore the need to consider affordability and residents' economic welfare in tourism planning.

3.2.3 Green Economy

The green economy recorded a mean of 3.54 (SD = 0.501), indicating a high perceived effect of tourism development on environmental and economic sustainability. Respondents recognized changes associated with tourism-related infrastructure, transportation, environmental conditions, and economic activities. These findings demonstrate that tourism development involves environmental considerations alongside economic opportunities. Pontillas et al. (2025) emphasized that residents perceive tourism impacts across ecological, sociocultural, and economic dimensions. The findings therefore reinforce the importance of balancing tourism expansion with environmental protection and responsible resource management.

3.2.4 Values of the Residents

Residents' values obtained a mean of 3.54 (SD = 0.446), reflecting a high perceived effect of tourism growth on community values and social behavior. Respondents reported changes in attitudes, social interactions, and traditional expectations, particularly among younger residents. Informants also described increasing acceptance of behaviors that were previously discouraged within their communities. The findings suggest that exposure to

different cultural practices and lifestyles may influence established community norms. Pontillas et al. (2025) highlighted the sociocultural implications of tourism development for residents' quality of life. These observations emphasize the importance of cultural awareness and community participation in maintaining local values amid tourism expansion.

3.3 Extent of Cultural Alienation Among Siargao Residents

3.3.1 Traditional Practices

Traditional practices recorded a mean of 3.50 (SD = 0.513), indicating a high extent of perceived cultural alienation. Respondents reported changes in traditional activities, celebrations, and community customs, including the reduced visibility of some established cultural practices. The findings suggest that tourism development may influence the continuity and meaning of traditional activities. Wirawan (2025) observed that tourism may encourage the adaptation and commercialization of traditional rituals to meet visitor expectations. This highlights the importance of preserving the cultural significance of local traditions while accommodating tourism-related activities.

3.3.2 Local Mode of Dressing

Local mode of dressing obtained a mean of 3.53 (SD = 0.490), indicating a high extent of perceived cultural alienation. Respondents reported changes in clothing preferences, particularly the growing adoption of modern and foreign-influenced fashion among younger residents. The findings indicate that tourism-related cultural interaction may influence everyday clothing practices and expressions of local identity. Hafidhoh (2025) explained that tourism branding can contribute to the commodification of cultural expressions and alter their traditional meanings. The present findings similarly suggest that clothing preferences represent a visible dimension of cultural adaptation.

3.3.3 Sense of Cultural Identity

Sense of cultural identity obtained the highest mean of 3.56 (SD = 0.466), indicating the greatest perceived extent of cultural alienation among the four dimensions. Respondents reported changes in cultural belonging, traditional values, and the recognition of locally rooted cultural practices. The findings suggest that rapid tourism development may affect residents' attachment to their cultural identity. Hafidhoh (2025) highlighted how tourism-related cultural commercialization may separate cultural expressions from their original meanings. The findings emphasize the importance of protecting cultural identity and encouraging residents' participation in heritage preservation.

3.3.4 Manner of Speaking

Manner of speaking recorded a mean of 3.55 (SD = 0.472), indicating a high extent of perceived cultural alienation. Respondents identified changes in everyday communication, including the increasing use of foreign-influenced expressions and language practices. Qualitative accounts also described greater use of English and changes in traditional forms of communication. The findings indicate that language adaptation represents another dimension of cultural transformation in tourism-dependent communities. The observations are consistent with the broader cultural changes discussed by Hafidhoh (2025) and Wirawan (2025), particularly the adaptation of cultural expressions in response to tourism. Maintaining local language practices may therefore contribute to preserving cultural continuity and community identity.

3.4 Differences in Cultural Alienation According to Demographic Variables

3.4.1 Differences According to Age

The Kruskal-Wallis test revealed no significant differences in cultural alienation according to age. Traditional practices recorded $\chi^2 = 2.99$ ($p = 0.559$), local mode of dressing $\chi^2 = 2.64$ ($p = 0.621$), sense of cultural identity $\chi^2 = 6.37$ ($p = 0.173$), and manner of speaking $\chi^2 = 5.08$ ($p = 0.279$). All p-values exceeded 0.05, indicating that cultural alienation did not significantly differ across age groups. The findings suggest that residents across different generations reported comparable levels of cultural alienation. Timothy and Said (2023) examined residents' perceptions of beach tourism in Zanzibar and identified mixed findings regarding age-related differences in tourism impacts. Their observations indicate that the influence of age may vary depending on the tourism setting and dimension examined. In Siargao, however, age did not significantly differentiate perceptions of cultural alienation.

3.4.2 Differences According to Sex

The Mann-Whitney U test showed no significant differences in cultural alienation between male and female respondents. Traditional practices recorded $U = 4303$ ($p = 0.084$), local mode of dressing $U = 4317$ ($p = 0.088$), sense of cultural identity $U = 4813$ ($p = 0.641$), and manner of speaking $U = 4395$ ($p = 0.130$). All p-values exceeded 0.05, indicating statistically comparable levels of cultural alienation between sexes. The findings suggest that male and female residents perceived similar cultural changes associated with tourism development. Eyisi et al. (2024) emphasized the role of gender and cultural dynamics in shaping residents' tourism experiences, while Tuntipisitkul et al. (2021) examined gender-related differences in perceptions of economic, environmental, and

sociocultural tourism impacts. The present findings indicate that sex was not a significant differentiating factor in cultural alienation among the surveyed residents.

3.4.3 Differences According to Civil Status

The Kruskal-Wallis test revealed no significant differences in cultural alienation according to civil status. Traditional practices recorded $\chi^2 = 4.804$ ($p = 0.187$), local mode of dressing $\chi^2 = 4.734$ ($p = 0.192$), sense of cultural identity $\chi^2 = 6.013$ ($p = 0.111$), and manner of speaking $\chi^2 = 0.307$ ($p = 0.959$). All p-values exceeded the 0.05 significance level. The findings indicate that single, married, widowed, and separated respondents reported comparable levels of cultural alienation. Luna and Bajao (2025) similarly found no significant relationship between civil status and residents' perceptions of tourism's economic impacts in Southern Cebu. These findings suggest that cultural changes associated with tourism development may be perceived across different household and marital circumstances.

3.4.4 Differences According to Highest Educational Attainment

The Kruskal-Wallis test showed no significant differences in cultural alienation according to educational attainment. Traditional practices recorded $\chi^2 = 10.45$ ($p = 0.164$), local mode of dressing $\chi^2 = 5.59$ ($p = 0.589$), sense of cultural identity $\chi^2 = 3.29$ ($p = 0.857$), and manner of speaking $\chi^2 = 6.31$ ($p = 0.504$). All p-values exceeded 0.05, indicating that educational attainment did not significantly differentiate cultural alienation. The findings suggest that residents with different educational backgrounds reported similar perceptions of cultural transformation. Timothy and Said (2023) found no significant differences in support for sustainable tourism development between residents with university and basic education in Puerto Plata, Dominican Republic. The present findings similarly indicate that cultural preservation initiatives should consider residents across educational levels.

3.4.5 Differences According to Occupation

The Kruskal-Wallis test revealed no significant differences in cultural alienation according to occupation. Traditional practices recorded $\chi^2 = 8.85$ ($p = 0.264$), local mode of dressing $\chi^2 = 6.25$ ($p = 0.511$), sense of cultural identity $\chi^2 = 7.72$ ($p = 0.358$), and manner of speaking $\chi^2 = 4.20$ ($p = 0.756$). All p-values exceeded 0.05, indicating comparable perceptions across occupational groups. The findings suggest that residents engaged in tourism-related employment, traditional livelihoods, government service, education, business, and other occupational categories experienced similar levels of perceived cultural alienation. Tuntipisitkul et al. (2021) likewise found no significant association between tourism employment type and residents' perceptions of selected negative tourism impacts in Botswana. This supports the finding that occupational background did not significantly differentiate cultural alienation among Siargao residents.

3.4.6 Differences According to Municipality

The Kruskal-Wallis test revealed significant differences in cultural alienation according to municipality. Traditional practices recorded $\chi^2 = 12.67$ ($p = 0.002$), local mode of dressing $\chi^2 = 16.49$ ($p < 0.001$), sense of cultural identity $\chi^2 = 17.42$ ($p < 0.001$), and manner of speaking $\chi^2 = 9.93$ ($p = 0.007$). All p-values were below 0.05, indicating statistically significant differences across Dapa, General Luna, and Pilar. However, the analysis did not establish which specific municipalities differed from one another. The findings suggest that geographic location may influence residents' experiences of cultural alienation, potentially reflecting differences in tourism exposure and local community conditions. The qualitative responses similarly indicated that cultural changes varied across areas with different levels of foreign visitor presence. These findings highlight the importance of considering municipality-specific conditions when developing cultural preservation and sustainable tourism initiatives.

3.5 Synthesis of Major Findings

Overall, rapid tourism development was perceived to have a high effect on residents' daily lives and cultural identity, particularly the cost of living ($M = 3.61$) and local culture ($M = 3.59$). Cultural alienation was also rated high across all dimensions, with sense of cultural identity ($M = 3.56$) and manner of speaking ($M = 3.55$) obtaining the highest scores. Significant differences were found according to municipality, while age, sex, civil status, educational attainment, and occupation showed no significant differences. The findings demonstrate that rapid tourism development in Siargao is associated with perceived cultural, economic, environmental, and social changes. Although these experiences were generally comparable across demographic groups, their variation across municipalities highlights the relevance of local tourism conditions. The results provide a basis for culturally responsive tourism planning, heritage preservation, community participation, and sustainable development initiatives that balance economic opportunities with the protection of local identity and traditions.

4. Conclusion & Recommendations

The study concluded that rapid tourism development was associated with substantial perceived cultural, economic, environmental, and social changes among residents of Dapa, General Luna, and Pilar, Siargao Island. Tourism growth was perceived to have a high effect on local culture, cost of living, green economy, and residents' values, with cost of living emerging as the most affected dimension. Cultural alienation was likewise high across traditional practices, local mode of dressing, sense of cultural identity, and manner of speaking, with cultural identity showing the greatest extent of perceived alienation. No significant differences in cultural alienation were identified according to age, sex, civil status, educational attainment, or occupation. However, significant differences were observed across municipalities, indicating that residents' experiences varied geographically. Overall, the findings highlight the importance of balancing tourism-related economic opportunities with cultural preservation, community well-being, and environmental sustainability to support responsible tourism development in Siargao.

The study recommends that municipal local government units in Dapa, General Luna, and Pilar prioritize measures addressing the rising cost of living, particularly through appropriate economic and price-stabilization initiatives that protect residents' welfare amid tourism expansion. Local government units, tourism offices, educational institutions, and cultural organizations should strengthen heritage preservation programs focusing on traditional practices, local clothing, cultural identity, and native language expressions. Community-based cultural activities, traditional skills workshops, and authentic cultural immersion initiatives should be promoted to preserve local traditions without excessive commercialization. Tourism authorities should encourage meaningful resident participation in tourism planning and ensure that development initiatives respect community values and cultural identity. Environmental sustainability efforts, including community clean-up activities, waste segregation campaigns, and environmental awareness programs, should also be strengthened. Because cultural alienation differed significantly across municipalities, interventions should be adapted to local conditions and periodically evaluated to determine their effectiveness in supporting cultural continuity and sustainable tourism development.

The study was limited to 200 residents selected through convenience sampling from Dapa, General Luna, and Pilar, restricting the generalizability of the findings to other municipalities and tourism destinations. Its quantitative descriptive-survey design relied primarily on self-reported perceptions, which may reflect individual experiences and subjective interpretations rather than objectively measured cultural changes. The investigation focused on selected dimensions of cultural alienation and tourism impacts during the academic year 2026–2027 and did not examine the full historical development of Siargaonon culture. Tourists and external stakeholders were not included as respondents. Furthermore, the statistical analysis identified municipal differences without determining which specific municipalities differed. Future research may address these limitations through broader sampling, additional stakeholder perspectives, and comparative or longitudinal approaches.

5. Compliance with ethical standards

The authors affirm that no conflicts of interest exist in relation to this study. The research involved 200 residents from Dapa, General Luna, and Pilar, Siargao Island, Philippines, under the Siargao Island Institute of Technology, with the necessary permissions secured from the SIIT Research Director and the respective municipal authorities. Participation was voluntary, informed consent was obtained, and data were collected through questionnaires and interviews, with respondents' privacy and confidentiality maintained and information used exclusively for research purposes. The researchers acknowledge the participating residents, the Siargao Island Institute of Technology, and the concerned municipal authorities for their cooperation and support throughout the study.

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