COMMUNITY RESILIENCE AND ITS INFLUENCE ON SUSTAINABLE TOURISM DEVELOPMENT

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Abstract

Purpose – This study explores residents' perceptions of community resilience and satisfaction and their influence on sustainable tourism development.
Methodology/Design/Approach – This quantitative research was conducted in the Galapagos Islands, an ecotourism destination. Bivariate techniques such as Spearman correlation and stepwise multiple regression were used.
Findings – Findings show that residents are generally resilient and satisfied with tourism; they see opportunities for resident development, especially for young people. There is also a high level of trust and excellent communication within the community, thanks to the associations that help to overcome negative social problems.
Originality of the research – his study confirms that a high level of community satisfaction with the sustainable development of a destination is directly and positively related to the level of resilience.
Keywords community resilience; sustainable tourism development; tourism; ecotourism; Galapagos.

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INTRODUCTION

Tourism has positive effects on local communities, such as job creation and improved services, but it also has negative consequences like resource depletion and cultural decline (Nkemngu, 2015; Zaei & Zaei, 2013). Destinations can be affected by natural or human-made events, requiring resilience and sustainable practices (Redman, 2014; Sofyan et al., 2022; Vlachos, 2022). Resilience refers to a system's ability to learn and adapt in challenging situations, while sustainability involves meeting present needs without compromising future generations (Folke, 2016; Holling, 1996; UN Secretary-General, 1987). Tourism studies frequently link resilience and sustainability by examining the impact of resilient practices on the sustainable development of destinations (Bakas, 2017; Strickland-Munro et al., 2010). However, the existing literature often presents contributions that may be challenging to put into practice or tend to assess the correlation between resilience and sustainability based on individual factors (Powell et al., 2018).

This study seeks to evaluate all the dimensions of resilience, namely its economic, environmental, and social aspects, as perceived by the residents of an ecotourism destination and its influence on sustainable development. It adopts different bivariate statistical techniques, such as Spearman's correlation and stepwise multiple regression, and it has selected a well-known ecotourism destination as the study site.

Community resilience

The concept of resilience was first examined from the perspective of the environmental sciences, especially ecology (Islam et al., 2020; McLeod et al., 2021; Platts-Fowler & Robinson, 2016). It was defined as "the ability of ecosystems to absorb changes of state variables, driving variables, and parameters, and persist" (Holling, 1973). Resilience is essential for ecosystem management because it serves as a core element during any ecosystem's recovery phase (Standish et al., 2014). By acknowledging that communities are social systems, community resilience is defined as the residents' existence, development, and participation in surviving in an environment characterized by change and uncertainty (Basurto-Cedeño et al., 2017; Holling, 1996; Magis, 2007, 2010; Musavengane & Kloppers, 2020; Rendon et al., 2021).

In addition to determining the importance of context in community resilience, other factors contribute to community resilience, such as economic development of different industries (e.g., tourism), infrastructure, social capital, information, communicative competence, agents' assets, equitable access to resources, collective action, values, beliefs, and governance (Cartier & Taylor, 2020; Joseph et al., 2020; Roberts & Townsend, 2015).

Tourism scholars recently paid particular attention to the concept of resilience due to the appearance of massive natural disasters that have impacted tourism businesses (Jiang et al., 2019; Musavengane & Kloppers, 2020; Tsai et al., 2016; Zhang et al., 2020). Researchers generally focus on developing models to assess the resilience and disaster management capacity of local communities. Faulkner's (2001) model was one of the first to analyse communities' levels of resilience and adaptation to natural disasters before, during, and after a crisis. Although Faulkner's model (2001) is the most widespread and widely applied, certain modifications of it have been presented.

For instance, after evaluating different frameworks from tourism and other fields, Bec, McLennan, and Moyle (2016) developed a model that assesses adaptive capacity, individual factors, and community responses. However, the authors indicate that the long-term application of that framework needs further research. It is therefore the case that empirical studies often apply the concept of resilience and adopt different models and methods in regards to the study context and to establishing the factors that lead to resilience. Similarly, Chen et al. (2020) assessed the role of human agency in shaping community resilience and developed a framework to identify any changes caused by external factors and community actions to overcome the differences. The authors conclude that collaborative networks are essential aspects of communities, but scholars must consider context-specific factors in order to apply the framework effectively (e.g., nature-based vs. urban-based tourism).

When assessing a community's resilience in nature-based tourism it is important to consider various interrelated factors, namely, economic, social, and environmental resilience, all essential to the pillars of sustainability (Holladay & Powell, 2013, 2016; Okafor et al., 2022; Powell et al., 2009). Economic resilience is concerned with the quantity, calibre, and diversity of employment possibilities available to community residents (Adger, 2000), and environmental resilience refers to a community's capacity to preserve ecosystem productivity and function (Jamaliah & Powell, 2019). Social resilience refers to a community's capacity to handle external pressures, including changes in social, political, and environmental factors (Lin & Lin, 2020).

Social trust, networks, group learning, and equity all have the capacity to influence social resilience (Pelling & High, 2005). The sustainability of communities engaged in nature-based tourism depends on these three types of resilience, all of which are linked. The ability of local citizens and institutions to connect and promote ties between the ecological and social elements of local systems depends critically on social capital (Holladay & Powell, 2013).

Economic variety and pay equity are two factors that can be used to gauge economic resilience, but tourism is not usually considered in that context (Rose & Krausmann, 2013). Despite this, tourism is seen as a key driver of local economies and economic recovery since it encourages economic activity and strengthens other sectors of the economy (Prayag et al., 2020). Increasing the quality of social relationships, building community institutions, and diversifying tourism offerings are all elements that can boost a community's resilience (Lee et al., 2021). Similarly, elements connected to the market as well as to business operations and connections impact an organization's capacity to maintain profitability in the face of climatic disasters (Becken, 2013). Studies on resilience have been done in regards to protected areas, communities, and businesses, and they have demonstrated that nations and regions that rely heavily on tourism have lower resilience levels when faced with terrorism or natural catastrophes (Cheng & Zhang, 2020; Holland et al., 2022; Strickland-Munro et al., 2010; Ruiz-Ballesteros, 2011; Williams et al., 2020).

Prior research has emphasized the values of social capital and strong stakeholder networks for resilience within destination communities. Strong social networks have been proven to aid suppliers by understanding and successfully navigating the risks and changes in towns in China that rely heavily on tourism (Dogru et al., 2019; Schuhbert, 2023; Traskevich & Fontanari, 2021). Close connections with municipal leaders who have significant access to and interaction with authorities can help the flow of information and aid in handling concerns "trickling up" from local stakeholders in small towns. Increased resilience, information sharing, and better adaptation results across communities have all been linked to participation and collaboration in governance processes (Davidson et al., 2013). In general, the resilience of destinations is clearly reliant on efficient communication and cooperation between stakeholders, including locals, businesses, officials, and other groups (Guo et al., 2018). Lastly, unlike economic and social resilience, environmental resilience can be impacted by various elements, such as the degree of human alteration in the environment (i.e., naturalness), the ability to withstand drought and other stressors, and the levels of biological diversity. Balance between natural environment and human planning is essential for resilience in rural communities (Ode et al., 2009; Powell et al., 2018).

Resilience and sustainable tourism development

Community resilience can have major implications for sustainable tourism development. Among the most prominent publications on this issue is Holladay and Powell's (2013; 2016) work, which investigates the community's perception of social and environmental resilience capacity in Dominica. Residents of this nature-based tourism destination mainly manage tourism businesses and activities. Holladay and Powell (2013) proposed strategies to improve residents' capabilities and active participation. Following that study, Lew and colleagues (2016) established and formulated the differences between sustainability and resilience and provided indicators for measuring both concepts in the context of rural community development. Among the differences found in the study, they highlighted that resilience develops the capacity to adapt to change, while sustainability mainly focuses on conserving resources. Besides, with the variety of problems that arise and then impose some form of change, resilience promotes new methodologies which improve the community's living conditions. At the same time, sustainability defends ancestral knowledge and cultures (Strickland-Munro et al., 2010).

Holladay (2018) later presented a new model to connect resilience with sustainable tourism development. This model integrates the life cycle model of a destination (Butler, 1980) and the adaptation cycle (Holling, 1986) to incorporate resilience strategies for any destination stage. Scholars believe that for a destination to be resilient, it needs to be willing to adapt, to seek opportunities to transform, maintain excellent social and human capital, include strong connections or associations, strengthen the leadership of residents, promote economic development through diversification, and preserve efficient management of its resources (Folke et al., 2010; Marchese et al., 2018).

In contrast, several recent publications analysed community resilience integrated into the study of climate change and natural disasters (Chan et al., 2022). Jamaliah and Powell (2019) examine vulnerability levels to climate change in Dana, Jordan's leading ecotourism destination. Their results indicate that tourism stakeholders must develop new and diverse tourist products to overcome the economic vulnerability of the destination. This strategy produces some benefits, such as reducing seasonality, increasing visitors' arrivals, and decreasing excessive use of the same natural resources typical of ecotourism (Biggs, 2011; Jopp et al., 2010).

Another strategy that benefits the community consists of implementing the concept of circular economy to achieve sustainable development (Jones & Wynn, 2019). According to the Ellen McArthur Foundation, a circular economy is "restorative and regenerative by design, and aims to keep products, components, and materials at their highest utility and value at all times" (Ellen McArthur Foundation, 2017). Together with resilience and natural capital, this concept allows for the full use of resources and permits adaptation to long-term change. For instance, Musavengane and Kloppers (2020) study the role of social capital in building community resilience in a community-based tourism destination in South Africa. They determine that social or cultural capital and good tourism governance can facilitate community resilience.

To the best of the authors' knowledge, there is a need for studying ways to evaluate economic, social, and environmental resilience in an island ecotourism destination. Therefore, the present study aims to answer the following research questions: 1) Which aspects of community resilience are valued most highly by the residents of an island ecotourism destination? 2) How satisfied are residents and communities with their island? 3) Which aspects of community resilience correlate with residents' satisfaction with their island ecotourism destination? 4) What are the main variables that predict residents' satisfaction with their island ecotourism destination?

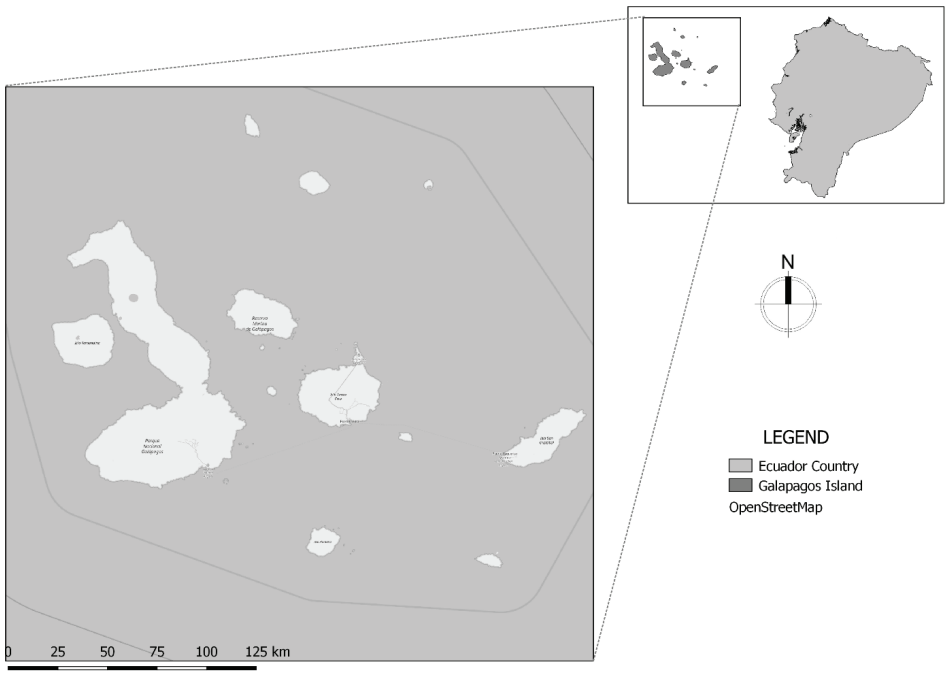
1. METHODOLOGY

1.1. Study site

San Cristóbal, an island destination in the Galapagos Islands, was chosen for its successful ecotourism and community involvement (see Figure 1). The Galapagos Islands, located 1,000 kilometres from the Ecuadorian coast, are a UNESCO World Heritage Site known for their unique flora and fauna. San Cristóbal Island offers activities such as wildlife observation, local cuisine, and cultural experiences (Ministry of the Environment of Ecuador, 2015). Tourism is the main economic activity, with a significant number of visitors arriving through San Cristóbal (Carvache-Franco et al., 2021). Among the main types of tourism that take place on San Cristóbal Island are ecotourism, coastal tourism, sun and beach, experiential and gastronomic tourism, and agritourism. The main economic activity of San Cristobal Island is tourism in food services, lodging, and tour operation, followed by trade and productive activities. Based on the annual report of the Galapagos National Park (2023), in 2022 the Galapagos Islands welcomed 267,688 arrivals, of which 145,445 were foreign tourists (54%) and 122,243 were national tourists (46%). Of the total number of tourists, 76,186 entered through San Cristóbal (28%) and 191,435 arrived through the Baltra airport (72%). The Gianny Arismendy Environmental Interpretation Centre registered around 55,000 visits, which represented 22% of the visits made to San Cristóbal Island.

The residents of the Galapagos Islands can be characterized as a resilient community due to their capacity to adapt and cope with environmental challenges and changes. This resilience has shaped the cultural values of local residents, fostering a deep respect and understanding of their environment. However, the COVID-19 pandemic has had a significant impact on the islands, bringing tourism, which contributes to 80% of the local economy, to a standstill (Ruiz-Ballesteros & del Campo Tejedor, 2020). This has resulted in unemployment, debt, and the return of migrants. In response to the pandemic, the residents of Galapagos have been compelled to explore alternative means of survival, leading to opportunities for innovation such as the establishment of digital companies, the provision of alternative services to tourism, and the development of specialized tourism offerings (Viteri Mejía, et al., 2022). Besides, the tourism industry in the Galapagos Islands prioritizes sustainability, involving the local community in decision-making processes (Consejo de Gobierno del Régimen Especial de Galápagos, 2016; Garcia Ferrari et al., 2023). Community-based initiatives and organizations contribute to environmental conservation and sustainable development. Examples include The Friends of Galapagos Organizations (FOGO) and The Galapagos Conservation Trust (Galápagos Conservancy, n.d.; Galapagos Conservation Trust, n.d.).

Figure 1: **The Geographic Location of San Cristóbal and the Galapagos Islands, Ecuador**



Source: Authors.

1.2. Questionnaire, sampling, data collection and analysis

This article uses a quantitative approach to study community resilience. A questionnaire survey was conducted with 12 questions in different sections: sociodemographic variables, perception of economic, social, and environmental resilience, and community satisfaction (Powell et al., 2018). The survey used Likert scales for measuring perceptions and satisfaction. The study aimed to include 393 participants, selected through simple random sampling, based on the population of San Cristóbal (National Institute of Statistics and Censuses, 2015).

Three tourism professionals conducted the survey by personally visiting participants at their residences. Prior to administering the survey, the professionals delivered a concise overview of the research project and extended invitations to the residents to partake in the study. Subsequently, they proceeded to conduct face-to-face surveys. A pilot test was conducted with 50 residents for validation. Data collection took place in June and July 2019, with most questionnaires self-administered. The data were analysed using SPSS (version 25) with descriptive techniques and statistical tests such as Spearman's correlation and stepwise multiple regression. This procedure allowed us to see the variables of the destination and the community that most influence resident satisfaction. In addition, the stepwise multiple regression served to find the resilience variables that were the most significant predictors of residents' satisfaction with their community.

2. FINDINGS

2.1. Sociodemographic characteristics of the respondents

The sociodemographic characteristics of the residents are presented in Table 1.

Table 1: **Sociodemographic Characteristics**

Variables	Categories	n	%
Gender	Man	194	49.4
	Woman	199	50.6
Age	Younger than 20 years old	15	3.8
	Between 20–29	107	27.2
	Between 30–39	123	31.3
	Between 40–49	74	18.8
	Between 50–59	42	10.7
	Over 59 years old	32	8.1

Variables	Categories	n	%
Marital status	Single	131	33.3
	Married / Free Union	195	49.6
	Widower	22	5.6
	Divorced	45	11.5
Place of birth	Galapagos Islands	249	63.4
	Continental Ecuador	140	35.6
	Another country	4	1
Level of formation	Primary school	11	2.8
	High school	158	40.2
	University	207	52.7
	Postgraduate	17	4.3
Professional activity	Student	24	6.1
	Researcher/scientist	8	2
	Entrepreneur / Business owner	39	9.9
	Private Employee	108	27.5
	Public employee	115	29.3
	Work in the home	27	6.9
	Unemployed	7	1.8
	Retired	2. 3	5.9
	Informal worker	19	4.8
	Others	2. 3	5.9
Level of disposable income	Less than USD 300	52	13.2
	From USD 300 to USD 499	59	15
	From USD 500 to USD 699	83	21.1
	From USD 700 to USD 900	61	15.5
	More than USD 900	138	35.1
Work is linked to tourism	Yes	131	33.3
	No	262	66.7
Involved in associations or community groups	Yes	130	33.1
	No	263	66.9
Interest in future employment in tourism	Yes	249	63.6
	No	143	36.4

Source: Adapted from data collected by the authors.

According to Table 1, men and women obtained almost equal representation. Most participants were young adults aged between 30 to 39 years old (31.3%). Half of the participants were either married or in a committed relationship (49.6%) and had been born in the Galapagos Islands (63.4%). Also, 52.7% hold a university degree and a significant percentage were either public or private employees. Regarding income, 35.1% of participants earn over $900 salary. Additionally, data show that 1 out of 3 residents worked in the tourism industry, and of the 33.3% working in tourism, only 33.1% were community association members. Among the associations are the following: the association of guides, the Chamber of Tourism of Galapagos, the board of citizens, hotel associations, and travel agencies, among others. Lastly, 63.6% expressed their desire to build a career in tourism.

2.2. Economic, social and environmental resilience

Residents' perception of three factors of community resilience (i.e., economic, social, and environmental resilience) are presented in Table 2.

Table 2: **Economic, Social and Environmental Resilience**

Variable Code	Variables	N	Minimum	Maximum	Mean
	Economic resilience				
E1	People in this community have different job skills.	393	1	5	3.9
E2	There are different types of businesses in my community.	393	1	5	3.9
E3	Most people in the community earn their living in multiple ways.	393	1	5	3.8
E4	There are different ways to earn money in this community.	393	1	5	3.8
E5	Most people in this community have some business to generate income.	393	1	5	3.7
E6	People from this community sell things in markets in other cities.	393	1	5	3.3
E7	People visit this community to buy your products.	392	1	5	3.2
E8	It is easy to start a new business here.	393	1	5	3.0
E9	There are many employment opportunities here.	393	1	5	2.6
E10	It is easier for young people to find employment today than in the past.	393	1	5	2.5
E11	I have important commercial connections in other cities.	393	1	5	2.5
	Social resilience				
S1	I feel like a member of my community.	393	1	5	4.0
S2	I talk to friends and family about the problems my community faces.	393	1	44	4.0
S3	My community responds quickly when problems arise.	393	1	5	3.7
S4	I learn about new things by talking to members of my community.	393	1	5	3.7
S5	Local organisations improve my local community.	393	1	5	3.5
S6	I have the opportunity to help make decisions regarding my community.	393	1	5	3.5
S7	I feel like I can ask others in my community for help when I need it.	393	1	5	3.5
S8	There are many associations, organisations and active institutions that provide valuable resources in my community.	393	1	5	3.5
S9	Most people in this community can be trusted.	393	1	5	3.2
S10	Everyone in my community has an equal opportunity to succeed.	393	1	5	3.2
S11	Everyone in my community has equal access to resources.	393	1	5	3.1
S12	I attend public meetings.	393	1	5	2.9
S13	I spend time in volunteer activities.	393	1	5	2.8
	Environmental resilience				
EN1	The air quality in my community is good.	393	1	5	4.4
EN2	The environment in my community is healthy.	393	2	5	4.4
EN3	My community's beaches are clean.	393	1	5	4.3
EN4	I have reliable access to food.	392	1	5	3.9

Variable Code	Variables	N	Minimum	Maximum	Mean
EN5	My community recovers quickly from natural disasters.	393	1	5	3.9
EN6	The food I eat is produced in my community.	393	1	5	3.7
EN7	I have reliable access to safe drinking water.	393	1	5	3.3
EN8	Volcanic eruptions are a serious concern in my community.	393	1	5	2.4
EN9	Wildlife negatively affects my livelihood.	393	1	5	2.3
EN10	Forest fires are a serious concern in my community.	392	1	5	2.2
EN11	Predators like cats and dogs improve the health of the environment.	393	1	5	2.2
EN12	Earthquakes and wildfires are severe issues in my community.	393	1	5	2.1

Source: Adapted from data collected by the authors.

According to Table 2, participants perceive the community to be resilient to economic effects and shocks due to the variety of businesses and the abilities of its population to undertake different work activities (E1 = 3.9), which means that the types of companies and work areas featured within the community allow it to be resilient to economic effects (E2 = 3.9). However, to improve economic resilience, the community should improve its business connections with other cities as well (E11 = 2.5).

Regarding social resilience, this community demonstrates social resilience because its members speak to each other about their problems (S2 = 4.0). The community responds as quickly as possible to any issues (S3 = 3.7), which means that good communication among families and friends about problems experienced by the community favours the destination's resilience to social changes However, to improve social resilience, residents should improve on their volunteer activities (S13 = 2.8).

Concerning the capacity to resist environmental effects, this community is resilient to external environmental shocks thanks to its good air quality (EN1 = 4.4), healthy environment (EN2 = 4.4), and clean beaches (EN3 = 4.3), which means that the environment's favorable conditions, the air, and the beaches favor the community in its resilience to environmental effects. However, to improve environmental resilience, residents should improve the destination's infrastructure and prevent forest fires (EN10 = 2.2).

The results from this section demonstrate those aspects of community resilience that are most valued by the residents, namely, "people in this community have different job skills" "there are different types of businesses in my community," "I am a member of my community," "I talk to family and friends about the problems facing my community," "the air quality in my community is good" and "the environment in my community is healthy."

2.3. Satisfaction with the community

Residents' levels of satisfaction with their community are shown in Table 3.

Table 3: **Satisfaction with the Community**

Variable	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I am satisfied with my community.	1%	2%	22.4%	55.2%	19.3%

Source: Adapted from data collected by the authors.

As shown in Table 3, 55.2% of the community's inhabitants agreed that they are satisfied with their community. Therefore, their level of satisfaction with the community is high, which produces a community that is more resilient to external shocks and that consists of inhabitants who are involved in solving the community's problems (Lew et al., 2016; Matarrita-Cascante & Trejos, 2013). These findings addressed the second research question about residents' levels of satisfaction with their community's resilience.

2.4. Relationship between community resilience and residents' satisfaction with the community

Spearman correlation was used to analyse the relationship between community resilience and residents' satisfaction with their community (Table 4).

Table 4: **Relationship Between Community Resilience and Residents' Satisfaction with their Community**

Variable Code	Variables	Coefficient
	Economic resilience	
E4	There are different ways to earn money in this community.	0.44 **
E10	It is easier for young people to find employment today than in the past.	0.42 **
E9	There are many employment opportunities here.	0.39 **
E5	Most people in this community have some business to generate income.	0.38 **
E2	There are different types of businesses in my community.	0.36 **
E1	People in this community have different job skills.	0.33 **
E3	Most people in the community earn their living in multiple ways.	0.31 **
E8	It is easy to start a new business here.	0.30 **
E11	I have critical commercial connections in other cities.	0.29 **
E6	People from this community sell things in markets in other cities.	0.20 **
E7	People visit this community to buy your products.	0.11 *
	Social resilience	
S9	Most people in this community can be trusted.	0.46 **
S3	My community responds quickly when problems arise.	0.45 **
S8	There are many active associations, organisations and institutions that provide valuable resources in my community.	0.45 **
S11	Everyone in my community has equal access to resources.	0.44 **
S10	Everyone in my community has an equal opportunity to succeed.	0.43 **
S7	I feel like I can ask others in my community for help when I need it.	0.39 **
S2	I talk to friends and family about the problems my community faces.	0.39 **
S13	I spend time in volunteer activities.	0.37 **
S12	I attend public meetings.	0.36 **
S4	I learn about new things by talking to members of my community.	0.36 **
S5	Local organisations improve my local community.	0.35 **
S6	I have the opportunity to help make decisions regarding my community.	0.32 **
S1	I feel like a member of my community.	0.18 **
	Environmental resilience	
EN6	The food I eat is produced in my community.	0.37 **
EN4	I have reliable access to food.	0.30 **
EN5	My community recovers quickly from natural disasters.	0.27 **
EN7	I have reliable access to safe drinking water.	0.18 **
EN10	Forest fires are a serious concern in my community.	0.17 **

Source: Adapted from data collected by the authors.

Note. ** The correlation is significant at the 0.01 level.

According to Table 4, improving employment opportunities that generate income in the community is related/correlated with resident satisfaction (E4 coefficient = 0.44; E10 coefficient = 0.42; E9 coefficient = 0.39). Besides, offering products to visitors had little correlation/relationship with residents' satisfaction with their community (E7 coefficient = 0.11). Also, the close relationship among people in the community, the residents' ability to overcome any community' issues; and the engagement of association and institutions in providing resources for the community (S9 coefficient = 0.46; S3 coefficient = 0.45; S8 coefficient = 0.45).

Concerning the variables of environmental resilience, improving production and reliable access to food (EN6 coefficient = 0.37) and enhancing community resilience to natural disasters (EN5 coefficient = 0.27), could improve residents' satisfaction with the community. In contrast, the community's concern about forest fires had little correlation/relationship with residents' satisfaction with their community (EN10 coefficient = 0.17).

The findings of this section answered the third research question. The results show that the variables that primarily correlate community resilience with residents' satisfaction were "there are different ways to earn money in this community," "most people in this community can be trusted" and "the food I eat is produced in my community." Therefore, to retain a high level of resident satisfaction, it is important to offer different job opportunities, promote resident engagement and participation, and ensure access to food.

2.5. Variables that predicted residents' satisfaction with the community

2.5.1. Economic resilience and community satisfaction

Multiple stepwise regression was used to analyse economic resilience variables that predict resident satisfaction with their community (Table 5). This method only included the variables from the T-Test that were significant (sig<0.05). In addition, to identify the variables with higher results in terms of satisfaction, the authors considered the variables with high BETA values (absolute value).

Table 5: **Economic Resilience and Residents' Satisfaction with their Community**

Variable Code	Variables	Beta	t	Sig.
E4	There are different ways to earn money in this community.	0.30	5.72	0.000
E10	It is easier for young people to find employment today than in the past.	0.18	3.6	0.000
E5	Most people in this community have some business to generate income.	0.15	2.92	0.004
E6	People from this community sell things in markets in other cities.	0.13	2.97	0.003
	(Constant)		9.44	0.000

Source: Adapted from data collected by the authors.

According to Table 5, the economic resilience variables that most predicted resident satisfaction with their community were: "there are different ways to earn money in this community" (Beta 0.30) and "it is easier for young people to find work today than for young people in the past" (Beta 0.18). Therefore, improving ways to earn money and find work in the community will improve resident satisfaction. In other words, resident satisfaction with their community depends on good management of the aforementioned independent variables.

2.5.2. Social resilience and community satisfaction

Multiple stepwise regression has been used to analyse social resilience variables that predict the residents' satisfaction with their community (Table 6). This method only included the variables from the T-Test that were significant (sig<0.05). Besides, to identify the variables with higher results in terms of satisfaction, the variables with high BETA values (absolute value) were considered.

Table 6: **Social Resilience and Residents' Satisfaction with their Community**

Variables	Beta	t	SIG.
Most people in this community can be trusted.	0.26	4.97	0.000
There are many active associations, organisations and institutions that provide valuable resources in my community.	0.19	3.32	0.001
My community responds quickly when problems arise.	0.17	3.14	0.002
I talk to friends and family about the problems my community faces.	0.10	2.54	0.011
(Constant)		12.69	0.000

Source: Adapted from data collected by the authors.

According to Table 6, the social resilience variables that most predicted resident satisfaction with the community were: "You can trust most of the people in this community" (Beta 0.2) and "there are many associations, organizations and active institutions providing valuable resources in my community" (Beta 0.19). Therefore, improving resident relationships and satisfaction and increasing the presence of active associations/organizations that provide valuable resources to community residents will increase resident satisfaction. In other words, resident satisfaction with the community depends on good management of the two variables mentioned.

2.5.3. Environmental resilience and community satisfaction

Multiple stepwise regression was used to analyze environmental resilience variables predicting resident satisfaction. This method only included the variables from the T-Test that were significant (sig<0.05). In addition, to identify the variables with higher results in terms of satisfaction, the variables with high BETA values (absolute value) were considered (Table 7).

Table 7: **Environmental Resilience and Residents' Satisfaction with their Community**

Variables	Beta	t	SIG.
Forest fires are a serious concern in my community.	0.29	4.07	0.000
The food I eat is produced in my community.	0.25	4.90	0.000
The air quality in my community is good.	0.20	3.53	0.000
I have reliable access to food.	0.14	2.50	0.013
My community recovers quickly from natural disasters.	0.11	2.20	0.028
I have reliable access to safe drinking water.	0.10	2.25	0.025
The environment in my community is healthy.	-0.14	-2.52	0.012
Earthquakes are a serious concern in my community.	-0.21	-3.00	0.003
(Constant)		4.,0	0.000

Source: Adapted from data collected by the authors.

According to Table 7, the environmental resilience variables that most predicted satisfaction with the community were: "forest fires are a serious concern in my community" (Beta 0.29), "the food I eat is produced in my community" (Beta 0.25) and "the air quality in my community is good" (Beta 0.20). Therefore, reducing the number of forest fires, improving food production and improving air quality will improve resident satisfaction. In other words, resident satisfaction with their community depends on good management of the three variables mentioned.

3. DISCUSSION

This study has analysed residents' perceptions of their own economic, social, and environmental resilience. The results coincide with the study by Powell et al. (2018) about the importance of the social and environmental elements of community resilience in sustainable tourism development. The results are also aligned with the work of Jamaliah and Powell (2019), where adaptation strategies were used by the community in Dana (Jordan) to face the consequences of climate change. However, when resident level of satisfaction was compared against their perception of their economic, social and environmental resilience, it was noted that there is a more significant correlation between economic and social resilience. Therefore, we can conclude that there is a strong relationship between a community's perception of their level of social resilience and their economic resilience. Similarly, Wilson (2010) and Ashkenazy and colleagues (2018) note the substantial importance of social, economic, and environmental capital on community resilience and development. Likewise, Musavengane and Kloppers (2020) agree that social capital is essential for community resilience to succeed.

Among the findings, it is relevant to highlight that this community is resilient to economic shocks and effects thanks to the wide variety of businesses and its population's abilities to function in different activities. Furthermore, San Cristóbal is resilient to external shocks and effects because its members talk to each other about their problems and respond as quickly as possible. Likewise, this study reveals that when a community is resilient to external environmental factors, this permits tourism stakeholders to make better decisions and understand the impact of unexpected events on the tourism industry and the community (Cartier & Taylor, 2020).

In this study, residents' levels of satisfaction with their community are high, which produces a community that is more resilient to external shocks and inhabitants who are more involved in solving the problems that the community might have to face.

In terms of a community's resilience with its residents' levels of satisfaction with the community, improving employment opportunities would improve resident satisfaction. Also, improving relationships between residents and developing associations and organizations would improve resident satisfaction. Enhancing production and reliable access to food and improving the community's resilience to natural disasters could enhance resident satisfaction with the community as well. Community resilience has been found to influence resident satisfaction with their community, which means that resident satisfaction would be enhanced by improving economic, social, and environmental resilience at the destination. Besides, certain predictor variables have a positive effect on resident satisfaction with their community, such as "the different ways to earn money," "trust among residents," and the "confidence that major natural disasters such as wildfire won't happen at the destination." Therefore, certain capacities to strengthen residents' economic, social, and environmental resilience should also be bolstered. However, to the authors' knowledge, there are no studies that analyse community resilience and its influence on resident satisfaction with their community, which is the main contribution of this study.

The opinion of locals about community resilience and sustainable tourism development can have a big impact on how well a destination develops its tourism industry (Powell et al., 2018). First off, locals may be more likely to support tourist development plans if they believe their town is resilient and able to handle the effects of tourism. This could entail attracting tourists to the area or even launching their own tourism-related enterprises. Second, because they are frequently the ones who are most directly affected by tourism, locals' perspectives on sustainable tourism development are crucial. Residents may be more likely to support tourism development if they believe it is being done in a sustainable way, a way that considers the social, economic, and environmental effects of tourism. Finally, the reputation and the image of the location may be impacted by locals' perceptions of local resilience and sustainable tourist growth (Holladay & Powell, 2013). Positive opinions can encourage travellers to visit, while bad perceptions can turn them off and damage the destination's reputation. In order to guarantee that local residents' issues and viewpoints are taken into consideration in tourist planning and development, it is crucial for destination marketing organizations and other tourism stakeholders to cooperate closely with local communities (Holland et al., 2022).

CONCLUSION

Islands are unique geographical features found worldwide, and tourism, especially ecotourism, has long been an essential source of revenue for many of these resource-strapped areas. If tourism is a source of economic development, island destinations must examine several factors and develop tourism economies that can withstand external shocks. In conclusion, resilience and sustainable tourism development are interconnected concepts that share common goals. By embracing sustainable practices, diversifying tourism offerings, engaging stakeholders, and fostering community capacity-building, destinations can build their resilience and create a more sustainable and resilient tourism industry. This relationship is crucial for ensuring the long-term viability and positive impacts of tourism (Folke et al., 2010; Holladay, 2018; Marchese et al., 2018).

With its theoretical implications, this study contributes to the literature by demonstrating that community resilience influences residents' satisfaction with their community. In addition, certain predictive variables have a positive effect on residents' satisfaction with their community: economically, "there are different ways to earn money in this community"; socially, it was "most people in this community can be trusted," and environmentally it was "forest fires are a serious concern in my community." Therefore, certain capacities must also be enhanced to strengthen the economic, social, and environmental resilience of residents. Moreover, this study also provides some methodological contributions. It utilizes bivariate analysis as a straightforward method to test the association between the selected variables and the strength of their association. Besides, it chose a well-established ecotourism destination as the study site to analyse residents' perspectives on its development. The study's findings also advance our understanding of community resilience and ecotourism within destinations in the Global South. Among the practical implications are that government institutions can learn about residents' perceptions of the three components of community resilience. Also, government institutions can learn about resident satisfaction and its relationship with the variables associated with community resilience, which might help plan policies that benefit the community. Some concepts incorporated into destination planning with a sustainable approach are: the circular economy, resilience, and natural capital (Jones & Wynn, 2019). Moreover, this study proposes several sustainable tourism practices that can be derived from a community's understanding of resilience. These include the implementation of community-based tourism initiatives, the adoption of sustainable resource management strategies, the formulation of climate change adaptation plans, the promotion of heritage preservation and cultural revitalization endeavours, the establishment of capacity building and education programs, and the adherence to sustainable tourism certification and standards. These examples serve to demonstrate how an awareness of resilience can serve as a catalyst for the development of sustainable tourism initiatives that not only contribute to the long-term sustainability of the tourism industry but also bolster the welfare of local communities and safeguard their natural and cultural assets.

As the study was conducted on a single island, future research could include a comparative analysis of community resilience on other islands, as well as in other regions or countries, and incorporate the evaluation of initiatives used by public and private organizations to contrast with the information provided by residents. Moreover, forthcoming research may entail intricate statistical analysis, such as ANOVA, post hoc analysis, or Kruskal-Wallis, in order to ascertain the extent of variation within sets of data, or to examine whether there are statistically meaningful disparities among two or more groups of an independent variable (e.g., age or employment status within the tourism industry).

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