



Statistical Analysis of Nosy Be Island International Tourist Satisfaction

Análisis Estadístico de la Satisfacción de los Turistas Internacionales en la Isla de Nosy Be

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Abstract: This paper investigates on the satisfaction of international tourists visiting Nosy Be and its impact on resource and development. The research method involves the tourist satisfaction concept and impact factor in addition to tourism island destination. Specific problems associated with quantitative approaches to measuring satisfaction were overcome. In order to achieve the objective, the present research work employs primary data mainly collected from more than 200 international tourists by using a specific questionnaire. To analyze the collected data, SPSS software was adopted and techniques such as descriptive statistics and correlation analysis were used. It is approved that satisfied tourists tend to communicate their positive experiences to others recommendation and they tend to buy the product repeatedly. Relevant analytical studies showed a positive correlation between recommended locations, willingness to share social network experiences and overall satisfaction. Descriptive statistical analysis showed that different demographic characteristics as origin, gender, age and employment visitors were accounted. 70% of tourists will stay in Nosy Be for more than a week and 56.5% come with friends or classmates. According to the current research results, combined with the tourism practice of Nosy Be Island, the factors affecting the satisfaction of tourists, and the follow-up behavior brought by the satisfaction of their services are clarified. The tourist loyalty behavior is identified in order to maintain tourism sustainability in Nosy Be Island destination. The research outcomes indicate the attributes that affect tourist satisfaction such as service quality, facilities, and destination image.

Keywords: *Tourist satisfaction; Island tourism; Nosy Be Island; Madagascar destination; Holiday experience; destination attributes.*

Resumen: Este artículo investiga la satisfacción de los turistas internacionales que visitan Nosy Be y su impacto en los recursos y el desarrollo. El método de investigación incluye el concepto de satisfacción turística y el factor de impacto, además del destino turístico insular. Se superaron los problemas específicos asociados con los enfoques cuantitativos para medir la satisfacción. Para alcanzar el objetivo, el presente trabajo de investigación emplea datos primarios recopilados principalmente de más de 200 turistas internacionales mediante un cuestionario específico. Para analizar los datos recopilados, se adoptó el software SPSS y se utilizaron técnicas como la estadística descriptiva y el análisis de correlación. Se ha comprobado que los turistas satisfechos tienden a comunicar sus experiencias positivas a otras personas y a recomendar el producto, y que tienden a comprarlo repetidamente. Los estudios analíticos pertinentes mostraron una correlación positiva entre los lugares recomendados, la disposición a compartir

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Received for publication on 2025/08/12; approved on 2025/12/25.

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experiencias en las redes sociales y la satisfacción general. El análisis estadístico descriptivo mostró que se tuvieron en cuenta diferentes características demográficas, como el origen, el sexo, la edad y el empleo de los visitantes. El 70 % de los turistas se alojará en Nosy Be durante más de una semana y el 56,5 % vendrá con amigos o compañeros de clase. Según los resultados actuales de la investigación, combinados con la práctica turística de la isla de Nosy Be, se aclaran los factores que afectan a la satisfacción de los turistas y el comportamiento posterior que genera la satisfacción con sus servicios. Se identifica el comportamiento de fidelidad de los turistas con el fin de mantener la sostenibilidad turística en el destino de la isla de Nosy Be. Los resultados de la investigación indican los atributos que afectan a la satisfacción de los turistas, como la calidad del servicio, las instalaciones y la imagen del destino.

Palabras clave: *Satisfacción turística; Turismo insular; Isla Nosy Be; Destino Madagascar; Experiencia vacacional; Atributos del destino.*

INTRODUCTION

Understanding tourist satisfaction is one of upmost importance for the tourism industry because of its ecological and socio-economic effect. Such an effect plays a major role in Pacific (Truong, 2005;), Atlantic and Indian ocean small islands (Stylidis & Terzido, 2007;) around the world. Today, few research work on the tourist satisfaction in Nosy Be Island is available in the literature. Before the performed study exploration, this section describes the bibliographic tourist satisfaction study from the existing literature in different island destinations.

Tourism satisfaction bibliographic study

The study about tourist satisfaction, its measurement and influence factor have been started since the late 1970's. It is called as mature research (Brian et al., 1974; Swan & Combs, 1976; WTTC, 2022). Satisfaction is defined as the consumers' overall cognitive or affective response to product use (Oliver, 1997;), and consumers' judgement of whether a product/service provides a pleasurable level of consumption-related fulfilment (Swan & Combs, 1976; Cadotte & Turgeon, 1988;). It is created by the comparison of the customer's expectation before and after consumption. It helps to create, develop, and maintain a favorable publicity and goodwill about a tourist destination or a resort. Satisfaction is a measure of how products and services supplied by a destination meet or surpass the customer expectations. Also, the customer satisfaction is considered as an important performance indicator of a successful business operation (Gnanapala, 2012;). Tourists' satisfaction with a trip or a destination is a result of many aspects, such as their perception of product elements experienced as well as their expectations before- and during the trip. People go on holiday to satisfy one or several of their needs, whatever these needs are. To achieve satisfaction people, try to behave in a rational way. They choose, for instance, activities that they expect will fulfil their needs satisfactorily. This tendency of rational behavior, illustrates that there are relationships between motives for travelling, choices made and

satisfaction. According to (Deng & Pierskalla, 2018), a tourist destination's economic development mainly depends on the high quality of tourism experiences and resulting satisfaction provided by the destination. It is alleged that tourists who are pleased with a destination are more likely to spend more, revisit, and recommend others.

Review on tourist satisfaction concept and impact

The first concept of tourist satisfaction has been originated in product quality and service quality research in manufacturing (Kano et al., 1984; Adinegara et al., 2017; Alegre & Garau, 2010; Corte et al., 2014). The standard concept of tourist satisfaction was defined as the “positive” feeling or perception on the basis of the “positive” effects through comparing the expectation of tourists with actual perception to tourist destination (Sheldon, 1989; Kozak & Rimmington, 1999 & 2000; Kozak, 2003; Khatib & Al-Ali, 2007; Marin & Taberner, 2010; Mohamed & Moradi, 2011; Karim et al., 2023;). In addition, many scholars agreed that the customer satisfaction often results in prolonged stay in a tourist place, which is certainly dependent on a fair relationship between the service user and provider (Oliver, 1997; Christie & Crompton, 2003; Daré & Rakotonirina, 2014; Statista Research Department, 2023; World Tourism Organization, 2023;). Through the year, it had been added as not only in the tourist destination experience but the reflection of perceiving whether to be satisfied with how people being treated in tourism destinations (Kozak, 2001; Briguglio & Briguglio, 2002; Corte et al., 2014;). The study of tourism satisfaction is frequently misunderstood as it is multidimensional and not easy to evaluate. Different parameters would influence satisfaction and it can differ from countries and destination (Kozak & Rimmington, 2000; Briguglio & Briguglio, 2002; Truong, 2005; Khatib & Al-Ali, 2007; Guntoro & Hui, 2013; Corte, et al., 2014; Daré & Rakotonirina, 2014; Kakazu, 2018; WTTC, 2022;). One should not forget to mention one of the most important goals of marketing managers in the field of tourism is to find the most applicable model for improvement of tourist satisfaction and their loyalty to the destination (Cadotte & Turgeon, 1988; Ashley, 2007; Adinegara et al., 2017;). Tourist satisfaction and its impact on future behavioral intention of destination loyalty has attracted considerable attention in the tourism industry (Herzberg et al., 1959; Cadotte & Turgeon, 1988; Bleuel, 1990; Alegre & Garau, 2010;). Research studies (Briguglio et al., 1996; Aguilo et al., 2005;) state that the island tourism is a tourism new trend maintaining the most significant asset and leads as the most important economic industry.

Overview on Madagascar tourist destination

Several hypotheses are suggested to affect the length of stay during the survey analysis in Madagascar. They are listed from one to five: Nationalities, socio-economic characteristics, higher label

of income (lower income, lower length of stay), the fourth hypothesis is travel cost, and the fifth hypothesis is nature, sea, sand and gastronomy. The survey was held at the international airport of Ivato and Nosy Be. A varied hotel offering to meet the needs of different categories of tourists; a balanced mix between direct tourists and customers passing through agencies; A stay longer than the average of the Indian Ocean which is ten days; A key role of hotels as information relays and prescribers for car rentals; and a high level of satisfaction and a high rate of return intention. The result has shown the third hypothesis had played its role on the length of stay are mostly the higher income, older male and educated tourists of all nationalities are those staying longer in Madagascar. It was proved by (Barros & Santos, 2007; Menezes et al., 2008;) that socioeconomic variable such as and income increase length of stay in all cited study. While studying the tourist satisfaction and intention to return, or study in sea-sand destination, the factors influencing the length of stay is commonly higher income and sea-sand, nature attributes. For instance, thanks to its natural environment, Madagascar offers tourists a huge diversity of activities: wildlife viewing, scuba diving, scenic hikes, beach tourism, adventure sports, and cultural encounters (The World Bank, 2013; Statista Research Department, 2023; World Tourism Organization, 2023;). Madagascar tourist attractions include its beaches and biodiversity (Peypoch, et al., 2012;). This diversity is reflected in the very high average length of stay (21 days) and return rates (40%) among leisure tourists. With the developments in the infrastructure and the introduction of new air and sea connections, islands became easier accessible and more favorable by tourists (Neto, 2003; Daré & Rakotonirina, 2014;). As (Baum, 2000;) states ‘the physical and climatic characteristics of islands create a particular allure to ever increasing numbers of tourists. It has become an important indicator to measure the level of tourism in a tourist destination (Kozak, 1999 & 2003;). Tourism is an important contributor to the country’s economy; an up-to-date overview of the country’s tourism performance has confirmed it (Ashley et al., 2007;).

Research work objectives

The main contribution and challenge of the present study is to measure the tourist satisfaction level to understand their reaction to the quality of the service offered, particularly whether their demand meets their needs. The research outcomes enable understanding their loyalty perception about the destination. This paper content includes the following points: 1) The ideas of the scholars to find the most applicable model for tourists’ satisfaction improvement; 2) Their loyalty to Nosy Be Island destination to understand the research status; 3) And to have an outlook of its future research direction by undertaking a survey.

METHODOLOGY

The research methodology followed during the Nosy Be Island tourist satisfaction is described in this section.

Research approach

There are many other approaches to measure satisfaction and applying these approaches typically requires data collection through surveys of travelers using a predetermined questionnaire instrument. A five-point Likert-type scale, ranging from (1) extremely satisfied to (5) extremely dissatisfied was used to measure the independent and dependent variables. Demographic variables were measured using nominal and ordinal scales. This study also used measurable data to formulate facts and uncover patterns in research. While, Qualitative Research is used to uncover trends in thought and opinions, and dive deeper into the problem, the sample size is typically small, and respondents are selected to fulfil a given quota. Quantitative data collection methods are much more structured than qualitative data collection methods. This study is a quantitative research approach using descriptive and statistical method to derive at the conclusions in the analysis of the resultant data. Survey research analysis is very important, not only because it enriches the credibility, but also because it can reveal some misconceptions, inaccuracies, and potentials for further improvement of what the tourism industry can do better. The survey targets were individuals who traveled to Nosy Be during the typical summer holiday including Malagasy or foreigner. Based on reviewing the related literature about the tourism satisfaction and island destination, the paper would summarize the ideas of the scholars find the most applicable model for improvement of satisfaction of tourists and their loyalty to island destination like Nosy be Island in Madagascar and to understand the research status and to have an outlook of its future research direction by undertaking a survey. The questionnaire allows the surveyed to express the visitor's recommendation or remark on the overall situation of the island as well as giving some solutions if needed.

Data collection and sampling

The populations of the research study are tourists performing tourism activity in Nosy Be Island in Madagascar. Questionnaires were conducted face-to-face and the respondents were randomly selected to voluntarily participate in the research. As the research objective was to study the tourist travel experience at Nosy Be, the respondents were informed that the survey was absolutely anonymous and would be used only for research objectives. They were instructed to answer the questions according to their actual travel experience. (Roscoe, 1975;) suggested a sample of more than 30 and less than 500 is sufficient for most research. Thus, among 205 questionnaires completed during the survey, 5 were eliminated based on lack

of information. Hence, 200 questionnaires were analyzed. The time required to complete the survey was between ten to fifteen minutes. The questionnaires were collected immediately after their completion.

Survey instrument

As the target populations were both national and international tourists who are traveling to Nosy Be, the questionnaire was designed in in two languages, English and French. The questionnaire was structured each of them into four sections. The first part contained questions about respondents' socio-demographic characteristics (Gender, Nationality, Age, Professional status); the second part is on travel information source, Frequency of visit, reasons, type of visit and length of stay; using the Likert scale from 1 to 5 ranged from extremely unsatisfied to extremely satisfied. The third part of the questionnaire evaluates the level of satisfaction according to the image and tourism choice on Nosy Be tourism destination image property assessment projects, including, entertainment, nightlife and entertainment, shopping facilities transportation, accommodation, price level, personal safety, as well as friendliness of the local people, networking system, service quality, road and infrastructure, information access and service at the airport. The last section asked respondents to show their degree of loyalty, from intention to return, willingness to recommend the place to other, willingness to share on social network, to make subsequent overall satisfaction.

Research model

The objective of the study was to define the dependence of satisfaction with different relevant parameters. According to the literature review regarding to the study, tourist satisfaction has been considered as a main tool for increasing tourist destination competitiveness. The research framework shown in Fig. 1 assesses the model adapted from the goals of the research.

- *The present research approach is focused on the statistic significant impact of following items:*
Tourist gender on the level of satisfaction on destination attribute: (MacKay & Fesenmaier, 1997;) analyzed how the visual content of tourist advertising material affected the creation of image, and reached the conclusion that tourist gender affects the perceived image. Furthermore, (Chen & Kerstetter, 1999;) in a study of the image of Pennsylvania as a rural tourism destination concluded that the tourists 'gender significantly influenced the perceived image. However, the study carried out by (Baloglu, 2000;), which analyzed the image of the US among German tourists, found no statistically significant relationships between the perceived image and the demographic variables of gender, income and education.

- *Tourist age on the level of satisfaction on destination attribute:* (Baloglu & McCleary, 1999;) explains that an individual's age influenced the perceived image of various tourist destinations. (Jenkins & Walmsley, 1993;) suggested also that the perceived image of different tourist resorts in Australia, and they found that the image of some places differed depending on the visitor age.
- *Tourist professional status on the level of satisfaction on destination attribute:* (Beerli & Martin, 2003;) suggested that the tourist socio-economic characteristics such as occupation are the factors that influence the perceptions of places what could be further reflected on the level of tourist satisfaction.

FIGURE 01: Research framework.



SOURCE: Prepared by the authors (2025).

- *Tourist socio-demographic characteristics on the tourist's loyalty to the destination:* (Corte et al., 2014;) explained that the positive experience with the tourist services and others facilities given by the tourism destination management, can encourage traveler memory and increase positive communication among customers about destination. In addition, according to (Almeida-Santana & Moreno-Gil, 2018;), there is an urgency and important need for further research to examine the potential antecedents of customer loyalty in tourism related studies. To socio-demographic and visitation characteristics, satisfaction is associated with the motivation of tourists, which has certain implications for nature-based tourism management. According to (Ma et al., 2018;) tourist satisfaction refers to the positive feeling or pleasure gained after experiencing or consuming any tourism product and includes the evaluation of the experience of travel or the tourism product against the tourists' motivation.

RESULTS AND DISCUSSION

Based on our survey, the quantitative characteristics from 200 Nosy Be tourist population is described in the present section. These models allow estimating multiple dependency ratios and represent

unobserved or latent variables in these relationships, taking into account the measurement error in the estimation process (Reisinger & Turner, 2000;).

Nosy Be Tourist Socio-Demographic Characteristics

Tourist gender, origin and age

During the survey, the majority of respondents were male. According to Table 1, there are 107 or 53% male and 93 or 46.5% female respondents.

TABLE 01: Gender of the respondents.

Gender	Number of respondents	Percent
Male	107	53%
Female	93	46.5%
Total	200	100%

SOURCE: Research data (2025).

In addition, the status of the origin displayed in Table 2 describes that the most loyal visitors came from Europe 56.5%. The dominant number were 33 or 16.5% from France, 15.5% Italian, followed by 14.5% Polish, 5.5% British and only 2% Norwegian. The second largest group was African. Malagasy tourists visiting Nosy Be were 12%, Mahorais from the neighborhood country Mayotte were 9%, Namibian 4%, and South-African 4%. Among the visitors, 11 of them were from China. About 3% of the respondents were from the USA and 2.5% from Chile. The smallest group were respondents from Australia 3.5%. The largest group of respondents was between 18 to 30 years old, 38.5%. Both groups between 31-45 and 46+ years old were 29.5 % as seen in Table 3. One emphasizes that only 2.5 % were less than 18.

TABLE 02: Origin of the respondent.

Origin		Number of respondents	Percent
Continent	Country		
Africa	Malagasy	24	12%
	Namibian	8	4%
	South-African	8	4%
Europe	French	33	16.5%
	Italian	31	15.5%

	British	11	5.5%
	German	5	2.5%
	Mahorais	18	9%
	Polish	29	14.5%
	Norwegian	4	2%
America	US	6	3%
	Chilean	5	2.5%
Asia	Chinese	11	5.5%
Oceania	Australian	7	3.5%
Total		200	100%

SOURCE: Research data (2025).

TABLE 03: Age of the respondente.

Age	Number of respondents	Percent
18-30	77	38.5%
31-45	59	29.5%
46+	59	29.5%
<18	5	2.5%
Total	200	100

SOURCE: Research data (2025).

TABLE 04: Professional status.

Status	Number of respondents	Percent
Student	46	23%
Employed	98	49%
Self-employed	27	13.5%
Retired	29	14.5%
Total	200	100.0

SOURCE: Research data (2025).

The result displayed in Table 4 reported that 49% of the respondents were employed, 22.5% were students, 13.5% were self-employed, and 15% were retired.

Information source

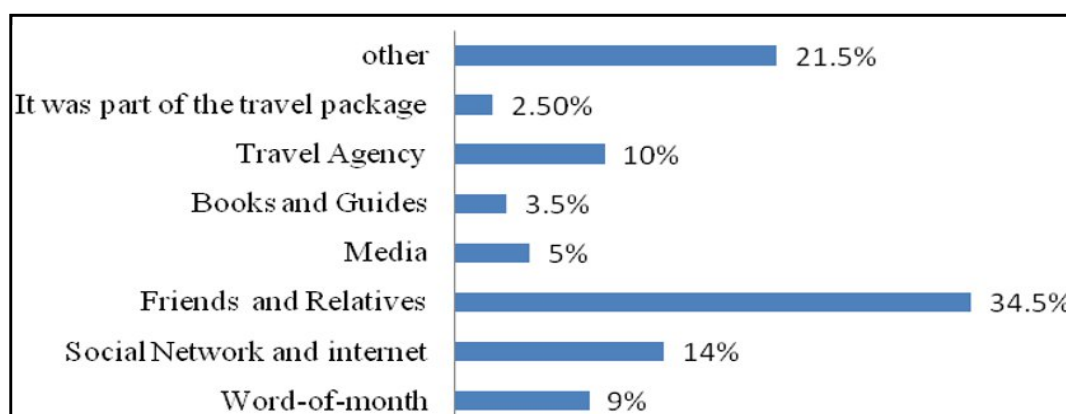
The graph from Table 5 displayed 34.5% of the respondents traveling to Nosy be reported to have been recommended by Friends and Relatives to select the destination. The corresponding histogram is shown by Figure 02.

TABLE 05: Information source of the destination.

Information	Number of respondents	Percent
Word-of-mouth	18	9%
Social Network and internet	28	14%
Friends and Relatives	69	34.5%
Media	10	5%
Books and Guides	7	3.5%
Travel Agency	20	10%
It was part of the travel package	5	2.5%
Other	43	21.5%
Total	200	100%

SOURCE: Research data (2025).

FIGURE 02: The information source of the destination.



SOURCE: Research data (2025).

The second largest group have other specific sources of information to have to help them select the place. The Social Network, travel agency, and word-of-mouth were displayed amongst the third group of a source of information. Fewer travelers have used the Media 5%, books and guides 3.5%. Those who have chosen Nosy Be being the part of the travel package were 2.5%.

Travel Behavior Characteristics

In this study on the frequency of visit, length of stay, partner during the travel and purpose of the visit were identified as travel behavior characteristics. The analysis of the overall level of tourist satisfaction, more and more research has been devoting to investigating attribute-level satisfaction recently (Oliver 1993; Chi & Qu, 2008; Hasegawa, 2010;).

Visit frequency and length of stay

The tourists stay constitutes one of basic information for the satisfaction assessment. Table 6 describes that 36.5% of respondents have been in Nosy Be before compare to 63.5% were visiting for the first time.

TABLE 06: Frequency of visit.

Frequency	Number of respondents	Percent
First time	127	63.5%
Second time and more	73	36.5%
Total	200	100%

SOURCE: Research data (2025).

The result summarized in Table 7 described that the majority of tourists choose to spend more than a week.

TABLE 07: Length of stay.

Length	Number of respondents	Percent
One night	1	5%
less than a week	59	29.5%
More than a week	140	70%
Total	200	100%

SOURCE: Research data (2025).

Persons accompanying and purpose of visit

As demonstrated in Table 8, 56.5% traveled with friends or colleague. The second largest group were with their partner, 17.5%. Those who came alone were 14.5% and 12% with family. In terms of the

visit purpose, the result on Table 9 displayed that 84.5% of the tourist while visiting Nosy Be choose YES the destination for discovery of the place.

TABLE 08: Partners while traveling.

Partner	Number of respondents	Percent
Alone	28	14.5%
with partner	35	17.5%
With family	24	12%
Friends/colleagues	113	56.5%
Total	200	100%

SOURCE: Research data (2025).

TABLE 09: Purpose of visit.

Destination description	YES		NO	
Sand and beach destination	136	68%	64	32.30%
Sport and recreation	44	22%	156	78.80%
Performing ecotourism	64	32%	136	68.70%
Discovering culture and festival events	84	42%	116	58.60%
Business trip or training program	50	25%	150	75.80%
Discovery of the place	169	84.50%	31	15.70%
Sense of hospitality of the local people	99	49.50%	101	51%

SOURCE: Research data (2025).

The second largest group had YES about 68% coming to visit Nosy Be because it is sand and beach destination. About 49.5% agreed to have chosen the place because of the sense of hospitality of the local people, 42% to discover culture and festival events, 25% for business trip or training program and 22% for sport and recreation.

Satisfaction Factors

The performed descriptive analysis and factor analysis was carried out with the aims of explaining the satisfaction of respondents with their trips. A total number of 200 collected data were analyzed using Statistical software, the Social Sciences (SPSS, version 23, IBM SPSS, 2023;). The first step was to

calculate unvaried statistics such as frequencies, means, and standard deviations. The second step used factor bivariate to find the relationship between the selected variables.

Descriptive analysis of the tributes

Table 10 addresses the destination attributes of Nosy Be Island.

TABLE 10: Destination attributes.

DESTINATION ATTRIBUTES	Mean	SD	Order
Cleanliness of beaches and sea	3.360	1.26029	14
Feelings of personal safety and security	4.035	.82898	7
Level of language communication	3.495	1.2030	11
Availability of cultural events and activities	3.580	1.16636	10
Easy access to the sightseeing	3.210	1.19290	16
climate conditions	4.555	.78104	1
Quality of food and availability of restaurants	4.150	1.04063	5
The quality standard of accommodation	4.065	.95147	6
Availability of museums and historical places	3.060	1.21399	18
Friendliness of residents	4.295	1.02628	2
Internet access	2.740	1.07619	19
Availability of shopping facilities	3.070	1.16701	17
Availability of nightlife and entertainment	3.350	1.17234	15
Existence of information centers and signage	3.370	1.32737	13
Availability of sports facilities and activities	3.745	1.01742	8
Availability of guided excursions and tours	4.235	.71578	3
Value for money	4.185	.85700	4
The comfort of local transport services	3.390	1.04082	12
The attractiveness of natural environment	3.720	1.22026	9
Availability of facilities and services at the destination airport	2.740	.98348	20

SOURCE: Research data (2025).

The addressed results indicate that tourists are satisfied with 9 attributes:

- Climate conditions (mean=4.55);

- Friendliness of local residents (mean=4.29);
- Availability of guided excursions and tours (mean=4.23);
- Value for money (mean=4.18);
- Quality of food and availability of restaurants (mean=4.15);
- Quality standard of accommodation (mean=4.06);
- Feelings of personal safety and security (mean=4.03);
- Availability of sport facilities and activities (mean=3.74);
- And attractiveness of natural environment (mean=3.72).

Regardless of a positive or negative mean, the average satisfaction which is 3.63, the table displayed 8 attributes less than such as:

- Availability of museums and historical places;
- Availability of cultural events and activities;
- Shopping facilities; nightlife and entertainment;
- Existence of information centre and signage; comfort of local transport services;
- Easiness access to the sightseeing;
- Cleanliness of beaches and sea;
- And the level of language communication.

Indicates the level of satisfaction shifted downward, considered to have influenced dissatisfaction. Results indicate that tourists are dissatisfied with two attributes, which are Internet access (mean=2.74) as well as the availability of facilities and services at the destination airport (mean=2.74). According to Table 11, the mean score of overall satisfaction is not high (mean=3.63).

TABLE 11: Overall satisfaction.

	N	Sum	Mean
Overall satisfaction of the participant	200	727.25	3.6363
Valid N (listwise)	200		

SOURCE: Research data (2025).

Descriptive analyses of the socio-demographic characteristics

Table 12 shows that the individual gender characteristics have relatively effects on the level of satisfaction. The findings indicated that female express higher level of satisfaction in (2) Feelings of personal safety and security (Mean=4.09). However, when Female was less satisfied in (8) Quality

standard of accommodation and Male express higher satisfaction (Mean=4.18). Furthermore, Female was more satisfied in (12) Availability of shopping facilities (Mean=3.20).

TABLE 12: Mean analysis of Gender (M/F).

Gender	1	2	3	4	5	6	7	8	9	10
Male	3.3271	3.9813	3.477	3.5421	3.1682	4.5701	4.0654	4.1869	3.0561	4.3364
Female	3.3978	4.0968	3.516	3.6237	3.2581	4.5376	4.2473	3.9247	3.0645	4.2473
Total	3.3978	4.0350	3.495	3.5800	3.2100	4.5550	4.1500	4.0650	3.0600	4.2950
Gender	11	12	13	14	15	16	17	18	19	20
Male	2.6075	2.9533	3.3364	3.3551	3.6355	4.1495	4.2336	3.3551	3.7009	2.5794
Female	2.8925	3.2043	3.3656	3.3871	3.8710	4.3333	4.1290	3.4301	3.7419	2.9247
Total	2.7400	3.0700	3.3500	3.3700	3.7450	4.2350	4.1850	3.3900	3.7200	2.7400

SOURCE: Research data (2025).

Table 13 shows that the individual's age characteristics have relatively an effect on the level of satisfaction. The findings indicated that the majority of the age of respondent belongs to 18-30. The group express a low satisfaction level in:

- (2) Feelings of personal safety and security (Mean=3.93),
- (8) Quality standard of accommodation (Mean =3.71),
- (9) Availability of museums and historical places (Mean=2.97),
- (10) Friendliness of local residents (Mean=3.97) and,
- (19) Attractiveness of natural environment (Mean=3.47).

The age group of 31-45 has the lowest level of satisfaction (Mean=2.89).

TABLE 13: Mean analysis of Age (M/F).

Age (M)	1	2	3	4	5	6	7	8	9	10
18-30	3.2597	3.9351	3.299	3.5325	3.1558	4.2727	4.0260	3.7143	2.9740	3.9740
31-45	3.2881	4.0339	3.610	3.5254	3.3729	4.7119	4.1356	4.2542	3.3051	4.4237
46+	3.5593	4.1864	3.576	3.6441	3.1695	4.7288	4.3220	4.4068	2.8983	4.5424
<18	3.4000	3.8000	4.200	4.2000	2.6000	5.0000	4.2000	3.2000	3.4000	4.8000
Total	3.3600	4.0350	3.495	3.5800	3.2100	4.5550	4.1500	4.0650	3.0600	4.2950

Age (F)	11	12	13	14	15	16	17	18	19	20
18-30	2.9091	3.0130	3.3247	3.2338	3.6494	4.2338	4.0519	3.3766	3.4675	2.7662
31-45	2.8136	3.2034	3.1864	3.4407	3.9153	4.2373	4.3390	3.4407	4.0169	2.8136
46+	2.4576	3.0339	3.4915	3.5254	3.6780	4.2881	4.2373	3.3898	3.7627	2.6610
<18	2.6000	2.8000	4.0000	2.8000	4.0000	3.6000	3.8000	3.0000	3.6000	2.4000
Total	2.7400	3.0700	3.3500	3.3700	3.7450	4.2350	4.1850	3.3900	3.7200	2.7400

SOURCE: Research data (2025).

However, people from 31-45 were more satisfied in (19) Attractiveness of natural environment (Mean=4.01). The third group of 46+ were less satisfied in (9) Availability of museums and historical places (Mean=2.90). The tourists with age <18 were more likely to be neutral. Table 14 shows that the individual professional status characteristics have relatively effects on the level of satisfaction. The findings indicated that the retired had more impact on the level of satisfaction.

TABLE 14: Descriptive analysis of profession (M/F).

Professi on	1	2	3	4	5	6	7	8	9	10
Student	3.0889	3.9111	3.578	3.5556	3.2222	4.4667	4.2444	3.6889	3.0000	4.2000
Employe d	3.5102	4.0612	3.255	3.5612	3.1122	4.5816	4.1224	4.0408	3.0612	4.2959
Self- employe d	4.0370	4.3704	3.481	3.7407	3.1111	4.7778	4.8889	4.4815	2.7037	4.3704
retired	2.6667	3.8333	4.167	3.5333	3.6000	4.4000	3.4333	4.3333	3.4667	4.3667
Total	3.3600	4.0350	3.495	3.5800	3.2100	4.5550	4.1500	4.0650	3.0600	4.2950
Professi on	11	12	13	14	15	16	17	18	19	20
Student	2.7333	3.0222	3.3778	3.3556	3.7556	4.2889	4.0667	3.4667	4.0222	2.8222
Employe d	2.7041	3.2041	3.4694	3.3980	3.7959	4.2245	4.2143	3.3061	3.6837	2.7857
Self-	2.7037	3.0741	3.0000	3.3704	3.8148	4.3333	4.2963	3.4815	4.2593	2.8148

employee d										
retired	2.9000	2.7000	3.2333	3.3000	3.5000	4.1000	4.1667	3.4667	2.9000	2.4000
Total	2.7400	3.0700	3.3500	3.3700	3.7450	4.2350	4.1850	3.3900	3.7200	2.7400

SOURCE: Research data (2025).

The retired respondents express less satisfaction in 4 attributes such as:

- Cleanliness of beaches and sea (Mean =2.66),
- (7) Quality of food and availability of restaurants (Mean =3.43),
- (12) Quality standard of accommodation (Mean =2.70),
- (19) Attractiveness of natural environment (Mean =2.90).

However, among the group of retired respondents, there is:

- A higher satisfaction in (3) Level of language communication (Mean = 4.16),
- Students group express less satisfaction in (2),
- Feelings of personal safety and security (Mean = 3.91) and,
- (8) Quality standard of accommodation (Mean=3.69);

The self-employed tourists express more satisfaction in:

- Cleanliness of beaches and sea. (Mean=4.04),
- Feelings of personal safety and security (Mean=4.37),
- (6) climate conditions (Mean=4.78),
- (7) Quality of food and availability of restaurants (Mean=4.89),
- (8) Quality standard of accommodation (Mean=4.48),
- (16) Availability of guided excursions and tours (Mean=4.33) and,
- (19) Attractiveness of natural environment (Mean=4.26).

Correlation analysis of demographic characteristics

The present subsection reports the correlation analysis of the study on demographic characteristics and destination attribute's level of satisfaction. One can state that the correlation analysis on Table 15, 16 and 17 displayed that the results were positively correlated. A significant positive relationship ($p < 0.01$) was found between the tourist's gender, age and profession with the destination's attribute's level of satisfaction, respectively.

TABLE 15: Gender (M/F) and the destination attribute level of satisfaction.

M/F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1																				
.028	1																			
.070	.204**	1																		
.127	-.184**	.240**	1																	
.066	.045	.545**	.514**	1																
-.021	-.121	.308**	.347**	.436**	1															
.265**	.179*	.133	.075	.081	.122	1														
.110	.242**	.396**	.177*	.243**	.076	.305**	1													
.230**	-.015	.348**	.301**	.414**	.347**	.228**	.066	1												
.002	-.261**	.387**	.406**	.511**	.394**	.050	.021	.379**	1											
.246**	.073	.076	.260**	.272**	.200**	.466**	.358**	.304**	.284**	1										
-.164*	-.249**	.134	.259**	.197**	.211**	-.102	-.333**	.183**	.408**	-.203**	1									
-.002	.078	.429**	.136	.232**	.112	.249**	.591**	.068	.295**	.302**	.031	1								
.081	.254**	.298**	.244**	.417**	.127	.314**	.414**	.272**	.204**	.457**	-.123	.496**	1							
.060	.031	.308**	.420**	.412**	.252**	.315**	.258**	.486**	.363**	.266**	.244**	.366**	.549**	1						
.033	.021	.076	.317**	.405**	.260**	.388**	.449**	.329**	.350**	.597**	-.020	.447**	.492**	.580**	1					
-.025	.000	.122	.080	.245**	.189**	.386**	.249**	.339**	.215**	.432**	.008	.251**	.261**	.506**	.621**	1				
.063	.054	-.037	-.055	-.118	-.053	.229**	.003	.380**	.033	.195**	.200**	.178*	.070	.311**	.279**	.445**	1			
-.016	.080	.124	.158*	.202**	.464**	.227**	.034	.258**	.204**	.292**	.190**	.130	.275**	.226**	.298**	.409**	.110	1		
.097	.344**	.099	-.100	.062	-.011	.354**	.283**	.163*	.110	.379**	-.014	.243**	.220**	.229**	.323**	.294**	.290**	.257**	1	
-.058	.076	-.131	.020	-.047	.008	.208**	-.016	.201**	.080	.141*	.244**	.029	-.030	.263**	.345**	.259**	.278**	.158*	.287**	1

SOURCE: **. Correlation is significant at the 0.01 level (2-tailed). Research data (2025).

TABLE 16: Age and the destination attribute level of satisfaction.

Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1																				
.090*	1																			
.098	.204**	1																		
.016	-.184**	.240**	1																	
.035	.045	.545**	.514**	1																
.038	-.121	.308**	.347**	.436**	1															
-.021	.179*	.133	.075	.081	.122	1														
.087	.242**	.396**	.177*	.243**	.076	.305**	1													
-.138	-.015	.348**	.301**	.414**	.347**	.228**	.066	1												
.003	-.261**	.387**	.406**	.511**	.394**	.050	.021	.379**	1											
-.043	.073	.076	.260**	.272**	.200**	.466**	.358**	.304**	.284**	1										
.132	-.249**	.134	.259**	.197**	.211**	-.102	-.333**	.183**	.408**	-.203**	1									
.108	.078	.429**	.136	.232**	.112	.249**	.591**	.068	.295**	.302**	.031	1								
.012	.254**	.298**	.244**	.417**	.127	.314**	.414**	.272**	.204**	.457**	-.123	.496**	1							
.012	.031	.308**	.420**	.412**	.252**	.315**	.258**	.486**	.363**	.266**	.244**	.366**	.549**	1						
.116	.021	.076	.317**	.405**	.260**	.388**	.449**	.329**	.350**	.597**	-.020	.447**	.492**	.580**	1					
.128	.000	.122	.080	.245**	.189**	.386**	.249**	.339**	.215**	.432**	.008	.251**	.261**	.506**	.621**	1				
-.061	.054	-.037	-.055	-.118	-.053	.229**	.003	.380**	.033	.195**	.200**	.178*	.070	.311**	.279**	.445**	1			
.036	.080	.124	.158*	.202**	.464**	.227**	.034	.258**	.204**	.292**	.190**	.130	.275**	.226**	.298**	.409**	.110	1		
.017	.344**	.099	-.100	.062	-.011	.354**	.283**	.163*	.110	.379**	-.014	.243**	.220**	.229**	.323**	.294**	.290**	.257**	1	
.176*	.076	-.131	.020	-.047	.008	.208**	-.016	.201**	.080	.141*	.244**	.029	-.030	.263**	.345**	.259**	.278**	.158*	.287**	1

SOURCE: **. Correlation is significant at the 0.01 level (2-tailed). Research data (2025).

TABLE 17: Professional status and the destination attribute level of satisfaction.

Prof.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1																				
-.046	1																			
.016	.204**	1																		
.158*	-.184**	.240**	1																	
.012	.045	.545**	.514**	1																
.089	-.121	.308**	.347**	.436**	1															
.005	.179*	.133	.075	.081	.122	1														
-.137	.242**	.396**	.177*	.243**	.076	.305**	1													
.244**	-.015	.348**	.301**	.414**	.347**	.228**	.066	1												
.075	-.261**	.387**	.406**	.511**	.394**	.050	.021	.379**	1											
.054	.073	.076	.260**	.272**	.200**	.466**	.358**	.304**	.284**	1										
.043	-.249**	.134	.259**	.197**	.211**	-.102	.333**	.183**	.408**	-.203**	1									
-.089	.078	.429**	.136	.232**	.112	.249**	.591**	.068	.295**	.302**	.031	1								
-.079	.254**	.298**	.244**	.417**	.127	.314**	.414**	.272**	.204**	.457**	-.123	.496**	1							
-.014	.031	.308**	.420**	.412**	.252**	.315**	.258**	.486**	.363**	.266**	.244**	.366**	.549**	1						
-.068	.021	.076	.317**	.405**	.260**	.388**	.449**	.329**	.350**	.597**	-.020	.447**	.492**	.580**	1					
-.058	.000	.122	.080	.245**	.189**	.386**	.249**	.339**	.215**	.432**	.008	.251**	.261**	.506**	.621**	1				
.044	.054	-.037	-.055	-.118	-.053	.229**	.003	.380**	.033	.195**	.200**	.178*	.070	.311**	.279**	.445**	1			
.018	.080	.124	.158*	.202**	.464**	.227**	.034	.258**	.204**	.292**	.190**	.130	.275**	.226**	.298**	.409**	.110	1		
-.207*	.344**	.099	-.100	.062	-.011	.354**	.283**	.163*	.110	.379**	-.014	.243**	.220**	.229**	.323**	.294**	.290**	.257**	1	
-.118	.076	-.131	.020	-.047	.008	.208**	-.016	.201**	.080	.141*	.244**	.029	-.030	.263**	.345**	.259**	.278**	.158*	.287**	1

SOURCE: **. Correlation is significant at the 0.01 level (2-tailed). Research data (2025).

Travel Expectation And Overall Satisfaction

The travel expectation and satisfaction are studied based on the descriptive and socio-demographic statistics.

Descriptive analysis of travel expectation

Table 18 displayed a descriptive analysis of the study on travel expectation. According to the result displayed, we state that: 1) The Intention to share on Social Network, the level of the average mean is (mean = 3.85); 2) The intention to return to Nosy Be in the future and will recommend the place to friends is (Mean = 4.06); And 3) to recommend the place to friends presents the level of the average mean is (mean = 4.06).

TABLE 18: Descriptive statistics.

	N	Mean	Std. Deviation
Intention to share the experience on Social Network	200	3.8500	.95502
Intention to return	200	4.0450	.74549
Recommendation of the place to friends	200	4.0600	.79344

SOURCE: Research data (2025).

The correlation analysis on Table 19 displayed the results were positively correlated at the recommendation of the place, intention to share the experience on social network, and the overall satisfaction. There is a positive sign of the correlation between the overall satisfaction and the willingness to recommend the place to friends ($r = 0.294$, $P < .05$); There is also a positive sign of the correlation between the overall satisfaction and the intention to share the experience on social network ($r = 0.222$, $P < .05$).

TABLE 19: Travel expectation and overall satisfaction.

PEARSON CORRELATION	1	2	3	4
Intention to return	1			
Recommendation of the place to friends	.089	1		
Intention to share the experience on social network	.010	.145*	1	
Overall satisfaction	.139*	.294**	.222**	1

SOURCE: *. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed). Research data (2025).

Travel expectation and socio-demographic mean analysis

The findings displayed in Table 20 indicate that the respondents who have intention to return to visit Nosy Be:

- The highest level of intention is the age <18 (mean=4.20),
- The group of 18-30 has the most significant number of respondents 77 who expressed the common intention to return (mean=4.05).
- While the respondents were asked to answer the degree of willingness to recommend the place to friends, the group of 46+ has the highest degree of recommendation (mean=4.20) and has 56 respondents followed by the age <18 (mean=4.20).

The age between 18-30 has the third highest degree of recommendation (mean=4.16) and has the highest degree of intention to share (mean=3.90). The total average of means is (mean=4.0). In terms of intention to share the experience on the social. The second group is between 31-45 (mean=3.88), has the second highest degree of intention to share on the social network. However, the two other groups 46+ (mean=3.76) and <18 (mean=3.60) have not a higher degree of intention to share compare to the total average of means (mean=3.85). The findings displayed on the Table 21 indicate that on the intention to

return, Female has the highest degree of intention (mean=4.13), higher than the total average means (mean=4.04).

TABLE 20: Age of the respondent and travel behavior.

Age of the participant		Intention to return	Recommendation of the place to friends	Intention to share the experience on Social Network
18-30	Mean	4.0519	4.1688	3.9091
	N	77	77	77
	Std. Deviation	.60472	.47024	.87632
31-45	Mean	4.0678	3.7627	3.8814
	N	59	59	59
	Std. Deviation	.76258	1.11941	.94841
46+	Mean	4.0000	4.2034	3.7627
	N	59	59	59
	Std. Deviation	.90972	.68932	1.07220
<18	Mean	4.2000	4.2000	3.6000
	N	5	5	5
	Std. Deviation	.44721	.44721	.89443
Total	Mean	4.0450	4.0600	3.8500
	N	200	200	200
	Std. Deviation	.74549	.79344	.95502

SOURCE: Research data (2025).

While the respondents were asked to answer the degree of willingness to recommend the place to friends, Female has the highest share of the degree of recommendation to friends (mean = 4.10) and higher than the average total of means (mean = 4.06). However, in terms of intention to share the experience on the social network, Male has the highest degree of intention to share (mean = 3.86), higher than the total average of the mean (mean =3.85) compare to female (mean = 3.83). The findings displayed on the Table 22 indicate that on the intention to return, Retired respondents have the highest degree of intention to return (mean = 4.26), higher than the total average of means (mean = 4.04).

TABLE 21: Gender of the respondent and travel behavior.

Gender of the participant		Intention to return	Recommendation of the place to friends	Intention to share the experience on Social Network
Male	Mean	3.9626	4.0187	3.8598
	N	107	107	107
	Std. Deviation	.80006	.93144	.95610
Female	Mean	4.1398	4.1075	3.8387
	N	93	93	93
	Std. Deviation	.66906	.59823	.95883
Total	Mean	4.0450	4.0600	3.8500
	N	200	200	200
	Std. Deviation	.74549	.79344	.95502

SOURCE: Research data (2025).

TABLE 22: Professional status of the respondent and travel behavior.

Professional status of the participant		Intention to return	Recommendation of the place to friends	Intention to share the experience on Social Network
Student	Mean	4.0444	4.2000	3.9556
	N	45	45	45
	Std. Deviation	.67270	.40452	.87790
Employed	Mean	4.0714	3.9490	3.8980
	N	98	98	98
	Std. Deviation	.66192	.93470	.86739
Self-employed	Mean	3.7037	4.3333	3.7778
	N	27	27	27
	Std. Deviation	1.20304	.48038	1.05003
Retired	Mean	4.2667	3.9667	3.6000
	N	30	30	30
	Std. Deviation	.44978	.88992	1.22051

Total	Mean	4.0450	4.0600	3.8500
	N	200	200	200
	Std. Deviation	.74549	.79344	.95502

SOURCE: Research data (2025).

The second group having the highest degree of intention to return is the employed respondents (mean=4.07), followed by Student (mean=4.04). Compare to the other group of the respondent; Self-employed has less degree of intention to return (mean=3.83), which is less than the total average of the mean. However, while the respondents were asked to answer the degree of willingness to recommend the place to friends, Self-employed group of respondents have the highest degree of recommendation (mean=4.33), higher than the total average of means (mean=4.06). The second group, with a higher degree of recommendation is Student group of the respondent (mean=4.20). The two other groups have less share than the total of means. They are the Retired group (mean=3.96) and the Employed one (mean=3.94). In terms of intention to share the experience on the social network, two groups have the degree of intention to share higher than the total average of means (mean=3.85). They are student group (mean=3.95) and employed group (mean=3.89). The retired respondent (mean=3.94) and Self-employed respondents (mean=3.77) have less degree of intention to share to friend compare to the total average of means.

CONCLUSIONS

While the study of visitor satisfaction is becoming increasingly popular among managers of tourism sites, the methods used are contaminated with flaws that affect the outcomes and implications, conducting customer satisfaction research costs time and resources to both a destination and service provider and its customers. There are a large number of studies focusing on measurement of tourist satisfaction. Furthermore, some studies attempt to examine the influence of attribute-level satisfaction on the overall satisfaction. It has been indicated that tourist satisfactions with each component of the destination have significant, positive, and direct effects on overall satisfaction. However, the existing researches have not satisfactorily represented individual heterogeneity in tourist satisfaction analysis. It is expected that the levels of importance attached to each component will vary across different tourists. It is also important to know that tourist evaluate the attributes of destination differently (depends if the survey focus on dimension of satisfaction or dissatisfaction). It is recommended to go through the dimension of dissatisfaction in order to provide complementary information on experience of destination. Where the degree of satisfaction is to which tourist evaluation of a destination exceeds his or her expectation. In the

study on sun and sand product, there are some attributes that should always be underlined such as climate, beaches and landscape, the quality of the hotel, safety and destruction. The important types of satisfaction allowing to measure the satisfaction is described.

The research includes the overall satisfaction measurand of international tourist in a specific destination, intention and likelihood to recommend to others, experience relative to expectation and best experience, and re-visit and purchase intention. However, only identify causes of satisfaction is not enough and not adequate. It should involve the product and service components of the destination with measuring approach satisfaction. The choice of measurement approach is dependent upon the objective of measuring satisfaction and the level of insights a destination wants to obtain especially when it is the research field is research on island destination, which is considered as trending nowadays. Moreover, while studying the tourist satisfaction and intention to return, or study in sea-sand destination, the factors influencing the length of stay is commonly higher income and sea-sand, nature attributes. We should not have to ignore the fact that those assumption can vary through years and the development of marketing strategy. The research results can serve as reference to find economic models that would maintain the Nosy Be competitiveness on the tourist market in conditions of globalization.

ACKNOWLEDGEMENTS

The authors are grateful to thank Dr. Blaise Ravelo from NUIST, China, Henri Joël Jao from University of Antsiranana, Madagascar, and Valencia Lala from ENAC, France, for their advice and their help to write the manuscript.

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