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Meet the editor

Syed Abdul Rehman Khan is a teacher of Supply Chain and Logistics Management. Dr. Khan obtained his Certified Supply Chain Professional (CSCP) certificate from the United States and completed his postdoctoral fellowship at Tsinghua University, Bejing, China. Since 2020, Dr. Khan has been affiliated with Xuzhou University of Technology, China, as an associate professor. He has more than nine years of core experience in supply chain and logistics at industry and academic levels. He has attended several international conferences and has been invited as a keynote speaker in different countries. He has published more than 100 scientific research papers in well-renowned international journals and conferences. He is a regular contributor to conferences and workshops worldwide.

Contents

Preface

The act of spending time away from home in pursuit of recreation, relaxation, and pleasure is called tourism. The tourism industry is directly and/or indirectly associated with per capita income. Since 2019, the tourism sector has been suffering badly due to the COVID-19 pandemic, which has stalled economic activities and restricted traveling.

Many factors attract international tourists, including transportation infrastructure and visa policies, both of which facilitate travelers' access to their desired destinations. However, a high crime rate and lack of tourist security create harmful effects on the tourism industry and portray a country's negative image.

This book presents case studies and practices in the tourism sector from different parts of the world. It also examines the challenges and obstacles faced by the tourism sector due to lack of environmental policies, high crime rates, and poverty. Further, the book also discloses some potential opportunities in the tourism sector.

We would like to thank the contributors to this book for their extraordinary hard work in writing their valuable and innovative chapters. We would also like to thank Author Service Manager Ms. Marijana Francetic for coordinating and facilitating the authors. We also extend our thanks to IntechOpen for publishing this work.

Thank you,

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Section 1

Introduction

Chapter 1

Challenges and Advances in the Planning of Tourism with Amazon River Dolphins in the Brazilian Amazon

Marcelo Derzi Vidal, Priscila Maria da Costa Santos,
Maria do Perpétuo Socorro Rodrigues Chaves and Robert Swett

Abstract

Being considered charismatic cetaceans are among the animals most sought after in tourist interactions that may involve observation, touch, swimming, and provisioning food. This tourism model has the potential to generate socioeconomic and conservationist benefits. However, when carried out in a disorderly manner, this can have a negative impact on cetaceans and tourists alike. In this chapter, we discuss the challenges and advances within the process of participatory planning of tourism with Amazon River dolphins (*Inia geoffrensis*). Our goal is to present strategies that can support the development of projects and public policies aimed at management of wildlife tourism in other areas. Since its implementation at the Anavilhanas National Park - Brazil, the activity had never had its impact monitored by any competent bodies, and this has led to problems and quick spreading to other sites. The rules and guidelines implemented in have significantly reduced risks for tourists and dolphins alike, improving tourist experience and promoting the awareness of animal life. However, many issues remain and need to be solved, especially in the protected areas. These include reduced staff levels, which limits the ability to implement and monitor planned actions. Such shortcomings lead to setbacks in the development of tourist activities with cetaceans.

Keywords: *Inia geoffrensis*, protected area, public policy, visitors, wildlife

1. Introduction

The settlement and development of the Amazon were started based on the paradigm of a relationship between society and nature, meaning that economic growth is seen as linear and infinite, and on the continuous exploitation of natural resources [1], which has contributed to the depletion or extinction of species, caused environmental imbalances, gaps in knowledge about how many and which species exist in the region, and loss of potentially exploitable economic resources. This has made the search for tools that allow the best use and exploitation of its natural potential imperative [2].

Since the heyday of its colonisation process, the Amazon has gone through a series of economic development cycles, each determined by the expansion and contraction of markets. In the local management plan, among the agents one can observe a strong element of pressure due to the need to enlist their capabilities as a means to build feasible alternatives for the improvement of living conditions [3]. This makes tourism, in its many facets, rank among the services that have stood out in the Amazonian region over the last decades.

Tourism plays a key role in the sociocultural transformation of the nations, while being one of the fastest-developing industries in the World and contributes to economic growth by creating several vocational opportunities [4, 5]. Tourism has become a relevant economic activity, considered one of the main sources of income, with some places relying almost exclusively on such activities [6]. However, with global growth in per capita income, tourists have increased swiftly, and this development of the tourism sector is reflected in the related environmental degradation [7, 8].

Tourism is characterised as dynamic social practice, intertwined with a context of relationships and interrelationships, which can boost different social groups or make them dependant, or even take over territories. In this light, the activity can lead to two outcomes that may oppose each other: one that can boost the emancipation of those involved, and the other that can create a dependency of sorts and even accommodate predatory practices [9]. In this perspective, tourism can generate a negative impact, especially when carried out in uncontrolled fashion and focused within time and space [10].

Several tourism and recreational activities can lead to the displacement of animal habitats and depletion of natural resources [11]. Other authors suggest that leisure and tourism activities can cause major problems for the management of protected areas. For example, when such activities are carried out in a disorderly fashion, without any planning, monitoring or control by managers, they can lead to negative environmental impacts, reduced visitor safety, and, in some cases, increased risk to animal species [12, 13]. Human interaction with wildlife is an activity that has been explored within tourism, most specifically within ecotourism, a segment of tourism that has sustainability as one of its cornerstones.

The Brazilian Amazon, in the north of Brazil, is an important destination for ecotourism in the country. Tourism has been taking shape as an alternative to development in several Amazonian cities, with ecotourism standing out mainly in protected areas. In these places, tourism has the potential to create benefits for the environment and contribute to its preservation, while boosting the economy by creating jobs and income for local populations, thus strengthening its acceptance by society [14]. In some cases, tourism is a source of funding that tops up the household income, assuming a key role for local development which, if planned well, can induce the sustainable use of local resources.

2. Tourist interactions with cetaceans and Brazilian environmental legislation

Cetaceans, regarded as charismatic animals that are easily spotted in their natural habitat, are part of a growing demand for tourist-animal interactions throughout the world [12, 15]. These interactions consist of watching whales and dolphins from bases on shore or ships, swimming, and dolphin feeding programmes [16–20].

In Brazil, recognised tourist interactions with cetaceans occur in some protected areas. The Abrolhos Marine National park off the southern coast of Bahia welcomes

hundreds of visitors annually, seeking to watch the reproductive migration of the humpback whale (*Megaptera novaeangliae*) [21]. Further north, the Fernando de Noronha Marine National Park in the state of Pernambuco is a tourist spot for observing spinner dolphins (*Stenella longirostris*) [22]. In the Baleia-Franca Environmental Protection Area on the coast of Santa Catarina, the mating and parental care of southern right wales (*Eubalaena australis*) are the main attractions [23]. In the mosaic of protected areas along the Lower Negro River, in the state of Amazonas, there is tourism based on feeding Amazon River dolphins (*Inia geoffrensis*) [24]. In these protected areas, tourism has developed a chain of services; local involvement and research activities have generated vital biological information for the preservation and handling of these species.

Artificial dolphin feeding as a tourist attraction is practised in many countries, such as Australia, the United States, New Zealand and Cuba [25–29]. However, currently, this activity is enshrouded in controversy [30] due to negative consequences, such as changes in animal diet, changes in territorial behaviour, problems associated with the ingestion of non-fresh food products, and consumption of harmful food products due to inappropriate food supply. At the same time, the artificial supply of food can lead dolphins to beg people to give them food, which can lead to an increase in the number of human-induced injuries, such as being run over by ships, or dolphins being caught in fishing traps or ingesting hooks and other fishing-related paraphernalia [29, 31, 32].

Brazilian environmental legislation does not contain any regulations prohibiting the artificial feeding of wildlife. However, such activity is banned by the internal regulations of protected areas such as Serra dos Órgãos National Park, in Rio de Janeiro, and Iguaçu National Park in Paraná [33, 34]. Despite the lack of a federal regulation banning the feeding of wildlife, Law 9,605/1998 does establish a penalty of three months to one year of imprisonment, plus a fine, to any person involved in harassment, mistreatment, harm or mutilation of wild animals, domestic or domesticated, native or exotic. Likewise, Article 30 of Presidential Decree 6.514/2008 establishes fines for anyone intentionally harassing any kind of cetacean, pinnipeds (seals) or sirenians (sea cows and manatees) in Brazilian waters.

Considering this scenario, this chapter discusses the challenges and advances related to the process of participatory planning of tourism with Amazon River dolphins in the Brazilian Amazon, which has resulted in the passing of a series of guidelines and regulations that significantly reduce the risks for tourists and dolphins alike, improving the tourist experience and promoting the population's awareness of animal life. Our goal is to present means and strategies that can support the development of future projects and public policies aimed at management of wildlife tourism in other areas.

3. Interactive tourism with Amazon River dolphins

Tourist interaction with Amazon River dolphins began in the Amazon in 1998 at the Anavilhanas National Park [35], located in the city of Novo Airão, Lower Negro River, in the state of Amazonas, Brazil. The city is located on the right bank of the Negro River, a 183 km drive from the state's capital, Manaus. The municipality occupies an area of 37,771 km^2, with 18,133 inhabitants [36]. Due to its proximity to Manaus, Novo Airão is now one of the main tourist destinations for people visiting the Amazon, and for inhabitants of Manaus and other cities close by, mainly for its natural attractions [37].

Created in 1981 as an Ecological Station and reclassified in 2008 as a National Park, Anavilhanas is managed by the Chico Mendes Institute for Biodiversity Conservation (ICMBIO, acronym in Portuguese), the Brazilian government entity responsible for the management of federal protected areas. With an area of approximately 350,000 hectares, the Park is comprised of *terra-firme* forests (unflooded areas) as well as *igapós* (periodically flooded areas), besides various streams, lakes,
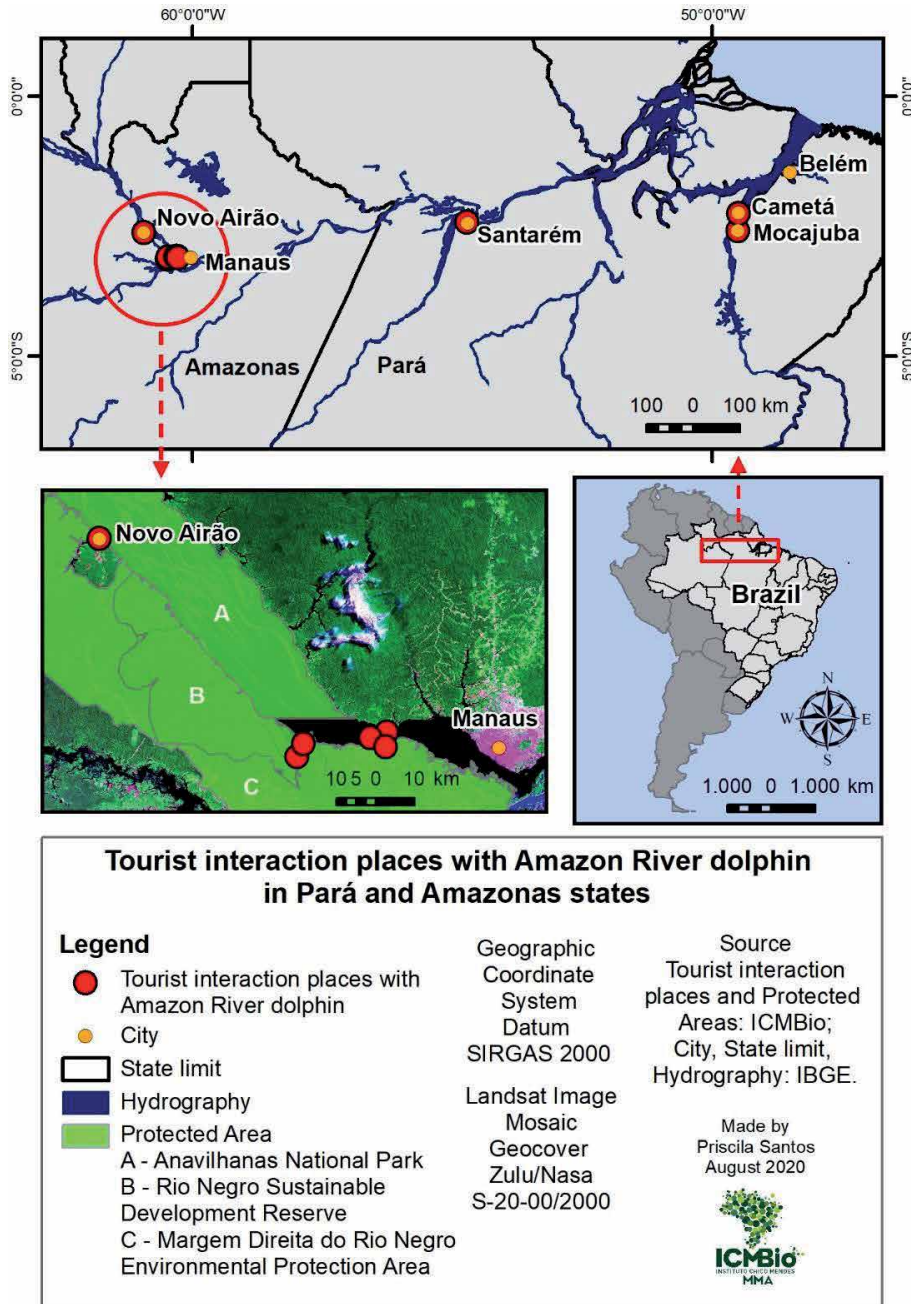
Figure 1.
Map identifying the areas where tourist interactions with Amazon River dolphins occur in the Brazilian Amazon.

channels, waterways and about 400 islands, making it the second largest river archipelago in the world [38].

Human interactions with the Amazon River dolphin at Novo Airão started by accident, when a child started offering fish to a dolphin that was roaming around the surroundings of a houseboat restaurant anchored in the south-central region of Anavilhanas National Park, right in front of the major urban beach of the city of Novo Airão [35, 39]. As time went by, other Amazon River dolphins were attracted

Figure 2.
Negative activities carried out before the implementation of visitor management. (A) Visitor "tricking" the dolphins, behaviour which frequently lead to bites on the hands of those visitors; (B) fish to be offered to dolphins placed on the ground, in a place where visitors circulate.

by the food and the child started swimming with the animals, which caught the eye of people visiting the city, who in turn started to buy portions of fish in the restaurant to feed the dolphins too [32].

Since then, interactive tourism between people and Amazon River dolphins in Novo Airão, based on the feeding of the cetaceans, has become well known among Brazilian and foreign tourists. Thus, the activity has become a major tourist attraction in both the city and Anavilhanas National Park [35, 40].

The dissemination of Amazon River dolphin related tourism at Anavilhanas National Park led to the activity being carried out in six other places along the Lower Negro River over time, each one located within state protected areas [34, 37], and at three other locations in the municipalities of Cametá, Mocajuba and Santarém, in the state of Pará (**Figure 1**).

However, several studies [13, 24, 35, 37] suggest that the replicability of the experience in Anavilhanas occurred without the establishment of any standards and monitoring of tourist practices, that involve the swimming and artificial feeding of Amazon River dolphins, in turn leading to negative consequences for those involved, such as a high number of tourists interacting with a handful of animals; tourists swimming with the dolphins and trying to hold them by force; the offering of objects and food products that were not part of the animal's natural diet, such as chips, beer, sausages and bread; tourists accidentally bitten or otherwise harmed by the animals during artificial feeding activities; fish sold to tourists and offered to dolphins while still frozen and poorly handled, from a hygienic standpoint; absolutely no control of the quantity of fish given to each dolphin daily (**Figure 2**).

This scenario created the need to discuss alternatives to reduce the various issues prevalent in interactive tourism with Amazon River dolphins in the Amazon region, especially at Anavilhanas National Park, where the activity has been going on for longer.

4. The participatory planning of the activity

Problems related to interactive tourism with Amazon River dolphins in Anavilhanas National Park led to the March 2010 establishment of a Work Group for the planning of tourism with Amazon River dolphins. This Work Group included representatives from several stakeholder groups: researchers, government bodies (technicians from the environment, tourism and education departments), the private sector (hotel and restaurant owners), organised civil society (fishing colonies, tour operator associations) and the Consulting Board of Anavilhanas National Park. The Work Group, led by ICMBIO, was given the task of drawing up a plan for tourist activities with Amazon River dolphins, via participatory actions, including relevant environmental, economic and social aspects [37].

The Work Group held several meetings and seminars to exchange information and knowledge among members and to discuss themes such as the positive and negative impacts of interactive tourism with dolphins at the Anavilhanas National Park; tourist experiences with cetaceans in other protected areas and regions of the country; and the biological and preservation aspects of the Amazon River dolphin. A planning proposal for tourist activities with the dolphins was drafted for the entire Amazon, as these activities had been quickly spreading throughout the states of Amazonas and Pará (**Figure 3**).

The proposal included aspects such as the number of visitors, minimum infrastructure and location of the houseboat where the interaction takes place, and duration of animal watching, as well as some more restrictive rules regarding the touching and the feeding of the dolphins [37]. In October 2010, the
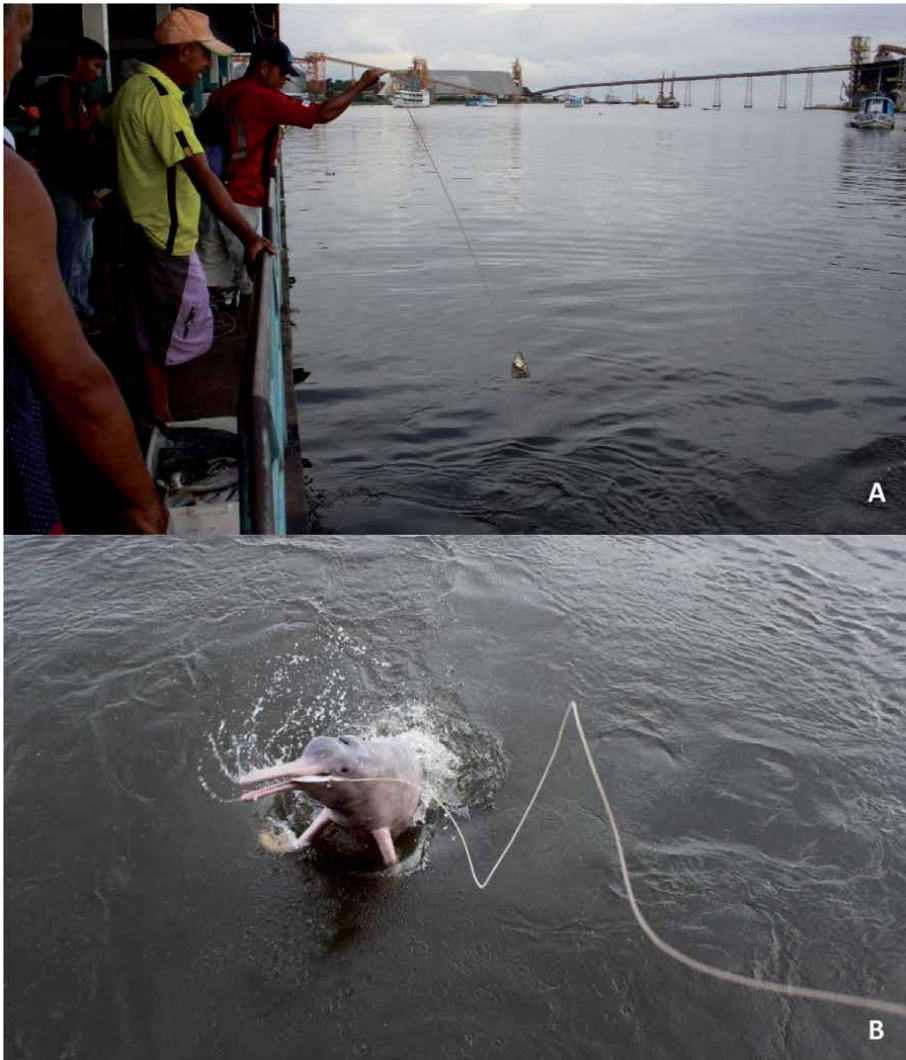
Figure 3.
Visitors observing Amazon River dolphins feeding in the fish market in Santarém, Brazil. (A) Market vendor throwing fish tied to a rope to attract the dolphin; (B) dolphin capturing the fish.

proposal was forwarded to the ICMBIO's Board of Research, Evaluation and Monitoring of Biodiversity. Additionally, ICMBIO Directive No. 47/2012 set out that visitors are strictly forbidden from feeding the dolphins in Anavilhanas National Park.

At the same time, changes in tourism with Amazon River dolphins were implemented at Anavilhanas National Park through an action plan based on the planning proposal with short, medium- and long-term goals [37]. Among the key changes applied to the activity (**Table 1**), visitors must receive guidance regarding biological and preservation aspects of Amazon River dolphins before any interaction can take place; only employees of the establishment are authorised to feed animals; feeding can only take place during pre-set hours; the amount fed to each individual dolphin is limited; the number of visitors and allotted time on observation platforms is limited (**Figure 4**); and swimming with dolphins is no longer allowed, although visitors are allowed to stand passively, on a submerged platform, with mandatory use of life jackets.

Before planning	After planning
No monitoring during visitation.	Monitoring of the profile and perception of visitors regarding the activity being carried out.
No prior information given to the visitors.	Prior to the interaction, visitors attend a lecture about dolphin biology, legends surrounding the animal, the main threats to the species, and the rules for interacting with the animals.
The visitors would feed the dolphins (which would occasionally lead to bites on the hands of those visitors who were "tricking" the animals).	Only employees of the establishment can feed the animals at pre-established times.
No control regarding the quantity and quality of food being offered to the animals (examples: frozen fish, sausages, beer, chips).	Only refrigerated fish can be fed to the dolphins. There is a limit of 2 kilos of fish a day per individual.
No information available on the possible dependency of dolphins on artificial feeding supplied by establishments.	Each dolphin attending a feeding session is logged. This information will allow for a reduction in the amount of food offered to the dolphins, thus stimulating their natural instinct to capture fish in the wild.
No information regarding the distribution of dolphins in Anavilhanas National Park.	The main areas for the observation of dolphins in Anavilhanas National Park are being mapped. This information will help foster vessel tours to observe dolphins, without artificial feeding.
No restrictions regarding the number of visitors on the interaction platform.	Limited number of visitors on interaction platforms, based on ergonomics, platform size, and technical standards.
Visitors were allowed to swim with dolphins (which enabled animal harassment and increased the risk of negative incidents affecting visitors and dolphins alike).	Visitors are only allowed to enter the water by standing on a submerged interaction platform that is 1.20 m deep. Visitors must remain passive. The use of life jackets is mandatory.
No restrictions regarding vessel navigation in the vicinity of establishments, which increased the risk of accidents involving dolphins/visitors and any nearby vessels.	Buoys were installed around the houseboat, significantly decreasing the risk of accidents involving dolphins/visitors and vessels.
Bathroom waste was poured directly into the water.	Bathrooms now have waste treatment.

Table 1.
Key changes made to interactive tourism with Amazon River dolphins in Anavilhanas National Park, Novo Airão, Brazil.

Participatory training in Amazonian Ecology, Biology and Preservation of Cetaceans, as well as Sustainable Tourism have been offered in order to strengthen environmental awareness, improve tourist services and help to preserve the dolphins (**Table 2**). To date 106 people involved in interactive tourism with the Amazon River dolphin in Anavilhanas National Park and in state protected areas have attended, including technicians from environmental and tourism agencies, hotel and restaurant owners, tour guides, and houseboat employees, among others. Attendees were selected based on nominations made by their own institutions, while also considering criteria such as a participant's capacity to apply and multiply the knowledge acquired and recognition of the nominee as a leader in his/her group.

A poster (**Figure 5(A)**) was developed to publicise information about planning for Amazon River dolphin tourism and the main anthropic effects on the species. Over 200 copies of the poster, in Brazilian Portuguese and English, were distributed to hotels, inns, restaurants, the local airport, and tourist operators. Banners

Figure 4.
Tourists interacting with Amazon River dolphins in Anavilhanas National Park, Novo Airão, Brazil.

Training	Number of participants
Amazonian Ecology	22
Biology and Preservation of Cetaceans (1st edition)	34
Biology and Preservation of Cetaceans (2nd edition)	24
Sustainable Tourism	26
Total	106

Table 2.
Training sessions offered and the number of participants in each.

(**Figure 5(B)**) were placed at locations where interactive dolphin tourism occurs and included information on the biology and anatomy of the species.

In 2013, following the example implemented in the Anavilhanas National Park, the Amazonas State Secretary for the Environment created a work group to build a state proposal (based on the one drawn up at the federal level) that would establish rules for this type of tourism. Thus, after a long process of technical and legal wrangling, in January 2018, the Amazonas State Environmental Council Ruling No. 28 was published, establishing guidelines and procedures to be followed in the approval and development of interactive tourism with dolphins in the State of Amazonas.

Figure 5.
Poster regarding the planning of tourism with Amazon River dolphins and the major anthropic effects on the species (A); visitor observing a banner presenting information on the biology and anatomy of the Amazon River dolphins (B).

Subsequently, in January 2019, the National Action Plan for the Preservation of Endangered Amazon Aquatic Mammals was set up, incorporating key activities to quantify and qualify the impacts of tourist practices on species, identifying new forms of low impact tourism involving dolphins, and propose normative acts related to tourist activities involving aquatic mammals in all the states of the Brazilian Amazon.

5. Conclusions

Due to the relevance of tourism in this day and age, it is understood that studies in this area are far too recent and lack expansion to step up the generation of knowledge that enables the comprehension of the multiplicity of social, environmental, economic, political and cultural relationships reached through its practices, this being a condition that qualifies it as a major subject of study.

Like other places in the world, tourism in the Brazilian Amazon has seen a great increase in the number of tourists over the past few years. The challenges now lie in the ability to create greater economic benefits from industry, while ensuring the sustainability of the tourism assets [41].

The use of food to attract wildlife is a strategy employed by tourists and tour operators because it increases the likelihood of sighting animals and getting close to them [30]. However, long-term planning and monitoring of tourism focused on the supply of food for dolphins is essential to ensure the safety and well-being of cetaceans and tourists [42]. Unfortunately, the most common approach for handling activities of artificial feeding of wild fauna is the prohibition of such practices, which, however, has proved to be extremely difficult to apply and, frequently,

presents low levels of compliance [22, 30]. Thus, the most appropriate approach would be to actively manage activities aimed at feeding wildlife, allowing its occurrence, but exercising strong control and monitoring, in order to reduce the potential risks for animals and tourists [30]. Despite the variety of impacts that can stem from interactive tourism to feed wildlife, one may not assume that they are all negative. It is important to acknowledge the fact that economic, social, psychological and preservationist benefits may also result from this model of tourism [30].

The planning of Amazon River dolphin tourism is a very recent experience, whose challenges match its geographical extension, and actions in this regard need the support of research to reach a level of excellence in both structure and quality. However, the changes made to date are perceived as positive by managers, partners and visitors, both in regard to the structure of the enterprises, as to well as the development of the activity.

Other positive aspects worth mentioning include the process of coming up with regulations. Part of the success of this planning is attributed to the democratic and participatory nature of the Work Group involved, which considered the environmental, economic and social dimensions of the activity.

Local communities consider Amazon River dolphin tourism, an activity that involves interaction with a wild species, to be a major alternative source of income than can help to increase quality of life. This is significant given that much of this population faces much hardship in terms of the acquisition of consumer goods, as well as social goods and services.

Major issues regarding Amazon River dolphin tourism in the Amazon, especially in the protected areas, remain and need to be solved. These include reduced staff levels, which limits the ability to implement and monitor planned actions. Such shortcomings lead to setbacks in the development of tourist activities with cetaceans. However, the proactive strategy behind participatory planning, based on research and on interpretational and educational activities, shows itself to be the best way to make sure of visitors' satisfaction, income generation to local residents and preservation of the Amazon River dolphin.

Acknowledgements

Conflict of interest

The authors declare no conflict of interest.

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Chapter 2

From Eco to Sustainable Tourism, the Contradictions and Challenges of Nature-Based Tourism: The Case of Polar Cruises

Alain A. Grenier

Abstract

Polar tourism includes all leisure travel products set in the Antarctic and Arctic regions. As such, it is conditioned by an interest for nature in extreme settings (polar desert, cold climate, harsh travel conditions – when by sea. The Arctic adds an additional interest for indigenous cultures. Trying to met those tourism interests, a specialized cruise tourism branch developed in the late 1980s (thu sporadic cruises were held back from the XIXth century onward) providing exclusive access the most difficult and far distant latitudes of the High Arctic and opposite Antarctic coastline. In any form of tourism, operators must protect the resources their economic activities rest upon as any deterioration they suffer will sooner or later impact the experiente and its viability. Hence a paradox: how to protect the ecological (and cultural) integrity of these features for sustained competitiveness? Since its emergence, as an industry some 40 years ago, the polar cruising has followed trends in environmental and social management, referring in their marketing and travel policies to both eco- and sustainable tourism. Serving the wealthy customers, initially the well traveled elderly, the ship-based polar industry kept a simple programme of lecture and soft-oriented activities, namely inflatable cruising in icy bays and close-to-shore trekking. Yet, with an increasing clientele of younger middle-age tourists, operators have also diversified their excursion products to offer more sportive-oriented activities off-ship. As long as these activities were non-fuel based, the operators enforced their ecological management claims. But with more fuel-based activities (helicopter, Zodiac sightseeing), and therefore a more invasive approach to the sensitive ecosystems visited, can this industry continue to claim to be sustainable? Based on the sustainable claims made by two important polar cruise operators, this study ams to underlines that while the polar cruise industry, as a whole, might seek to improve its ecological footprint, there remains many contradiction between their will to be environmental and the desire to conquer the environment.

Keywords: Sustainability, nature, tourism, Arctic/Antarctic, cruise (ship-based tourism)

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1. Introduction

"Image is everything", informed us in 1989 then rising sport personality Andre Agassi, during a sun-glasses commercial. The motto, created by the marketing industry to increase consumption through the valorisation of the self-image, applies to much more than clothes and accessories. Beyond the general arguments for rest and escape, tourism, a luxurious form of leisure, involves the consumption experiences in the form of activities in selected environments, atmospheres, and cultures (see [1]). It allows the travelers to acquire social and cultural capital, so important for identity building and assertiveness. As such, tourism leads to recognition by the peers and distinction, through the display of that newly acquire capital, otherwise referred to as "distinction" [2]. Referring to Bourdieu's analysis of the concept, Boyer [3] has argued that tourism was built – and is still rests – on the concept of distinction. Hence, when tourism becomes the target of vast criticism, following the emergence of its negative impacts on environment and host communities, [some] operators and tourists are quick to adjust. So would the visibility of sustainable claims in tourism promotion would lead to believe. But are they?

The many failures of the tourism industry to manage its negative impacts are well documented. The complexity of the management issues has surfaced with the advent of mass tourism in the mid-1970s. Beginning with the 1980s, this criticism toward mass tourism was met with the development of so-called alternative forms of travel: "ecotourism", "community-based", "ethical", "fair" and, more recently "slow" tourism, to name but only a few, all aimed at reducing their negative impacts on the environments, host communities and cultures visited. Pushed by the disenchantment for mass tourism and its negative image, the much-valorised alternative tourisms have diverted the attention of the visitors away from locations capable to host large numbers of visitors, to bring them to often much more sensitive areas, especially in nature-dominated environments. With the number of visitors seeking nature-based tourism increasing constantly, alternative tourisms – with few exceptions if any – often repeat similar mistakes mass tourism does but on a much more subtle scale.

The juxtaposition of the concepts of ecotourism and sustainable tourism, two of the perspectives that have been referred to since the 1990s, only adds to the confusion of genres. Used both as a product of merchandising and management mode, both have become the perfect tools for greenwashing: I ecotourism or I speak sustainability, therefore I am! Yet, the problem lies not only in the choice of one's consumption activities at the destination, but also in how to access them. "The underlying reason for the ecological unsustainability of mainstream tourism lies in the intensive impacts generated by transport, i.e. the transfer of tourists from their homes to their destination and back", underlines Carić [4]. The continuing debate over the sustainability of the flying industry (see [5]) for summary) can very well be extended to cruising.

Thus, in the name of his love for an endangered nature, the tourist is still able to travel to the smallest corners of his planet without remorse, as long as he can qualify his experiences with fashionable labels. Fletcher [6] refers to this as "Anthropocene tourism" – "capitalism's astonishing capacity for self-renewal through creative destruction, sustaining itself in a "post-nature" world by continuing to market social and environmental awareness and action even while shifting from pursuit of nonhuman "nature" previously grounding these aims". And so, the Arctic and Antarctic ecosystems see thousands of wealthy tourists traveling each summer by planes, ships and inflatables, using fossil fuel, in order to admire the polar environment threatened by climate change caused by human activities and... fossil fuel (**Figure 1**).

The years 2000 saw the rise of yet another approach, sustainable tourism, aimed this time at a challenging quest for balance between economic development

Figure 1.
So-called sustainable tourism bring thousands of visitors to the Arctic and Antarctic by cruiseships and inflatables using fossil fuel to admire the polar environments threatened by climate change, ironically caused by human activities and carbon emissions from fossil fuel vehicles. Source: Alain A. Grenier.

and environmental and cultural conservation. Yet, facing an unstoppable thirst for [cash] income, communities have been overflowing with visitors, leading to overtourism – the saturation of the sites where tourists visit and reside when their umber exceeds the natural or human ecosystem's capacity of charge, leading to deteriorations or even depletion of the resources, and the quality of the experience for both visitors and residents. That was before the 2020 COVID-19 pandemic interfered with the tourism flow and growth, leading to the industry's first collapse since the disturbance that followed the terrorists' attack of 9/11 in the US. Yet, with the medical response to the pandemic, tourism will eventually resume. And while social distancing may infringe of mass tourism, nature-based tourism will continue to offer ideal opportunities for travelers seeking wide-open landscapes to venture in (with the challenges associated with indoor infrastructures and services, namely ticket offices, accommodation, restoration, and hygiene rooms0. Hence, in the light of the post-COVID-19 recovery, the sustainability challenges facing tourism are more topical than ever.

More than addressing the sole ecological issues – as is the case in ecological or "ecotourism", sustainable tourism involves equity and ethics consideration toward the labour providing the required services in the travel experience, as well as the social, cultural and economic well-being of the host communities. This implies a fair contribution to local economies – all aims easier stated than done. The challenges of sustainable tourism are even more difficult to apply in natural environment – remote and/or wilderness, due to the challenges of fair-distant transportation, but also the cultural differences between local residents, traditional indigenous populations, and more westernized visitors in regard with food con-sumption – the killing of local wildlife to sustain life, while being attraction at the same time. Yet, with the constant need for cultural capital and distinction, tourists driven by a variety of agendas, are not solely interested in sustainability. Hence, to please a growing demand from nature and pro-environment goers, operators who are trying to response to criticism by implementing sustainable policies. Yet because demand also comes from from *ego*-tourists looking for another line to add to their travel résumé, the same operators may tend at the same time to offer news products

that are in contradiction with the principles of sustainability, leading to a potential risk of green washing, where image is everything. Such is the case of polar tourism.

Polar tourism includes all leisure travel products set in the Arctic and Antarctic regions, which include both land and air travel in Europe, North America and northern Russia, with a specific cruise branch dominating the most extreme and far difficult to reach latitudes. Since its emergence, as an industry some 40 years ago, the polar cruise industry has followed trends in environmental and social management, referring in their marketing and travel policies to both eco (1990s) and sustainable tourism (years 2000s+). As long as their customers were the elderly (often over their 70s and 80s), the activities offrered were limitied to enflatible tours in bays to observe scenery and icebergs, and the occasional walk ashore, close to the landing point or bird rockeries. But with younger (mid-40s and higher) passengers, more active and demanding, operators have begun to enlarge the spectrum of activities offered, including more fuel-based activities (helicopter, Zodiac sightseeing, deeper into the landscape), and therefore a more invasive approach to the geographical exploration of the polar spaces. In addition, the aging of the current fleet of polar vessels requires new one to be build. The industry, at the cross roads between the former non-ecological vessels and those they can design for the near future, are facing the challenges of applying to their activities the principles of sustainable tourism, while yet facing a demand for more aggressive ways to interact with the pristine ecosystems that brings them visitors in the first place. In this context, can this ship-based polar industry really claim to be sustainable?

Based on the travel policy set by some of the leading operators, and travel organizations representing them at both ends of the world, and on the empirical travel experience of the researcher onboard polar cruises, this article aims at underlining the orientation the ship-based industry has taken over the last 40 years, from eco- to sustainable tourism, confronting their sustainable policies to actions to discuss how much the willingness to adapt to current management trends may or may not equate with green washing.

2. Nature tourism as a response to mass tourism and the environmental crisis

Tourism, as leisure, involves the consumption experiences in the form of activities in selected environments, atmospheres, and cultures (see [1]). Visiting natural environments is one of the primary motivations for out-of-town excursions in the context of leisure and tourism.

If goes back to the Industrial Revolution when the restorative qualities of nature for the urbanized soul, tormented by the side effects of time and labour, led to a demand for nature-based travel, pushed forward by the Romantic Movement. It remains the case today. Nature occupies an important place at the heart of recreational tourism experiences. But for those who spent their year living and working in congested cities, the wide-open natural spaces can become salutary. "In a world where standardized spaces are multiplying, wild spaces constitute a singular potential for experiences despite, and because of, their marginal character in the face of a daily life where artifice and machines play the beautiful role"[1], observes Christin [7].

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[1] "Dans un monde où les espaces standardisés se multiplient, les espaces sauvages constituent un singulier potentiel d'expériences malgré, et à cause de, leur caractère marginal face à une vie quotidienne où artifices et machines tiennent le beau rôle" ([7]: 93).

Recreational activities – of which tourism is one of the luxury components – also help define social classes. Tourism is "an important component of the process of identity-building", stresses Light [8]. It allows the travelers to acquire social and cultural capital, so important for identity building and assertiveness. As such, tourism leads to recognition by the peers and distinction, through the display of that newly acquire capital, otherwise referred to as "distinction" [2]. Referring to Bourdieu's analysis of the concept, Boyer [3] has argued that tourism builds itself on distinction, through the valorisation of the self-image, stressed nowadays by the selfie culture, which brings tourists to engage with attractions for the need to collect and broadcast (through social medias) their facial or bodily incrustation over the sleeked attraction – see [9–11]. Through their sacralisation as tourism resources (see [12]), geographical locations referred to as destinations have made themselves available for a distinctive form of consumption – one that stresses the distinctiveness of the consumer, as a sophisticated traveler, being there, where things happen.

Pushed forward by the environmental crisis in the 1970s, then up-dated into the climate change crisis and the consequent loss of biodiversity, tourists developed a thirst for destinations in crisis and opportunity to see them while they last, a tourism drive also referred to as "last-chance tourism" (see [13]) – namely the self-determined need to visit and experience destinations before their most important characteristic vanish. Nature-based tourism has been especially aggressive toward the "opening" of new destinations for grazing. Key words such as "unspoiled", "pristine", "unique" or "majestic" (used by John Muir†, 1838–1914, an influential outdoor man, co-founder of the Sierra Club and advocate for the protection of nature in the form of park) have been used all over the travel literature to sell the qualities of these natural sites. Since the beginning of the environmental crisis in the 1970s, far-distant and sparsely populated natural areas have been presented in the travel literature as the antithesis of mass tourism – although not in written word, nothing less than paradises due in large part to their remoteness from human beings and their infrastructures, hence part of the secret of their "unspoiled" features.

Ecotourism was so successful – and distinctive – in emerging economies such as Costa Rica, Equator and Kenya, that it lead operators to seeks even more remote nature locations to bring visitors to, including both polar regions: the Antarctic and soon after, the High Arctic. At an average of around 10 000 $US a cruise, accessing and experiencing those "last wildernesses" of the planet qualifies as rather exclusive. It has not prevented cruise-based tourism at both end of the planet to flourish (**Figure 2**).

The prestige of wildlife, promoted indirectly through television documentaries (docutainement), stimulates the tourism demand which in return makes wildlife sanctuaries economic magnets both for operators and countries. Because many species are more easily observable during the breeding and feeding seasons, they become more easily accessible for tourists, who increase their vulnerability.

Tourism – and more particularly when in natural environments – represents a risk for ecosystems, which are sensitive to the importation of external organisms via the visitors themselves (**Figure 3**), their equipment or their pets.

"Concerns over the environmental impact of cruise tourism are based on indications that some companies and host destinations are failing to adequately protect the environment", underlines Carić [4]. Critics are often more concerned with cruiseship than other forms of tourism since "[…] the hosting destination environment, landscape, and social fabric, when degraded, do not affect the cruise business as they simply transfer their activities elsewhere" ([4]: 497). All operators, however, do claim to care for the ecosystems they bring visitors to. Throughout the 1990s and two first decades of the 2020s, different paradigms – namely ecotourism and sustainable tourism – have been brought forward to help managers and tourists alike take account of their impacts.

Figure 2.
About 100 cruise tourists transferred by inflatable from their ship to an uninhabited location in northern Greenland for a few-hour-excursion. Source: Alain A. Grenier.

Figure 3.
The constant importation of non-native living organisms by tourists, including seeds and mud from boots and other equipment, food, viruses, etc., may present a risk for indigenous species. Source: Alain A. Grenier.

3. From eco- to sustainable tourism

Marketing plays a major role in the promotion of consumption, including tourism. Using a concept to sell is however no guarantee that the label use is appropriate for the product. In the case of the environment, ecological pretention often leads to green washing – the pretention that a product or service has ecological virtues that are not there. Hence, nature-based became known as ecotourism before eventually being equated with sustainable tourism, all wrongfully.

Ecotourism was initially defined as:

"Environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy, study and appreciate nature (and any accompanying cultural features – both past and present), that promotes conservation, has low negative visitor impact, and provides for beneficially active socio-economic involvement of local populations" ([14, 15], r. 1996).

When Mexican researcher Hector Ceballos-Lascuráin [14, 15] formulated his concept of ecotourism, natural ecosystems were still mysterious to the general public. For the majority, the exploration of nature was taking place in nearby green spaces – municipal parks, mountain resorts or national parks. Little had changed since the Romantic Movement: apart from a few adventure-seekers who got on expeditions to unfamiliar terrain, the majority of citizens were content to approach nature on the surface, without really penetrating into it. Through television reports and magazines, the environmental crisis of the 1970s brought these ecosystems, often as remote as the Amazon rainforest, to the forefront of discussions. *Docutainment* was entertaining while raising awareness to something out of the viewers' world. And soon, they were ready to see all of it from their own eyes. Deploying nature tourism had the advantage of requiring little infrastructures – apart from trail development. Accommodation did not have to be on site, as long as transportation could be organized. Because reaching these out-of-this-world-nature spots was difficult and expensive, tours required proper interpretation and guiding– hence the visitor awareness programs that ecotourism became associated with – to bring out the value of the privilege these fortunate tourists were paying for. This lead to the birth of the concept of ecotourism, so named by Ceballos-Lascuráin – and soon to become a travel product.

The higher prices for these trips, so exclusive – so distinctive, did not hinder the growth of the ecotourism as a product. On the contrary, it spread all over the planet, from the Galapagos Islands to the polar regions – no ecosystem was immune to it. Ecotourism became one of the most important tourism development sectors of the 1990s. The flaws of ecotourism then gradually appeared.

Ecological tourism was supposed above all the reduction of one's ecological footprint on fauna and flora. This implied a capacity for awareness of one's impacts, not only as an individual visitor but in terms of cumulative impacts of all thousand of visitors that proceeded and those who would follow. In addition, ecotourism promoted royalties to host or neighboring communities. This is where the concept flied off the handle. The creation of economic benefits encouraged any operator and beneficiary to want to derive more benefits.

Ecology and economic benefits do not always go hand in hand when it comes to employment, growth and development in an economic system based on enrichment. "One of the main processes through which nature can be reconfigured through tourism is via commodification", underlines Duffy [16]. "This involves the creation of economic value from landscapes, animals and experiences. One of the core justifications for nature-based tourism is that nature can be conserved or saved because of its 'market value'" ([16]: 533). As pointed out by Fletcher and Nevers ([17], in [16]: 534), nature-based tourism – an even more when labeled as " good " or " ecotourism ", "has the capacity to transform bodies into sites of virtually limitless capital accumulation by promoting a satisfying experience yet usually delivering instead a mere 'pseudocatharsis' that paradoxically stimulates a desire for further experience in pursuit of the fulfilment continually deferred". Hence, while claiming to protect nature, ecotourism produced nature lovers who become conquerors [18, 19]. They no longer see nature as a place of exploration and discovery, but rather as a theater where they can practice activities of domination of nature – activities where humans can tame and overcome nature and its obstacles (mountaineering and other climbing sports, use of motorized vehicles, speed activities, etc.).

This has lead several destination managers and tour operators to increase the number of visitors allowed, to the detriment of conservation. Product renewal dictated by markets led to the inclusion of fossil-fueled vehicles (snowmobiles, inflatables, helicopters, small planes, etc.) to get deeper into wilderness for closer access to wildlife, often at the cost of harassment, trampling on flora and defiling of natural spaces, etc. New activities were added, diverting the attention of the tourists from nature and refocusing the visit on performances, often taking the appearance of a conquest of nature during which the visitor can test his or her skills and celebrate his or her accomplishments: ecotourism then mutated into adventure tourism.

In short, while it claimed to promote the study of nature by visitors, ecotourism was more of a way to access spectacular ecosystems because they are still relatively undisturbed, to admire species that are otherwise very difficult to access By high-lighting ecosystems that were previously spared from visitors, ecotourism gradually led to the over-visitation of natural sites that were prized because of their rarity, sensitive fauna and esthetic characteristics.

At the end of the 1990s, the over-visitation of certain sites led observers to question the true nature of the motivations of "eco" or "ego" tourists, as they were then nicknamed. To meet the management challenges, the concept was gradually reworked a full decade. The concept, pursuing too many avenues away from its central ecology-centric core – ecological protection – led to its dismissal. It would soon be replaced by yet another concept that would blossom with the turn of the century: sustainable development.

3.1 Sustainable tourism

In 1987, the World Commission on Environment and Development (WCED) led by former Norwegian Prime Minister Gro Harlem Brundtland promoted a new approach to development – one "that meets the needs of the present without compromising the ability of future generations to meet their own needs" [20]. The paradigm focused on raising public awareness about the limits of resources promoting recognition of the value of intangible resources as its humanism (ethics) and empathy (equity). Although the validity of the concept is still debated, it has the merit of taking the discourse on development out of the economic sphere alone to include the people's social and cultural well-being, as well as that of the ecosystems. Brundtland's report failed, however, to transfer those principles into a more specific approach of actions to be implemented. Hence the confusion that often misguides the use of the term "sustainability" directed only toward the conservation of the environment.

Building on the popularity of the concept of sustainable development, the World Tourism Organization [21] transposed it to its field, to make it "sustainable tourism", that is "tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities" [22]. The definition is accompanied by principles, defined in 1995 and updated in 2004 [22].

While the principles are appropriate, the definition presents a major contradiction: how can the tourism take into account its negative impacts (and therefore respond to the principles of sustainability) if operators are simultaneously expected to respond to the needs of the beneficiaries of tourism, whose desires, without limit, have caused the damage leading to the need to rethink tourism? The issue led several observers to propose their definition of the concept, in order to "shift the focus from a group of actors (tourists, entrepreneurs or guests) to the relationships between these groups in the context of respect for a given ecosystem" [23]. In a previous publication, I have proposed to define sustainable tourism as:

A management approach for tourism projects and services that promotes and achieves a balanced stewardship between the development objectives of the destination and its stakeholders and the benefits (social, cultural and economic) for the local community without compromising the integrity of natural ecosystems and the communities that live in or depend on them." ([23][2]).

The discussion around the concepts of eco- and sustainable tourism points out to the fact that they are meant to be used as management approach, not consumption products. A sustainable approach allows compromise on nature defense and protection, to find a balance with humans' needs in the area of economic development on three fronts: society, environment and economy. Compromise, however, should not be understood as an invitation to contradictive actions. Indeed, the implementation of sustainable development/tourism principles i usually cut short by the fact that "economic growth stimulates environmental degradation" ([24]: 1).

3.2 Transportation and the fossil-fuel issue

CO_2 emissions – the main cause of global warming – result in large part from human activity, including tourism [25]. Of its components (accommodation, restoration, entertainment, etc.), transport is the most polluting. It includes both that of supplies as well as the mobility of staff and customers. Yet, the fuel spent to reach the destination cancels by far any effort made at the destination and for that matter at home for months or years ahead, unless other actions are taken. When transport becomes the mode of travel itself, as in cruising, the 24/h/day emissions of fossil-fuel pollution to maintain the craft in operation is enough to raise a red flag. It is even more questionable when this "mobile tourism" in the form of cruises takes sensitive environments for a target.

Between 2009 and 2013, the tourism sector contributed to 8% of the CO2 emissions produced by human activity, which is four times more than estimated at the time with transport, shopping and the food sector being the main contributors ([26]: 522). For tourism to contribute to the reduction of its footprint, it must adopt different strategies, including the reduction of distance traveled [27] as well as the design and development of low carbon tourism products ([25]:8). This is possible through technological and behavior changes. Technological changes include everything from developing more efficient engines and the use of alternative energies – efforts to develop alternative energies for transport that would be low or even "zero-emission are showing that changes may be near by [28] – to the reduction of packaging – demonstrated as beneficial for cruise tourism [29]. Behavioral changes involve choices made by consumers in their daily activities, and lifestyles.

Achieving a truly "sustainable tourism necessitates a clear-eyed engagement with notions of limits that the current culture of consumerism and pro-growth ideology precludes" ([30]: 125). This requires operators to set limit on consumption of spaces but also in the tools to achieve the visits – especially those that are fossil-fuel dependent. While one would expect nature-based tourism to take the lead, especially in over-sensitive environment (such as the polar ecosystems), what we see suggests the opposite.

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[2] Le tourisme durable est. un mode de gestion des projets et des services touristiques qui favorise et obtient une intendance équilibrée entre les objectifs de développement de la destination et de ses acteurs et les retombées (sociales, culturelles et économiques) pour la communauté locale sans pour autant compromettre l'intégrité des écosystèmes naturels et des communautés qui y vivent ou en dépendent " [23].

4. Case study: sustainability and ship-based polar tourism

4.1 The polar cruise industry: then and now

Although traces of early entertainment travel (tourism) by ship to Nordic region dates back to 1933 (Norway) and 1941 (Canada's Hudson Bay) [31], polar cruises to the High Arctic and Antarctic is a much recent phenomenon. As a novelty – and highly expensive – travel product, ship-based polar travel attracts wealthy and well-traveled tourists: elderly (over 70 years old) western travelers, mostly. Due to the age of the passengers, and the lack of knowledge of the visited areas by operators and their crews, activities, once at the destination, were long limited to interpretation lectures on board, and a few off ship excursions by inflatable crafts, cruising among small bergs in the hope for wildlife sightings. The inflatibles also made possible shore excursion for travelers to set foot on these rarely if ever explored surroundings through light hiking, under guided supervision. That was then.

With more ships available today, the industry quickly grew from the original seven operators to over 50, with more locations for shore excursions to avoid overcrowding (**Figure 4**). Long-time described by operators as non-invasive because "soft", both ship-based and land-based tourisms did impact on both polar regions (see for summary [32]).

In the absence of legislation regarding tourism, seven operators involved in Antarctica created in 1991 the International Association of Antarctica Tour Operators (IAATO), "a global, non-profit industry alliance dedicated to safe and responsible private-sector travel to the White Continent" [33]. A similar organization – the Association of Arctic Expedition Cruise operators (AAECO) supervises cruise operators in the Arctic. In parallel, researchers in tourism develop an interest for this specific industry in the early 1990s and help create the first Code of visit

Figure 4.
Two vessels – The Russian Akaemik Ioffe, and the Estonian Lovonia, cross path for a common landing in Antarctica (austral summer 1993–1994). Source: Alain A. Grenier.

conduct, largely used by IAATO. The code addresses distances to keep between tourists and wildlife as well as behavioral approach to historical huts and other artifacts. The operators make it clear that the protection of the resources upon which they graze, must be protected for tourism to continue, without depleting the visited areas from the characteristics that make them attractive for visitors. Considering the financial costs and the discomfort of very long journeys to reach the polar regions, the love of nature is a *sine qua non* to the choice of polar tourism for one's vacations. However, the tourists' love of nature does not automatically translate into a demand for ecological activities from their operators. On the contrary, passive activities requiring gas-powered transport vehicles (Zodiacs, submarines and helicopters – see **Figure 1**) are the favorites of a majority of polar cruises customers who never raise the issue of the ecological footprint during exchanges, except to justify it. This is where polar tourism faces its main contradiction: being dedicated to a commercial activity – tourism – while at the same time promoting the protection of highly sensitive environment, symbols of the climate change crisis, by using fossil-fuel 24/day, including for off-ships excusions by inflatable (**Figures 5** and **6**).

Juvan and Dolnicar [34, 35] have documented the contradictions in behavior from those who self declare to be advocate of environmental conservation, at home, and engage in harmful activities for nature, while on holidays. The explanation brings us back to Jafari's [36] concept of "tourist culture" to the effect that during the vacation period, tourists, in a state of intellectual weightlessness, abandon almost all the rules of common sense, or even ethics, in the name of the right to pleasures so boldly deserved and paid for – the holidaymakers believe. Consequently, any misconduct is self-justified in the name of the exception. "Participants [do] not report changing their behaviour", state Juvan and Dolnicar ([34]: 76) about the environmental activists studied during a tourism holiday. "[I]nstead, they offered a wide range of explanations justifying their tourist activities"

Figure 5.
The operations of refueling inflatable boats with oil are done away from the gaze of tourists, on the stern lower deck. Nature lovers, despite their ecological values, close their eyes once they reach their destination. Source: Alain A. Grenier.

Figure 6.
Nature-based tourists using fossil-fuel watercrafts to explore fast-melting Arctic glaciers, due to climate change fossil-fuel emissions. Source: Alain A. Grenier.

starting with "It's not that bad", "It could be worse", "Not my responsibility", "Vacations are an exception", "I am doing more good than bad" (Juvan and Dolnicar ([34]: 86). "I've been a good citizen, now I deserve some pleasure", would justify in their subconscious, the superegos of the tourists. The fact is that behavioral intentions (see the theory of planned behavior – [37]) do not automatically translate into behavior ([34]: 77). The problem is far from getting better.

A growing demand and limited amount of places and vessels means prices constantly going up, cabins getting smaller and more crowded, making polar travel even more exclusive and therefore customers more eager to obtain what they believed they have paid for. Competitions between operators lead to the search for the most outstanding locations for visits – well over 200 in Antarctica. With younger and more active customers, product renewal requires in addition to conventional soft impact activities such as walk ashore and nature photography opportunities for deeper exploration into the sites through trekking, kayaking snorkeling, kayaking, paddleboading, scuba diving, cross-country skiing, mountain biking and mountaineering including ice-wall climbing.

4.2 The test of sustainability

Operators address the issue of conservation in their WebPages, for their customer to see. Yet, their actions remain limited, dictated by the limitations imposed by the vessels built at a time when environmental concerns were not on the agenda of the day. While in the age of ecotourism in the 1990s, the operators' actions were solely oriented toward minimizing disturbance of wildlife through their Code of Conduct, concerns have been up-dated to include among other the ecological footprint according to the principles of sustainable tourism development.

For the purpose of this qualitative study, the author chose to analyze the webpage content associated with "sustainability" of two operators active in both polar regions (Arctic/Antarctic) to see how they address the management of their vessels and tours, on the basis of the main elements. From their main objectives, actions that arise from their sustainable policy (summarized in **Table 1**). It should

		Operator A	Operator B
Environment		• Environmental policy • regarding travel equipment and passengers' behaviors on board the vessels	• Environmental policy • regarding travel equipment and passengers' behaviors on board the vessels • regarding supplies and partners' actions (policies)
		Fuel • More efficient use of charter planes and vessels to provide occasional transport for cargo to villages (when possible)	Fuel • Investment in technology to use of low sulfur fuel
		Waste and pollution • Waste collection and triage for recycling	Waste and pollution • Initiatives to reduce waste ahead of consumption (by reducing material and selecting multiple-use objects) • Waste collection and triage for recycling • Investment in technology to help vessel(s): • reduce their carbon emissions • noise pollution
		(Financial) Support • for environmental research/ conservation initiatives	(Financial) Support • for environmental research/conservation initiatives
Society			Employment • Promoting inclusivity and equity with labour (training, working conditions)
		Equity and ethics • Promotes local (indigenous) cultures • Hires local people (artists –storytellers, musicians, elders) for talks and cultural performances • Advocates equity and ethics with partners (stresses promoting changes with partners and suppliers' policies and operations)	Equity and ethics • Promotes local (indigenous) cultures • Hires local people (artists –storytellers, musicians, elders) for talks and cultural performances • Invests in training local staff • Advocates equity and ethics with partners (stresses promoting changes with partners and suppliers' policies and operations)
		Support to communities • Provides occasional transportation for locals between villages (when possible) • Financial support to communities and youth initiatives	Support to communities • Financial support to communities initiatives
		Customer care: • Stresses diversity in customers (no age discrimination) • Health: • operates in compliance with governmental special hygiene measures (COVID-19) (both on the ship and for community visits) • air regeneration onboard	

	Operator A	**Operator B**
Economy	Chain of supplies	
	• Favors sustainable growth while advocating equity and ethics with partners	
	• Provides occasional transport for cargo to villages (when possible)	
	(Financial) Support	(Financial) Support
	• To science: offers logistics to researchers to collect data	• To science: offers logistics to researchers to collect data
	Advocacy	Advocacy
	• Partnership with a variety of organizations	• Partnership with a variety of organizations

Source: Author's compilation from 2 operator's websites.

Table 1.
Actions undertaken by 2 polar-cruise operators toward sustainability.

be stressed that this list is neither exhaustive nor exclusive. It is only intended to provide an overview of the implications of adopting a sustainable business model for any company.

What the table reveals is that these two operators, well aware of the three dimensions of sustainable development/tourism, put forward the importance of the responsibility they feel toward the protection and conservation of the environment (the words "conservation" and "preservation" are usually used as synonyms in the industry's literature, although they meanings imply different management philosophies and practices). The means put forward to meet the sustainability include, as seen earlier, behavioral and technological solutions.

4.2.1 Technological solutions

Technological solutions are brought in by engineering innovations. They offer quantitative data to measure at the source of the reduction of resource consumption (fuel, for instance) or waste discarded. Technological solutions require major investments in the infrastructures and equipment used in tourism, starting with the ships themselves – hence, the reduction of fossil fuel, which is addressed by only one polar cruise operators.

Operators claim to work toward offsetting the negative impacts from flying passengers across the world to reach the polar destinations through the ecological management on location. They also stress adopting sustainable practices toward the wellbeing of the communities they visit. But beyond those principles, actions are limited. For instance, the means deployed to reduce air pollution are limited to "low sulfur fuel" – without mention of reducing fossil-fuel consumption through activities such as inflatable (Zodiac) cruises and helicopter sightseeing or transport for heli-skiing. A conventional cruiseship's daily emission of air pollutant was already that of 12 000 automobiles, two decades ago ([38]: 1, quoted in [39]) (**Figure** 7).

One polar cruise operators produced an environmental report in 2019, available to the public on from its webpage. It states that "an analysis of our historical fuel consumption data shows that we've decreased emissions from our vessels by 28 % per guest per day from 2010 values ([41]: 27). The emissions "include ship, zodiac

Figure 7.
Conventional cruiseship's daily emissions of air pollutant compare to that of tens of thousand of cars. Although 80% of polar vessels use lighter fuels ([40]: 341), their ecological impact is arguably even worst, considering the sensitivity of polar ecosystems in the climate change crises. Source: Alain A. Grenier.

and flight fuel consumption" ([41]: 27). The operator does recognize that their calculation of fuel-related carbon emissions for their activities do not include "guest transportation to embarkation/debarkation points" and "emissions generated from fly cruises, Zodiac operations, staff transportation, and office-related emissions, which we recognize are not insignificant" ([41]: 27).

Those results were obtain through actions such as removing wrapping from equipment sold to customers (such as parkas), the elimination of individually wrapped food (such as yogurt containers) and the elimination of single-use bottles ([41]: 38). The operator puts much hope (and emphasis) on a new vessel equipped with lower fuel-consumption engines coming into service. "We expect the average daily fuel consumption to be approximately half the consumption of our older chartered vessels of similar size", stated the operator ([41]: 36). The new vessel is able to collect "energy from the exhaust air to reduce energy demand for maintaining a comfortable environment" onboard ([41]: 36).

Other oeprators do not provide more detailed indicators than the adjective "low" to show the actions they take. Yet, if nature-tourists are not inclined to ask – based on Juvan and Dolnicar's ([34]: 86) findings –, how can operators work toward effective solutions? Wu and Geng ([42]: 6–7) underline in their study that the negative effects of air pollution "adds an even heavier environmental burden [on the nature tourists] (by decreasing tourists' pro-environmental behavior), which in turn, harms the sustainable development of tourism".

4.2.2 Behavioral solutions

Behavioral solution focuses on actions that can be taken by staff and customers to minimize their footprint on the environment, and increase awareness and empathy toward the members of the communities they visit. This includes all initiatives taken by the operator and their staff to help their customers reduce and avoid the production of unnecessary waste. Disposable water bottles are increasingly being replaced by reusable ones with refilling stations (a challenge since tap water on these vessels in usually not suited for human consumption). Daily distribution of

soap is also being replaced by soap dispensers in bathrooms, refueled on need by the staff – eliminating again plastic bottles. One operator requires suppliers to stop wrapping individually material aimed at the passenger. A similar approach is used to eliminate individual packaging for food items mainly used for breakfast (jams, honey, etc.) and seasonings.

In regards to the economy, the transformation of a conventional profit-seeking activity into a sustainable one requires among other things, a fair financial return from the entrepreneur to the community upon which it grazes resources from. Here, little if anything is said on the operators' webpages about their contribution to the host communities. One operator refers in its sustainability report to charity auctions held during the cruises and different non-profit community-based project where the money obtained from their passengers might be directed. Operators will not release financial data as to contributions coming either from them or their customers to this effect. One must therefore rely on other sources. In 2015, for instance, cruise passengers accounted for 16% of the total number of visitors to Nunavut, in Arctic Canada, an increase of 46% since 2011 ([43]: 10). Yet cruise tourists left only 5% of the $38 million (CAD) in tourism revenues ([43]: 10). Arctic cruise ship passengers have a reputation for leaving less in communities than other types of tourists ([44]: 18). Nunavut Tourism ([44]: 18) stressed that the average tourist pays $17,000 (CAD) for a cruise. Yet, cruise tickets do not earn a return to the territory visited, unlike airline tickets, since Inuit are the main shareholders of the two major airlines serving their territory. Considering that cruise passengers travel with their own hotels and restaurants (their ship) and their own guides, the souvenirs visitors may purchase are all that is left in terms of economical input to the communities, during the excursions. In the absence of paying activities during village visits, tourists leave little behind to help the local economy.

Of the ship, in addition to the interest toward local cultures, showing empathy by refraining abusing the communities' hospitality (imposing oneself in homes or community buildings, in peoples' yard, visiting cemeteries and other sacred sites). In wildlife tours, it also means accepting not to get close to wildlife, and not pressuring guides and inflatable drivers to do so, not to trample all over the location simply because it is temporarily made available– all actions that are easier said than done (**Figure 8**).

Figure 8.
Polar tourists stepping unsupervised on artefacs. Source: Alain A. Grenier.

The sustainability approaches brought foreword by the operators, do not directly refer to tourism management on site during the excursions. Ship-based polar operators are all members of the International Association of Antarctic Tour Operators (IAATO) and its Arctic equivalent, the Association of Arctic Expedition Cruise Operators (AECO). Both organizations have adopted a code of conduct for their members, inspired by those develop in the early 1990s for Antarctic cruises [45]. They address actions to take to minimize negative tourism impacts such as disturbance to flora and wildlife, and sites of historical values. The Arctic code also promotes respect of indigenous people and their cultures.

Already, in spite of the code of conduct, we know that tourists have negative impacts on the fauna and flora of the sites visited and that indigenous communities have reported cultural conflicts with their guests. Yet, those disturbances are often impossible for tourists to recognize and acknowledge, since they have no way to compare with the situation that prevailed on a site prior to their arrival, a situation this author observed many times at both ends. Considering that the most lasting impacts are the result of their addition, the numbers of visits conducted per site (see IAATO's online pages) are sticking. In Antarctica, for instance, the Chinstrap penguin colony located on the beach and lower cliff of Half Moon Island can receive over 20 000 visitors during the short 3-months tourism season – equivalent to 222 people/day [46], with an average of 2 hours/visit. Hence, while the efforts of the operators to implement codes of conducts must be recognize, the density of the visiting rate casts a shadow on their efforts.

4.2.3 The promises of new up-dated vessels coming in

The end of the polar cruise operators' dependence on (mostly) Russian vessels, aging, is in sight. At least two operators opted to build their own ice-rated vessels – the USD 85 million *m/v Hondius* (2019) and the 106 million Euros *Ultramarine* [47] – the way Linblad had done it in the late 1960s, with new amenities and up-to-date technological innovations.

Having been made specifically for polar tourism purpose, both vessels' new designs address not only the scope of safety issues, new facilities, atmosphere, and comfort they offer their passengers, including up-dated facilities for tourism which the previous Russian research vessels did not have. But equally – if not even more – important, the technological features of these two new vessels will allow reducing their foot print on the environment [48, 49].

While the *Hondius* "uses LED lighting, flexible power management systems, and steam heat in order to reduce fuel consumption and minimise CO_2 emissions" [48], the *Ultramarine* features "a micro auto gasification system (MAGS) which is capable of converting onboard waste into energy, eliminating the need for transportation of waste" [49]. In addition for the *Ultramarine*, "environmentally-friendly innovations such as dynamic positioning, [...] will eliminate the need to drop anchor in sensitive seabed areas" which will enable to "minimize the ship's environmental footprint to an extend previously unseen for a vessel of this size", states its operator [50, 51].

Improvements on these vessels are not only technological. Emphasis has also been placed on the comfort of the passengers and the efficiency of the operations, both onboard and off the vessels, such as when conducting excursions. Some of the ships' decks have been redesigned specifically for off-ship-excursion, offering proper "sheltered zodiac boarding zone, where passengers can board boats to take them to the shore" [48]. Such launching decks do not exist on any other vessels used for polar tourism. These updated decks allow passengers getting off the ship "in less than 20 minutes – which is half the industry average", states one operator [50].

But the update covers as well other amenities starting with the inclusion of 2 twin-engine helicopters, designed for sightseeing which "will allow passengers to experience epic aerial perspectives of the Polar Regions and landings only accessible by air" which will render possible new activities never offered before, including heli-hiking and heli-skiing", continues the operator [50].

The arrival of these new amenities is not without impact on the type of experience offered to passengers. The fact that the exits for the excursions are located on a lower deck of the ship, closer to its waterline with openings on both sides of the deck, not only saves time but also extends the excursion time [52, 53]. Operators also increasingly offer kayak excursions, on demand, a fuel-free activity that helps generate ecological experience and good marketing image, but that over all cannot compensate for the footprint of the tours. One operator also adds helicopters sightseeing and transportation for inland excursions, contradicting its own effort to reduce its environmental footprint.

Far from being a miscalculation, the design of the new *Ultramarine* vessel, "[e] quipped with two twin-engine helicopters", "operated from two helidecks allow more passengers to stimultaneously experience news destinations accessible only by air, and to enjoy more unique aerial perspectives of the polar regions than on any other trip", invites potential clients to the "most robust portfolio of adventure activities in the industry" [52].

While it from an ecological point of view, engineering calculations of the ecological footprint could demonstrate that the ship's technological upgrades more than compensate for the pollutants emitted by the watercrafts fleet and the two helicopters to its environmental balance sheet, the use of helicopters to satisfy entertainment needs contradicts on all level the sustainable efforts put forward by the operator –all of this, at the very heart of polar ecosystems, which embody more than any other, the negative impacts of human activity on the climate.

Many operators stress advocating environmental, human and cultural issues in partnerships with other organizations. Some of these initiatives take the form of "ambassadorship" programmes where former passengers committed to the conservation of the polar environment to take actions in their communities by promoting the cause, in the name of the operator. To which extend the activities of the "ambassadors" work for the environment versus promoting the destinations and the operators remains unclear. But those labels become more and more criticized, as emerges the paradoxes of those claiming to want to save the planet contributing to major greenhouse gas emissions through their last chance tourism (see [40]).

5. Discussion and conclusion

The public's enthusiasm for nature, since the Romantic Movement and in response to industrialization, continues to grow. The advances brought by technology, especially on the modes of transportation, have pushed back nearly every obstacle to the human quest of its planet. No region on Earth, except the deepest seas, is nowadays void of tourists, venturing as far as the polar regions to satisfy their curiosity and need to reconnect with nature, or simply "because it's there" (paraphrasing Hillary's answer about his motivation to climb the Everest in 1953). Pushed forward into the public's attention with the environmental crisis, ecosystems – especially those of the polar regions, are now promoted as consumption products through nature-based tourism, including the fast-growing polar cruise sector. Criticized for their negative impacts on the destinations, operators adopted in the early 1990s a common Code of conducts, which was the only management tool at the beginning on the 1990s. Understanding that promoting their products

with the controversial concept of ecotourism was not serving their interest, so long as their operations are so deeply dependent on fossil fuel, they opted in the years 2000s for the new fashionable concept of sustainability.

At first a word without roots, operators eventually translated the concept into actions applied both through behavioral and technological changes. The concept of sustainability was therefore a blessing allowing them to redirect their customers' attention to initiatives that were less spectacular than saving the ecosystems, like with so-called "ecotourism", yet, that are equally important and more accessible like reducing water consumption and that of other resources – electricity, food, plastics, paper, etc.

In this respect, a major part of the actions required to "save the environment" shifted from the tourists' responsibilities to that of the operators since apart from supplies, the most important efforts to reduce greenhouse gases produced by the cruises are almost exclusively linked to the performance of the ships and the transport back and forth of crew and passengers from home to the vessel and destination. The arrival of new vessels, up-dated to nowadays environmental norms in terms of energy efficiency, is therefore welcomed. The major investments made by at least two operators in this direction are commendable. They bear witness to the genuine ambitions of these companies to reduce their ecological footprints. It is therefore surprising to see them enlarging the range of activities offered during the cruise to include helicopter transfer and sightseeing between the ship and the locations visited, allowing tourists to penetrate even deeper into the pristine environment they claim to want to protect.

Prior to mobility technology, the experience of nature required "psycho-corporal engagement, based on the combined movement of body and mind"[3], recalls Christin [7], closer to the original pursue of ecological tourism. However, this engagement is dissipating as tour operators interpose technological gadgets between nature and the tourists – encouraging the conquest of nature rather than a harmonious experience with it, in contradiction with sustainability.

Yet the discourse in favor of concern for the environment and fragile human populations still clashes with the actions of consumers who claim the right to travel, to discovery - perhaps - but above all to self-affirmation. "Conventional wisdom of current societies sees consumption as an expression of individuality and freedom", stresses Higgins-Desbiolles [30]. As Klein [39] points out, "it is easy to think about sustainability in terms of shipboard operations, but¸ when considering the interaction of cruise tourism with local communities [and the ecosystems] the concept of responsible tourism may be more useful". On this level, "progress in transitioning from concepts and principles to pan-industry practice is limited" ([54]: 402).

On this level, the commissioning of new and more environmental friendly vessels, to reduce the industry's footprint and other negative impacts on the environment, is commendable. On the other hand, the promotion of activities that are not always putting nature in the foreground but rather in the background raises a red flag. I share Williams and Ponsford's ([54]: 403) pessimistic view that "current business and destination level environmental initiatives generally fail to address tourism-induced contributions to broader global climatic and environmental changes. This is ironic and shortsighted given that the threat of global climate change is considerable for all of tourism's stakeholders". Nature-tourism can be an indispensable tool to provide people with an opportunity for rejuvenation through a contact with the living environment – the biophilia theory. Yet, when the activities offered to polar tourists include opportunities to challenge nature by encouraging performances of conquest of nature, one cannot help but wonder if all the efforts

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[3] "[un] engagement psychocorporel, fondé sur le mouvement associé du corps et de l'esprit" ([7]: 94).

put into making the logistics of getting people to the far end of the world to place them on a more ecological boat yet again to use more fossil-fuel dependent vehicles to cruise and fly around, for the fun of it, will have been in vain.

Because in the end, having the most sustainable entrepreneurship, and the most environmental-friendly vessels, will mean nothing if the reduction of the footprint of the technology is only use to compensate an increase in nature-consuming and other abusive tourism practices. As the principles of ecotourism were repeatedly abused 3 decades ago until the concept became a caricature of itself, sustainable tourism now faces the same threat. A glance at the direction some tour operators are taking with highly technology-dependent and motor vehicle-dependent call products bears witness to this.

Two schools of thoughts continue to challenge the future of nature-based tourism: nature as a foreground for boosting one's egocentricity for distinction and self esteem, versus a more care-taking approach where nature is preserved for the rejuvenation of the soul.

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Chapter 3

The Light-Up of Dark Bali Tourism: A Qualitative Study

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Abstract

Tourism world currently stumbles due to Corona virus case that limits all human activities including those related to traveling. Various efforts in every country have been conducted to rebuild tourism to the normal condition; however, each country has its own obstacles. This study aims to create a strategic model in developing tourism based on cultural values or local wisdom to rebuild tourism passion to support economy. This study is a qualitative study using cultural approaches with ethnomethodology tools. Data are collected through in-depth interview with tourism actors: government and communities represented by traditional village leaders. The qualitative results indicate that cultural values summarized in a harmonization concept—harmony with God, harmony with fellow human being, and harmony with environment—become a model core that influences human behavior in developing tourism, namely: natural tourism, cultural tourism, spiritual tourism, culinary tourism, conference tourism, and so on. Traditional villages become the second pillar in developing tourism and it supports by local government. Another finding is that Bali will conduct a shift in tourism from cultural-based tourism to those that give more emphasis on natural tourism based on cultural and religious values as a promoter. The strategy will support health protocol related to physical distancing between tourists.

Keywords: Bali tourism, local wisdom, strategy, light up

1. Introduction

The world has recognized the impact of tourism on global economic. It is proven by a report by World Tourism Organization (UNWTO) explains that foreign tourism development that has been submitted to UNWTO World Tourism Barometer data in January 2019 indicates that international tourists have grown by 6% in 2018 and the UNWTO estimates 1.4 billion will be achieved in 2020 considering stronger economic growth, affordable flight, technology development, new business models and broader visa facilitation in the whole world that accelerates tourism growth for the last few years [1].

This expectation, however, crushes due to corona virus (Covid-19) pandemic that creates disturbance in global tourism. The newest report from the UNWTO explains that travel restrictions cause deterioration in tourism activities [2, 3].

Based on the report, almost all global destinations enact a travel restriction since January 2020. A full restriction of traveling also applies as an effort to surmount

the pandemic. According to a research in April 6, 96 percent destinations in the whole world apply travel restrictions. There are 90 destinations that completely or partially close the border for tourists, whereas other 44 destinations are closed for specific tourists depending on their country of origin.

The increasingly threatened tourism sector causes the UNWTO to urge the governments to review the travel restrictions. If it is considered as safe, then the travel restrictions are immediately lifted.

The UNWTO global review suggests that global areas are mostly consistent in encountering the Covid-19 pandemic. Africa, Asia Pacific and Middle East, based on accumulation, have set restriction in almost 100% destinations regarding the Covid-19 since January 2020. In America, 92 percent destinations have taken the same measure as well as Europe of 93 percent per April 6 data.

Results of an observation indicate that there are four things regarding the restriction measure. First, full or partial border closure for tourists. Second, specific-purpose travel restrictions, such as transit passengers or passengers who are already in a certain location but are not permitted to enter. Third, full or partial flight delay. Fourth, various different measures including requirement for quarantine or self-isolation, medical certificates, visa issuance cancelation or delay. The tourism delay threats the sector since millions of jobs could vanish. Progress made in sustainable economic equality and growth could be canceled.

Indonesia is one of countries that has an income source from tourism foreign exchange. Bali tourism destinations contribute 55.6% of the foreign exchange source. Bali Island relies on income source from tourism to support the regional development. Based on National Bureau of Statistics record in 2019, tourism foreign exchange contribution was 9.346 million USD. Countries that provide the biggest contribution to Bali include Australia 23%, China 16%, United Kingdom 6%, USA 5%, and India 5% [4]. Due to Covid-19 Bali experiences a decline in the number of tourist arrival in the first quarter of 2020 of 42.3% and the decline is estimated to be sharper in the second quarter [3].

The tourism sector performance decline during Covid-19 must be ended. The tourism sector should rise to prevent further problems. This will trigger some questions: how Bali to rise from this darkness to become bright again? Would Bali be able to adapt to the new life order (new normal) by considering cleanliness, health, and safety factors and one of them is minimizing physical contact (contactless) in all business processes of the tourism industry.

Based on several studies, a strategy is needed to resurrect the slumped destinations to keep their competitiveness by using their own internal abilities [5]. This resource-based view is a view that applies basic competitive advantages where the main thing lies in a set of tangible and intangible assets owned by a destination. The theory describes the destination abilities to provide sustainable competitive advantages when resources are managed in such a way that the results will be hard to imitate or create by competitors and in the end it will create competition barriers [6].

The resource-based theory that is rooted from Penrose's [7] economic theory and strategic theory of Ansoff [7] and Selznick [7] states that competitive advantages in a long term depend on: (1) resources and (2) core competences. It is this resource that differentiates a destination to the competitors. It is durable, hard to imitate, and irreplaceable [8, 9]. Each destination has its own uniqueness that comes from its resource characteristics and abilities, knowledge, and expertise in using the resources make its competitive advantages more durable since resources are relatively fixed in nature [4]. Resources are basically could be classified into two categories, namely: (1) tangible resources and (2) intangible resources. The tangible resources are inputs in the destinations that visible, touchable, and countable. These

resources consist of eco-tourism, agro-tourism, alternative tourism, rural tourism, and marine tourism. The intangible resources include factors such as cultural tourism, spiritual, and destination reputation [10]. The most important thing in understanding the intangible resource definition as a tool to develop competitive advantages is the creation of harmonious atmosphere that full of peace between human or community, government, and nature that is based on local wisdom values as a guiding philosophy of a tourism area. Peaceful atmosphere is not the same for each competing destination. The atmosphere could only be felt but invisible. Destinations that could provide a safe, tranquility, and peace feeling will be able to continuously arouse motivation and new ideas beneficial for competitiveness improvement. As stated by [11], intangible resources are harder to imitate and understand than tangible resources.

Grant [8] divides resource groups important for competitive advantages into six groups, namely: physical, technology, finance, human, organization, and reputation. The resource-based theory, however, does not consider all resources owned instead it focuses only on important or strategic resources as a base for its competitive advantage model. Some studies [12, 13] have tried to test resources' strategic level to destination abilities to create sustainable competitive advantages. The test includes: (1) competing superiority test that evaluates whether the destinations' certain specific resources provide contribution to differences between the destination and competitors. (2) Impersonation test that analyzes difficulty level of potential and actual competitors in impersonating resources due to, for example, its physical uniqueness, natural beauty, employees' friendliness, harmony of relationship between people and the nature, human and God, convenience, and religious atmosphere that provides peace and tranquility vibrations. (3) Duration test that analyzes whether the current unique resource benefits provide positive contribution to long term competitive advantages. (4) Accuracy test assesses whether companies that have the resources could utilize their competitive advantages in the market. (5) Substitution ability test analyzes how difficult it is for the competitors to replace resources with other alternatives that able to provide the same advantages.

The fundamental principle of competitive advantages of the resource-based theory is ability improvement of a developed area to act, form, and transform its environment; hence, the main goal is no longer to adapt to the environmental strengths, but to select strategies that allow the best utilization of its resource combination and main competences toward external potential [14]. The competitive advantages that are bigger than the resource-based model occur due to the existence of main competences. Main competences, according Hollensen [14], could be explained from its three characteristics, namely: (1) competence due to a set of unique resources, (2) learning, a competence results in from the accumulation of years of experiences in various fields where the destination dominates it, (3) multiplier effect, a competence that spread to all destination elements in its several product lines or strategic business units. Core competence as clearly stated by Prahalad and Hamel [15] has 3 (three) properties, namely: (1) it creates contribution to consumer values felt, (2) it is difficult for competitor to imitate, and (3) it could be elevated to various broader markets.

Johnson, Allison, Stewart, David [16] classify core competences into 2 (two) broader categories, namely: (1) personal competences, and (2) organizational competences. The personal competences owned by each individual include the following characteristics: knowledge, expertise, abilities, experiences, and personalities. The organizational competences are process and structures that are embedded and tend to stay in the organization although a competence individual leaves the organization. The two competence categories are not always independent of each other but they synergize in the organizational environment. Collection of individual

competences could form a more effective way to do something in an organization and are capable of establishing a company culture that attached and embedded within the organization. In addition, company competences could determine type of personal competence most suitable to organization. According to [14] another approach model that is also interesting as a business model for competitive advantage strategy is a Market Orientation View (MOV) model or known as a fit model. The MOV strategic model suggests a company to develop competitive advantages by adjusting its assets to constraints in an environment where the company operates to obtain suitability with its environment.

Kohli and Jaworski [17] opine that a market orientation view is basically an adjustment to market environment. This market orientation model is more understandable as a culture instead of a collection of supporting behaviors and values [18]. The market orientation view (MOV) is understood as a culture with all employees are bound to the creation of superior values for consumers continuously [19]. The MOV model main weakness is that different consumers from different countries could be a very expensive business model. It means that a company could obtain satisfied consumers, but it involves high operational costs to create customer values.

Other important factors that become a fundamental principle for sustainable competitive advantages in globalization era include organizational culture and design. According to Schein [20], culture is an abstraction; however, power produced in social and organizational situation that comes from the cultural factor will strongly attach. If we do not understand the power operation, we will be its victim. The cultural power becomes very strong since it operates beyond our consciousness. When many leaders and executive managers of a destination talk about the development of "appropriate type of culture", "quality culture", and "customer service culture" it signifies the importance of culture to be applied and conducted with certain values that they want to implement. In other words, culture have an important implication on the effectiveness of organizational performance. The stronger the culture influence in an organization the more effective the organization to achieve its goals; thus, an increase in market competitiveness.

Several empirical studies such as one conducted by Wilderom et al., [21] supports a view that a strong culture has a significant influence on organizational effectiveness. A certain cultural value dimension is closely related to economic performance. Some cross-cultural organizational studies as those conducted by Hofstede [22] indicate that culture has an effect in determining an organizational effectiveness thus it encourages the creation of better organizational design. As a consequence, it makes global companies to be superior in competition. Next, Hofstede explains 5 (five) cultural value dimensions in a global organization that create differences between countries in the world. The dimensions include:

- Individualism versus Collectivism: The dimension refers to the degree of culture that will encourage people's tendency to pay attention on their selves and their close relatives or people who are within their groups and considered as defending their members as a form of loyalty.

- Power Distance: The dimension refers to the degree of culture that encourages less powerful group members to accept that powers are distributed unevenly.

- Uncertainty Avoidance: The dimension refers to level of people who are threatened by unknown and uncertain situations and have developed a belief, principle or ritual to avoid it.

- Masculinity versus Femininity: The dimension is illustrated in two milestones, one milestone by success, money, and objects and the other milestone by attention to other person and life quality. The dimension refers to emotional role distribution between man and woman.

- Long versus Short Term Orientation: The dimension refers to the degree of culture that triggers gratification of material, social, and emotional needs between the members.

Further cultural value study by Hofstede adds cultural value elements developed in Asian people that relate to time orientation, namely: between short term versus long term orientation. The cross-country cultural dimensions influence management methods in designing organization that more suitable to its competitive environment and affect ways of company managers and executives in formulating business models and operating its business. The development of Hofstede's cultural value study is further conducted by [23] as part of a research project of Global Leadership and Organizational Behavior Effectiveness (GLOBE). The study adds cultural dimension between human orientations versus performance orientation. Further cross-cultural study is conducted by [24] based on a research to managers in 23 countries that adds national cultural dimension, namely: (1) universal versus specific, (2) individualism versus collectivism, (3) introvert versus emotion, (4) public space versus personal space, and (5) achievement versus ascription. Cultural dimensions affect organizational design and effectiveness. Organizational culture forms from the behavior of employees, leaders, and the surrounding communities. Cultural values developed could be used as an organizational cultural power. The most relevant cultural dimensions for an organization or destination to achieve superior effectiveness and performance will depend on local wisdom cultural values. Destination design that includes structures, functions, and strategies will be adjusted to cultural and environmental conditions where the destination operates. Therefore, this study focuses on the creation of a tourism development strategic model based on Balinese cultural values or local wisdom in a new normal condition that includes health protocol of CHS (cleanliness, health, and safety). Approaches used in the study consist of qualitative approach with ethnomethodology [25] to explore culture implemented by traditional villages. There are 1493 traditional villages in Bali that led by a traditional leader known as *Bendesa Adat*. The traditional leaders are an informant target to explore information through an in-depth interview and the results will be used to create a model of tourism recovery strategy. Replace the entirety of this text with the introduction to your chapter. The introduction section should provide a context for your manuscript and should be numbered as first heading. When preparing the introduction, please bear in mind that some readers will not be experts in your field of research.

2. Theoretical study

2.1 Bali tourism

Bali Island is one of popular islands in the world based on a research result by Travel from Jerman Tourlane in April 8, 2020 [2]. The island carries cultural tourism that attracts tourists. Number of tourist visits in January—April 2019 is 1.819.664. Detail on the number of foreign tourists visiting Bali in 2019 is presented in **Table 1**.

No	Country	Total
1	Australia	222,359
2	Hong Kong	117,074
3	India	67,363
4	Russia	56,563
5	Japan	48,143
6	USA	46,275
7	England	46,509
8	South Korea	42,487
9	Malaysia	30,924
10	French	29,307
11	Other	343,206

Table 1.
Total foreign tourists in Bali in 2019.

The condition is different in 2020 where foreign tourists directly arrive on Bali Island in April 2020 is 327 visits. The tourist arrival through I Gusti Ngurah Rai airport is 273 visits and through the seaports is 54 visits. The number of foreign tourists declines by −99.79 percent compared to March 2020 (m to m). Compared to April 2019 (y on y), the number declines by −99.93 percent. The big five of tourists visiting Bali in April 2020 consist of domestic tourist (16.21 percent), Philippines (16.21 percent), China (12.23 percent), India (10.40 percent), and Russia (8.56 percent) [4].

Star hotel room occupancy rate in April 2020 is 3.22 percent, a decline of −22.19 percent compared to previous mount (m to m) at 25.41 percent. Compared to April 2019 (y on y) that achieves 60.33 percent, the room occupancy rate in April 2020 declines by −57.11 point. Average length of stay of foreign and domestic guests at the star hotels in Bali in April 2020 is 2.49 days, a decline of −0.31 point compared to those in March 2020 (m to m) of 2.80 days. In comparison with April 2019 (y on y) at 2.77 days, the average length of stay in April 2020 declines by −0.28 point.

2.2 Balinese local wisdom

Based on Porter and Treacy and Wieserma's competitive advantage concepts, Bali has a strong competitive advantage in terms of differentiate strategies [26], and customer intimacy [27]. Balinese Hindus have various values and local wisdoms that could not be found in other countries. The Balinese Hindus, just like other Asian people, are known for their natural friendliness to others. All these local wisdoms are based and relied on Balinese Hinduism. For the Balinese Hindus, religion and custom are two sides of a coin that are unseparated yet differentiable. Religion surely comes from the truth of God's teachings and it explicit and implicit in holy books. Customs, on the contrary, are originated from human behavioral habits that are viewed as having truth values although it does not have to be maintained. According to Windia [28], since religion is originated from the truth of God's teachings thus it is sanatha dharma (an immortal truth).

Changes that occur and influence human civilization could not change the truth of religious teachings. Those that could change and tend to keep up with the change are those that related to material aspects that support the implementation of the religious teachings. For example, such things related to upakara (a traditional

religious ceremonial tools) that have been conducted among the Balinese Hindus, such as the use of *pis bolong* (cash coins). Since pis bolong has increasingly scarce it starts to be replaced with fake cash coins or with official money prevailing in Indonesia. Although it has been replaced, the essence is similar, at least it serves as *sesari*. Thus, the essence of religious teachings will remain the same anywhere and at any time since it originates from God's revelation. As regards custom, since it comes from human behavioral habits that are considered as having the truth values, changes, adjustment or even removal of something containing in a custom is not a taboo.

Three basic frameworks of Balinese Hinduism religious teachings consist of Tattwa (philosophy), Ethics (susila), and ceremonies (rituals). The three basic principles are an inseparable part in the Balinese Hindus life. According to Astawa and Sudika [29], if the three frameworks of the Hinduism is analogue with an egg, the ceremonies (rituals) are the outer part or the "skin", which is the most visible part, whereas ethics (susila) and tattwa (philosophy) are the "egg white" and "egg yolk", which are the "core" of Balinese Hinduism.

As a unit, parts of the three basic frameworks of the Balinese Hinduism are mutually animating. It means that traditional-religious ceremonies are actually the manifestation of ethics and tattwa.

The three basic frameworks are interrelated and are the foundation of Balinese culture. Balinese culture gains its form in various arts, painting, sculpture, dance, gamelan, and others. All Balinese Hinduism traditional-religious activities thus could not be separated from art activities. On the contrary, every art activity contains religious elements originated from religious teachings.

The Balinese Hinduism is basing its teachings on Panca Sradha or five believes, namely: Believe in the existence of Ida Sang Hyang Widhi Wasa or God the All Mighty; Believe in Atman (spirit), which is a small splash of God and becomes a life-giving spirit in the human body; Believe in the existence of Karmaphala, which means that whatever humans do in this world, good or bad, will have consequences; Believe in the existence of Punarbawa, which is the re-birth into the world or known as reincarnation; Believe in the existence of Moksa, which is freeing of the spirit from worldly bonds and uniting with the Creator. Someone who has achieved Moksa do not born again to the world (reincarnate).

According to Windia [30], human is a territorial being since they will always follow changes occurred in their territory or settlement area. Human culture is also change along with the territory; likewise, agrarian culture that changes current Balinese culture. The agrarian culture gives birth of many local wisdom values, such as sekaa (association) that is specifically related to farming activities, such as sekaa nandur, sekaa manyi, sekaa makajang, sekaa ngabut, and so on. Many values could be emulated in sekaa, such as togetherness, gotong royong (mutual assistance), and volunteerism in conducting something together. The Balinese Hindus culture essentially comes from agriculture. The culture term actually refers to agriculture.

Joesoef [31] states that in the western world, culture term comes from "cultuur" (Dutch), "culture" (England, French), and "kultur" (Germany) that is rooted from Latin word of "colere" (cultivating land). This is the same with the words "cultivate" and "agriculture". Anthropologists use culture term as a value system that is lived by human (individual and group). Therefore, the word culture, since the beginning, has an implication as something that grows and unspontaneous as a result of human wills. The term refers to beneficial efforts or efforts that generate results (cultivation) and value systems as well as vital ideas (mind and feeling creation).

According to Hofstede, culture is a set of behavioral patterns, values, assumptions, and common general experiences. Culture defines social structures, decision making practices, and communication methods in a social environment as well as

dictates behaviors, ethics, and protocols in each of our social interaction with the society. Thus, culture is a set of beliefs that are developed from childhood till the rest of our lives. Several value elements then become relatively fixed, whereas other elements could change according to the society's social condition and situation. This process is known as socialization. Further [22] suggests that we should uphold and strengthen different working processes in different regions and respect differences in each organization as a uniqueness that could create competitive advantages.

Bali has several local wisdoms sourced from basic principles of Balinese Hinduism teachings and its culture. The local wisdoms consist of Tat Twam Asi (a view that all beings in the world are the same), Ngayah (willingness to work for common interest), Asta Kosala-Kosali (a holy book of Balinese architecture guidance and traditional building layout), Awig-awig (customary rules in banjar level and pakraman village), Yadnya (holy offerings), Tri Hita Karana (three harmonious relationships that cause happiness), Subak (an agricultural irrigation system and organization that has received a recognition from UNESCO as World Culture Heritage in 2012), and many more. Various Balinese local wisdoms become a guide in daily life behaviors. Therefore, the local wisdoms will continue to live and develop as well as sustainable from generations.

2.3 Tourism strategies

A tourism destination could use competitive strategies of differentiation strategy, cost leadership strategy, focus strategy, or a combination of the existing strategies [32, 33]. Differentiation strategy is based on product offering that is different to what the competitor is offering in a certain characteristic or quality. Therefore, the product could be sold in higher prices than the competitor and profit will be higher due to decrease in elasticity demand price. Differentiation could be achieved through several ways including: Create a more superior product than competitor based on design, technology, performance, etc.; Offer superior service level; Have access to superior distribution channels; Create a strong brand name through design, innovation, advertisement, frequent flyer program, and so on; Specific or superior product promotion.

Cost leadership strategy aims at achieving competitive advantages by reducing cost below the competitors. Therefore, by maintaining low cost, the company (goal) could sell its products or services in lower prices and achieve income realization. The cost leadership strategy potential benefits consist of: It is able to obtain higher profit by charging the same price as competitors or reduce the price below the competitors since costs are lower; It allows to increase sales and market share by reducing prices below those charged by the competitors; It allows to enter new markets by charging price in the lower level than the competitors; It is important for a market where demand is elastic; It creates additional obstacles for new competitors to enter the industry.

Focus strategy is used when a tourism destination wants to attract a market segment that will canalize its offering. The market segment could be identified through various demographic categories, such as age, income, life style, geography, and so on or through benefits expected, members of the expected target market, and from the travel as well as suitable tourism product and destination. In the selected market segment, differentiation or cost leadership strategies could be applied. The main benefits of focus strategy are: It requires lower resource investment compared to strategy intended to all markets; it allows more specialization and knowledge on served segments; it facilitates new market entry to be cheaper and simpler. It should be noted that the three strategies (Porter) are existed in every

tourism market and tourism destination. Selecting the suitable strategy, however, is a result of an immediate and broader change occurred in the environment as well as efforts to response to the changes according to its abilities and resources.

2.4 Sustainable tourism

There are four aspects to be achieved in sustainable tourism, namely: environmental aspect, economic aspect, social aspect, and cultural aspect. The four aspects have been clearly scheduled from the start for companies in tourism industry that are based on harmonious management that put forward values of honesty, humanity, and respect to environment. The condition is supported by a fact that natural resources could be exploited intensively in a tourism business. Tourism activities will sometimes have a big impact on environment, ecosystem, economy, society, and culture. Therefore, a holistic balance between the four aspects must be considered to guarantee a short-term as well as long term sustainable development for tourism sector to face climate change. Sustainable development principles must be applied for various tourism activities and operations by determining long term as well as short term strategies and programs. Sustainable tourism could be conceptually defined as a tourism activity development with a balance between the dimensions of environmental, economic, and socio-cultural aspects to guarantee long term sustainability. In other words, sustainable tourism development must achieve sustainable environment, sustainable economy, sustainable society, and sustainable culture. Key elements in tourism regarding environmental sustainable management consist of:

Eco-tourism: Eco-tourism term is initially proposed in the end of 1970s. It is considered as a nature-based tourism and has become a way to protect natural landscape of a certain area. It refers to segment in tourism sector with the main focus is on environmental and ecological preservation; thus, it attracts many tourists as an alternative tourism. It could play an essential role in green growth for developing countries with significant natural abilities since this activity usually require less capital and investment. It could also connect to local communities that could lead the tourism activities and ecosystem preservation operations. Through these activities, ecotourism could provide employment for unskillful workers in rural communities and create export opportunities in remote locations to ensure green economy. Therefore, it must be considered as an appropriate industrial effort to promote economic development in developing countries with capital scarcity yet abundance natural resources.

Low-carbon tourism: Society is increasingly concern about the impact of actions on the world and this planet ability to maintain sustainable development. There is a growing awareness in the tourism industry as well as among the tourists on tourism carbon footprint. Tourism is one of the fastest growing industries in the world; thus, its rapid global expansion brings out environmental, behavior and socio-cultural impacts in many regions. At the same time, more and more tourists need information on tourism package carbon footprint. The same prevails for tourism industry, such as tour operators, travel agents, e-business sales operators, and business travel companies. They increasingly realize the importance of reducing greenhouse gas emission and calculating carbon footprint of their products and services in reliable and automatic ways.

Agro-tourism: Agro-tourism is a tourism activity that refers to activities of visiting farmers who work on their agricultural land. In this case, tourists would likely see the nursery process, planting, harvesting and even agricultural product processing in the context of agribusiness activities.

Alternative tourism: A form of tourism that put natural, social, and societal values first and allow local communities as well as tourists to enjoy positive and beneficial interaction and the experience together.

Behavioral economics: It studies the impact of psychological, social, cognitive, and emotional factors on individual and institutions' economic decisions and its consequences on market prices, profit, and resource allocation.

Political economics: A study on production and trade and its relationship with law, customs, and government as well as income distribution and national wealth.

Circular economics: It utilizes society as a whole through a design of separating consumption from economy based on three principles: design waste and pollution, save products and materials used, and natural system regeneration.

Sustainable society: is a society that is capable of fulfilling their needs without reducing future generation opportunities. There are three measurement used in sustainable society, namely: Environmental prosperity: nature and environment (for example, air quality), climate and energy (for example, reduce in greenhouse gas), and natural resources (for example, biodiversity); Human prosperity: Basic needs (for example, clean water), personal and social development (for example, gender equality), and health (for example, clean water); Economic prosperity: Transition (for example, organic agriculture) and economy (for example, jobs).

Based on the indicators, components should be focused on in tourism development include: population and health: healthy society could offer various healthy foods for guests; accessible tourism: tourism development for disable people; community tourism: a community concept could be applied in tourism. In the community tourism, local communities are responsible for developing initiatives and managing tourism activity schedules. A community-based tourism connects balanced tourism development goals with ecological considerations into the existing business model. Sustainable development concept in community tourism applies to improve people's life quality by protecting the environment and the built environment, to provide high quality experiences for tourists, and optimize local economic benefits.

Sustainable culture: cultural tourism is increasingly being developed as a way to protect ancestral heritage. Natural and cultural heritage should be considered as a base for sustainable tourism. The natural heritage comprises vegetation, flora and fauna, geological and hydrological phenomenon or natural events, such as climate, astrology incidents, and volcano. Likewise, cultural heritage includes living cultures (such as festivals, rituals, education, religion, costume, legend, behavior, habits, music, dance, and culinary), immobile historic monuments (such as parks, gardens, buildings, facilities, and archeological sites), and mobile historic monuments (such as paintings, statues, art works, handicrafts, agricultural tools, industrial machines, and documents/objects). Efforts to protect tourism-related culture could be divided into four tourism categories.

Rural tourism: It emphasizes on healthy activities and proper life with the joy of clean air, fresh water, landscape, culture, and tradition. Therefore, rural tourism has similarity to ecotourism, but its main attraction lies on traditionally managed landscapes and cultures.

Cultural tourism: One of tourisms that utilizes culture as its object. The implementation of cultural-based tourism in Indonesia is indicated by several provinces, namely: Bali and DI (Special Region) of Yogyakarta, especially Yogyakarta City since 2008.

Spiritual tourism: Spiritual tour is one of emerging cultural tourism heritages since more people are trying to develop their own spirituality. In 2007, the UNWTO rates the spiritual tourism as a segment that has a rapid development, although it is not easily framed. The tourism is based on various motivations, traditional religious

tourism to alternative health treatment. Heritage integrity: Cultural heritage values are maintained in cultural tourism development.

3. Methodology

A qualitative approach was used in this study [34]. The 10 largest of each tourism actor as an informant based on recommendations from local governments which consist of travel agencies, accommodation (hotels), restaurants, academics, and tourist villages. Before the interview began to 50 leaders of tourism actors were preceded by a delivery activity through post and email. The letter's content is to ask for his willingness to respond to questions about; how to apply the application of Harmony culture within the company [36]; what are the factors used as an indicator of sustainable tourism [35, 36] and how to have health protocol [37]. Of the 50 informants, only 35 (70%) Who are willing to be interviewed and the other fifteenth (30%) cannot be contacted. Data collection time starts from January to April 2020 with an average interview length of 45 minutes. The Data is collected compared to cultural theories, sustainable tourism, and the Health Protocol [38] and coding using Miles and Huberman [39]. Qualitative results are used to design the model of Bali's future tourism development strategy.

4. Results and discussion

The in-depth interview results regarding the implementation of local wisdom-based tourism activities in the form of harmonious culture that emphasizes on a harmonious relationship between human being and the Creator (God), between fellow human being, and human being and natural environment are presented in **Table 2**. The main goal of the harmony of relationship or harmonization is the creation of the happiness of life. Happiness is a goal mostly searched by all human being. Happiness in the Balinese people concept is the establishment of a harmonious relationship between God, human being, and the nature or a balance between macrocosm and microcosm nature. The concept brings out cultural values that recognize a difference in a unity of goal, which is the happiness of life.

Table 3 indicates that harmonious culture is a local wisdom that uphold the harmonious relationship with God, human being, and the nature as the spirit of Balinese tourism. It produces tourism forms of spiritual tourism, cultural tourism, and heritage tourism. These tourisms are the reflection of cultural activities related

Indicator	Market orientation view	Resource-based view
Basic Principles	Adaptation of a company's resources to the needs of its competitive environment is its main success factor.	Active search on business environment that allows the best exploitation of a company's resources
Strategic analysis	An industrial structure and market properties-centered	Gives emphasize on internal diagnosis
Formulation Process	*Outside-in*	*Inside-out*
Advantage Sources	Market position regarding local competitive environment	A collection of a company's special resources and core competences

Table 2.
Main differences between RBV and MOV.

Variable	Indicator	Item	Detail item
Harmonious culture	Harmony with God	• Spiritual tourism	• Religious trip
		• Cultural tourism	• Religious ceremonies
		• Heritage tourism	• Dances and arts
			• Sacred places
	Harmony with human being	• Mice	• Meetings
		• Tourism	• Medication
		• Health	• Foods and beverages
		• Culinary tourism	• Community groups
		• Community tourism	
	Harmony with the nature	• Eco-tourism	• Natural preservation
		• Agro-tourism	• Natural result utilization
		• Rural tourism	• Natural utilization
		• Alternative tourism	• Marine Biota
		• Marine tourism	
Sustainable tourism	Economic benefits	• Economic behavior	• Purchasing power
		• Economy-politics	• Prosperity
		• Economic turnaround	• Society income improvement
			• Costs of ceremonies
			• Unemployment
			• Costs of cultural and natural protection
			• Health
	Social benefits	• Accessible tourism	• Transportation
		• Community tourism	• Public service
		• Population tourism	• Health service
		• Healthy tourism	• Birth control
	Cultural benefits	• Cultural tourism	• Cultural preservation

Variable	Indicator	Item	Detail item
		• Community tourism	• Cultural organization or associations
		• Heritage tourism	• Cultural performance sites
			• Artifacts preservation
	Environmental benefits	• Eco-tourism	• Natural and its content preservation
		• Agro-tourism	• Pollutions
		• Low carbon tourism	• Waste
		• Adventure tourism	• Natural utilization
Health protocol	Clean	• Virus free	• Garbage bin
		• Free of dirt	• Cleaning services
		• Free of bacteria	• Cleaning ceremonies
	Health	• Hygiene	• Hand washing
		• Improved health	• Gloves
			• Face masks
			• Sink
	Safety	• Free of risks	• Insurance
		• Free of threats	• Physical distancing
			• Protection ceremonies

Table 3.
Qualitative data processing results of cultural-based tourism activities, sustainable tourism, and health protocol.

to God. The implementation of these tourism models is reflected by many tourists who conduct religious trips and visit sacred sites and watch dances and religious ceremonies.

Other cultural activities are related to harmonization with human being that create Mice tourism, health tourism, culinary tourism, and community tourism. These four tourism models are indicated from tourist activities of meetings, traveling to enjoy unique foods, and having traditional and medical treatments. Moreover, there are tourists who conduct the activities since they join a group, such as bike lover groups, plant lover groups, and many more.

Cultural activities that are related to natural environment bring out tourisms that reside with natural environmental preservation, such as eco-tourism, agro-tourism, rural tourism, alternative tourism, and marine tourism. These tourism models could be seen from activities conducted by the communities to perform environmental conservation of land, marine, and air. In addition, there are

activities that utilize the nature as an attraction by promoting the sustainability of the tourism development.

The cultural implementation results are interesting to discuss since through the cultural activities, the Balinese people have supported sustainable tourism as stated by several researchers, such as [34, 39–43]. There are uniqueness found in the cultural activities related to God. The uniqueness is related to religious ceremonies to conduct natural preservation since the communities believe the existence of God in all of His creations; therefore, respect is done through ceremonies to all lives in this world. The ceremonies are, among others, tumpek kandang, which is a ceremony to respect all animals; tumpek uduh, a ceremony to respect all plants, and otonan, a ceremony to respect human being. This ceremonial model can be explained in **Figure 1**.

Table 3 explains that sustainable tourism implemented in Bali focuses on four benefits. First, economic benefit that will influence behavior, politics, and community economic activities. The condition could be observed from purchasing power,

Otonan ceremony *Tumpek kandang* ceremony *Tumpek uduh* ceremony

Figure 1.
Ceremonies to humans, animals, and plants.
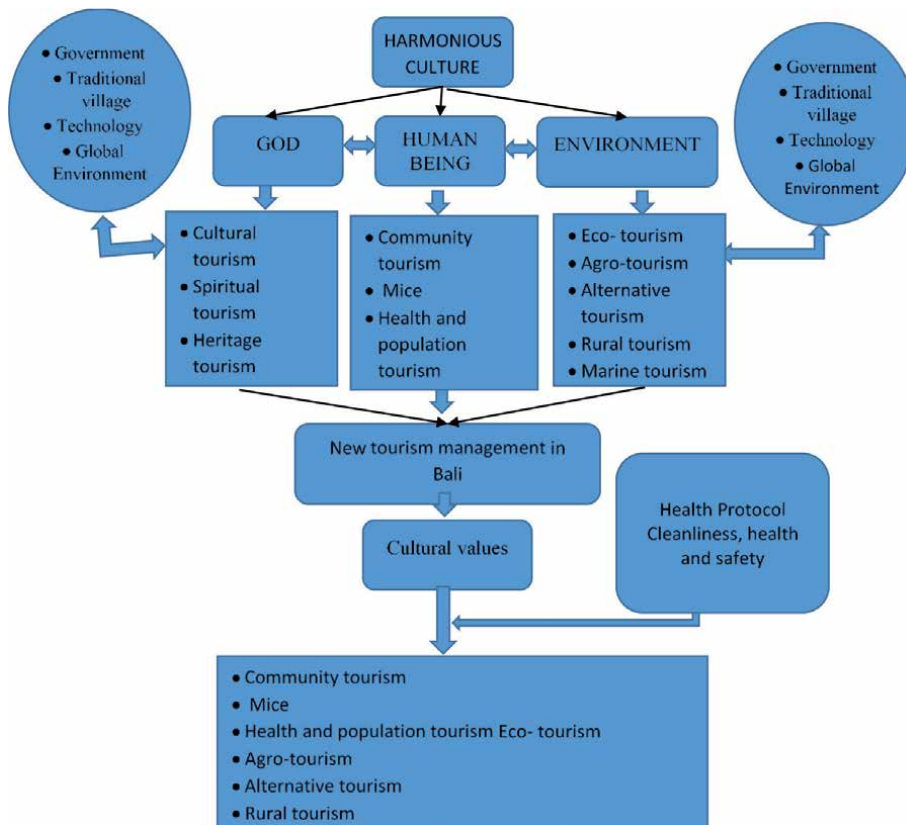
Figure 2.
Bali tourism development model.

prosperity, society income improvement, ceremony costs, unemployment, costs for cultural and natural protection, and health. The remaining benefits include social, cultural, and environmental benefits that give rise to various tourisms. It is in line with a research by Yuan Pan [34] and a direction from UNWTO. The concept of Covid-19 management through health protocol is in accordance with WHO guidance. Another interesting finding of the research is that each activity related to sustainable tourism and health protocol is linked to cultural or religious activities. The unique condition is different to the finding of [34, 39, 43, 44] where communities believe that behind every success in activities there is a beyond reason and influential power; thus a ceremony is used to respect it [35].

The results of in-depth interview have been explained in **Table 2** and compared to the existing theories [37, 45]; thus, a model could be designed to create Bali tourism development in the future. The model could be explained in **Figure 2**. The center of Balinese tourism is in the harmonious culture that provides spirit to maintain harmonization between God, human, and the nature. The cultural activities create a tourism models that are supported by the local government, traditional villages, and global environment that contain technologies to form a new tourism order. The new order concept intended is that Bali tourism is no longer sell the cultures as an icon instead it is shifted to the nature and human. Cultural values are a booster in the natural tourism implementation by considering health protocol set based on local wisdom. The natural tourism that is combined with cultural value-based health protocol will be a unique product and it supports strategies developed by Barney.

According to the Balinese cultural concept what is meant by clean, health and safe is linked to both real world according to the WHO and unreal world through religious rituals. Cleanliness, health, and safe that will be legitimated either physically or non-physically are completely different to models implemented by other destinations in the world.

5. Conclusion

Cultural values implemented by Balinese people amid Covid-19 condition will experience a shift in the cultural tourism development. At the beginning, it is offered as equal to natural and human-based tourism, but in the future, it will become a spirit of the two tourisms. The change brings impact on tourism business actors in marketing their products.

The tourism model development concept with a new order is a model that could change stakeholders in maintaining sustainable tourism. The concept will also provide legitimacy that Bali rises with a deep collaboration between modern and traditional to package a natural and human-oriented tourism. The results provide good color in the development of competitive strategy theories for a tourist area.

This research will be more perfect if it involves tourists who have visited Bali as an informant to give their views on the new way of tourism that will be carried out so that Bali remains a favorite destination. This deficiency becomes a gap for future studies to come so that the concepts of demand and bidding can be viewed in a balanced manner in formulating sustainable tourism policies.

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Conflict of interest

All data relating to this project have been approved by the parties so that there will be no claims in the presentation.

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Section 2

Tourism and Environment

Chapter 4

Opportunities and Obstacles in the Global Tourism Industry: A Story of Post-Covid-19

Syed Abdul Rehman Khan, Laeeq Razzak Janjua and Zhang Yu

Abstract

The rapid spread of Covid-19 has had far-reaching consequences for people's daily lives in almost all parts of the world. Furthermore, it creates a negative impact on trade and economic activities, which further has spillover social problems, including unemployment and poverty. Moreover, in the tourism sector, millions of people lost their jobs, and hundreds of airlines are nearly bankrupt. This chapter is intended to investigate the link between the outbreak of Covid-19 and its effect on the tourism sector. The discussion reveals that due to the Covid-19, tourism sector declined sharply, but it provides an opportunity to transform our polluted world into a green one, which will have a significant and positive impact on global tourism in upcoming years. Finally, the chapter provides practical implications and recommendations, which will help policymakers to formulate an eco-friendly mechanism in the tourism sector.

Keywords: tourism industry, Covid-19, environmental sustainability, post-Covid-19 world

1. Introduction

If we look at history and especially last century, there were some remarkable incidence happened which leave every lasting impact on our daily life. Moreover, these incidence changes our overall behaviors, as well. Among these incidents was an era of the First and Second World War, then the cold war and 9/11. However, the invention of recent technologies such as mobile phone communication, artificial intelligence, and the internet of things profound effect on our daily life. Besides all wars and inventions, the ongoing pandemic crises of Covid-19 will have permanent and everlasting impacts on our lives, even if we can control it immediately. In terms of economy, due to pandemic crises of Covid-19, IMF predicts that the world economy would contract with 3%; however, the revised estimated figure for the contraction of the global economy is 4.9 to 5.5% in 2020. One of the critical factors, which decline rapidly due to Covid-19, is the tourism sector.

According to the estimate, the international labor organization tourism sector created approximately 330 million jobs worldwide, and it is 10.3% of the total global employment. The tourism sector creates jobs; promote local economic development

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and culture. In terms of career, it contributes to direct and indirect jobs for young people and women. Globally, tourism is an essential source of employment. There are some distinctive characteristics of the labor market. In general tourism industry is labor-intensive. Furthermore, approximately 54% of posts are taken by the tourism sector by the woman and young people, which makes the industry inclusive.

The expected loss for 2020 in the tourism sector can be estimated by analyzing the figure of the previous year, as in 2018, approximately 1407 million international tourist arrivals were recorded, which generate total tourist receipts amount 1480 billion dollars. Similarly, the tourism sector also provides a significant amount of indirect employment, such as in construction and infrastructure development, and even a long chain of the supply chain of food and drinks is also associated with this sector. Many staff in the tourism offices, airlines, aircraft, hotels, restaurants, shopping centers, and various tourist attractions often has direct interaction with visitors. Below give **Figure 1** indicate, inbound tourist expenditure recorded in 2018 by top tourist destination in the world.

It is not the first time where the world is experiencing a pandemic outbreak. In the past 20 years, the earth had also experienced two regional pandemic crises, SARS 2004 and Ebola 2014. Both pandemic disasters did not affect the airline and especially the tourism industry. However, due to the Tsunami 2004, the tourism sector of Far East Asian countries. The 9/11 incident did not account for the massive decline in the airline industry. Give below **Figure 2** present, these incidences and overall flight operations.

In the European Union, it is expected that 13 billion people might lose their job due to Covid-19, and in terms of revenue, it is approximately 12 billion per year.
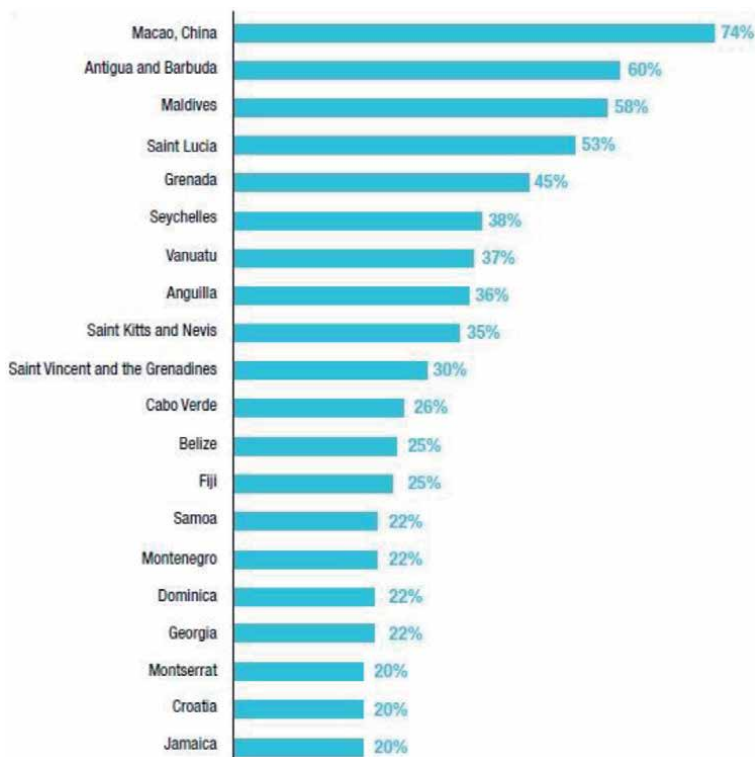
Figure 1.
Inbound tourism expenditure of 2018 by top tourist destinations. Source: United Nations Conference on Trade and Development.
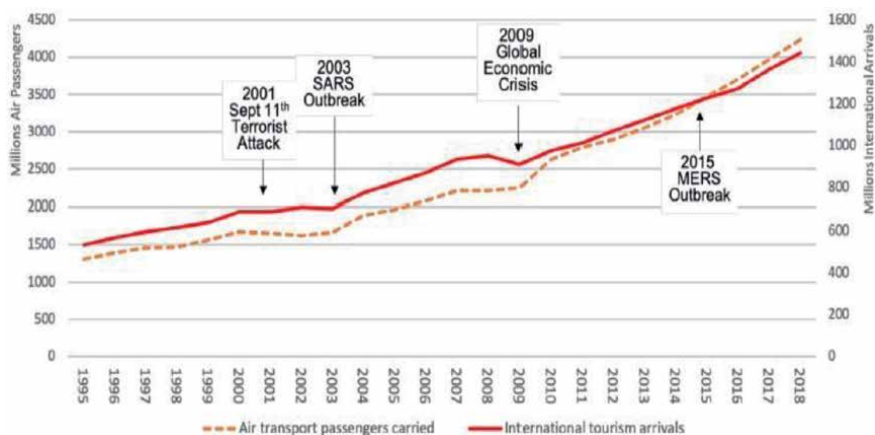
Figure 2.
Impact of major crises on the global tourism. Source: Gössling et al. [1].

The key drivers of the tourism industry in Europe are the local festivals, trade fairs, sports events, and concerts. Therefore due to Covid-19 in many tourist places, hotels, restaurants, bars, and theme parks already closed. Similarly, sports events like the Euro 2020 football championship already postpone until 2021. Likewise, on the other hand, at the beginning of the Covid-19 outbreak, many tourists faced difficulty with returning home due to the border controls in massive countries of Europe.

The primarily purpose of this chapter is to explore the nexus between the impact of Covid-19 and tourism. Furthermore, this chapter explains the overall impact of tourism and lockdown on pollution as well.

2. Covid-19 and tourism

Tourism also has an indirect economic effect, in addition to incoming tourism expenditures. Tourism employs workers, ports, and airports as well as a wide variety of intermediate inputs, including financial services, education, food and alcohol, and domestic transport. According to IATA estimation, as compared to April 2019, 80% fewer flights were recorded in 2020 due to the Covid-19 outbreak. In terms of numeric values, the estimated monetary loss recorded in the airline industry is 84.3 billion and 2020. Furthermore, according to IATA estimation, regular international flight schedules will start working until 2023–2024, whereas domestic flights will soon be restored.

In terms of survivor crises of the Covid-19 outbreak, three kinds of potential threats have been indicated by 2020, the United Nations Conference on Trade and Development. These scenarios are listed below in **Figure 3**.

According to the above table, each scenario indicates the annual tourism expenditure is reduced as productivity shock. Similarly, on the other hand, the social effect on the output of the other products and sectors also hit massively in each of the scenarios explained in the table, such as food, drink, logistics, and construction. However, in the case of a moderate scenario, for four-month, the global economy reduced by 1.2 trillion US dollars. Intermediate for eight-month it reduces 2.2 trillion US dollars. In the last, in case of a dramatic scenario, the world would experience a loss of 3.3 trillion US dollars in terms of GDP (2020, United Nations Conference on Trade and Development).

No	Label	Description
1	**Moderate**	**1/3** of annual inbound tourism expenditure is removed in each country.
		This is equivalent to 4 months standstill of international tourism or a ↓ **80% for 5 months.**
2	**Intermediate**	**2/3** of inbound tourism expenditure are removed in each country.
		This is equivalent to 8 months standstill of international tourism or a ↓ **80% for 10 months.**
3	**Dramatic**	**All** annual inbound tourism expenditure is removed in each country.
		This is equivalent to almost **12 months standstill of international tourism.**

Figure 3.
Three kinds of potential threats. Source: United Nations Conference on Trade and Development.

Similarly, Ali and Cobanoglu [2], mention in work once, as initially due to Covid-19 world experience lockdown situation, they predicted that under the current circumstances of international travelers can be shrinking from 1.4 to 1 billion. Furthermore, they also reveal that approximately 50 million jobs could be lost. However, the current statistics are indicating the worse situation. The world has already experienced massive outbreaks, crises, and other natural disasters that directly or indirectly impact the overall tourism sector. In the past, one of the significant crises hit the tourism sector, especially, was the Tsunami of 2004, which ran almost 15 countries of the Indian Ocean, and more than 200,000 people lost their lives. It was a natural disaster, as [3] disasters are unpredictable catastrophic change; usually, it happens all of a sudden and can be responded after the event, furthermore response is possible either by contingency plans or by through reactive responses as well. Although Covid-19 is not a regional issue or any specified geographical disaster, it is pandemic crises spread worldwide, and eventually, every human living in this world is disturbed due to it. It is right to argue that the tourism sector hit and disrupted massively due to Covid-19 due to that sector, every other industry of the world experience a downward trend.

In terms of Covid-19 impact of economy, Barro et al. [4] empirically investigate the economic effect of Covid-19 and reveals that due pandemic crises, on average, 2.1% death rate could cause the decline of averagely 6% of world GDP and 8% decline in private consumption. On the other hand, one more study conducted by Coibion et al. [5] using a survey on the household in the US concluded due to pandemic crises, consumption and employment decreased whereas inflation and economic uncertainty increased.

Similarly, a massive number of empirical studies have been conducted that explain the positive impact of the tourism sector on the economy. Some of these studies which demonstrate a positive relationship between economic growth and tourism are [6] for Turkey, [7] for six Balkan countries, Chen and Chiou-wei [8] for Thailand and Korea [9] for India, and more recently Khan et al. (2019) empirically investigate that relationship between multiple variables for Thailand using ARDL estimation and conclude that the logistics and transportation sector positively impact inbounds tourism. Therefore it is correct to argue that, due to current

Country	% Change (GDP)	Country	Value Change – GDP (US$Millions)
Jamaica	-11	United States of America	-187,036
Thailand	-9	China (inc. Hong Kong SAR)	-104,690
Croatia	-8	Thailand	-47,728
Portugal	-6	France	-47,289
Dominican Rep.	-5	Germany	-46,260
Kenya	-5	Spain	-44,119
Morocco	-5	United Kingdom	-37,096
Greece	-4	Italy	-34,324
Mauritius	-3	Japan	-30,706
Senegal	-3	India	-28,120
Ireland	-3	Republic of Korea	-22,092
Egypt	-3	Indonesia	-20,713
South Africa	-3	Canada	-18,480
Malaysia	-3	Mexico	-17,376
Spain	-3	Portugal	-13,922

Figure 4.
Overall GDP change in top 15 countries due to Covid-19. Source: World Tourism Organization.

pandemic crises, the overall economic industry hit massively due to the downfall of the commercial sector. The figure below indicates the global destruction of GDP in terms of the percentage and value of the top 15 tourist destinations in the world (**Figure 4**).

The above table indicates that from Asia, Thailand, and Malaysia's GDP falls with 9 and 3%. In terms of the monetary value of GDP, Indian GDP decreased by 28,120 million US dollars, China bear loss of 104,690 million US dollars, and Korea experienced the loss of 22,092 million US dollars. Jamaican and Dominican republic GDP indicate a downward trend of 11 and 5%. However, European countries' tourism sector hit massive due to the Covid-19 outbreak. Croatian GDP fall by 8%, Portugal 6%, Greece 4%, Ireland and Spain 3%. In terms of monetary value, France bears losses of 47,289 million US dollars, Germany 46,260 million US dollars, and then Italy lost 34,104 million US dollars. All these losses are due to the lockdown of other sectors, directly or indirectly, with the tourism sector of Europe.

Similarly, the net of loss experience by European countries is due to massively unemployed labor and capital. One of the main reasons for the substantial loss in Europe is the high percentage of Tourism to GDP ratio. According to the estimate, the overall tourism sector is responsible for 30% of the EU's GDP [10]. Due to this, many people are unemployed or displaced in Europe. However, due to the lockdown situation, all these unemployed people also face difficulty searching for new work.

Gössling et al. [1] indicate in their research work that various airlines such as Scandinavian Airlines (March 17, 2020), Singapore Airlines (March 27, 2020) and Virgin (March 30, 2020), and German TUI (March 27, 2020) have already requested for state aid due to pandemic crises. According to the Federal Aviation Administration estimate in the USA, approximately 64 million take-offs and landed recorded. However, the Covid-19 pandemic crises became a significant cause of downfall in the airline industry. The below figure indicates the trend of airlines from January to April 2020, and due to lockdown situations, a massive number of airlines top working (**Figure 5**).

At the beginning of 2020, it was not expected that Covid-19 caused economic down and air restriction. In the middle of February the causalities and death rate due to Covid-19 start increasing especially in the UK, Italy and Spain, most of the European countries lockdown their border, and also put travel bans. Besides that, all
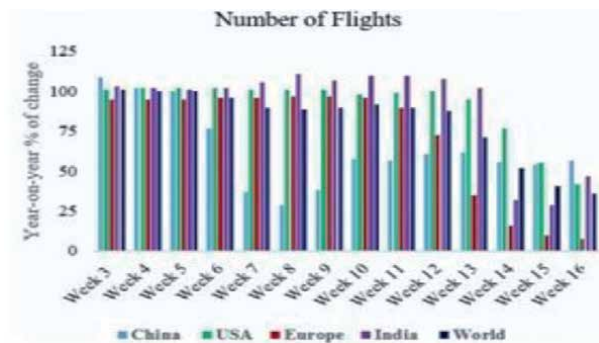
Figure 5.
Flight operations during for first four mother of 2020. Source: International Energy Agency (2020).

the schools, universities, bar-restaurants, and other tourist spots were also closed by authorities in Europe. Given the below figure, indicate travel restriction imposed by countries due to the Covid-19 (**Figure 6**).

However, as the number of confirmed cases started increasing, most of the world's countries put travel restrictions. In the case of tourism, many people also faced issues related to their visa, which was on a visit to other countries as international tourists. However, it is notable that almost every country of the world increased visa validity for an unknown period. Similarly, embassies of the different countries also played an active role during the crises. Many countries arranged chartered flights for their nationals, which were stuck in different countries of the world.

Besides the airline industry, exploring and travel by cruise ship is also very much popular in European, American, and Asian countries. However, due to Covid-19 cruise industry also faced a downward trend. The significant number of cruise ships also experienced heavy losses. The cruise industry stops its operation until 2020 September, and also it is expected that it will be until the first quarter of 2021. The top three cruise ship lines which experienced heavy losses are cruise lines Carnival, Norwegian Cruise Line, and Royal Caribbean Cruises. However one of the most
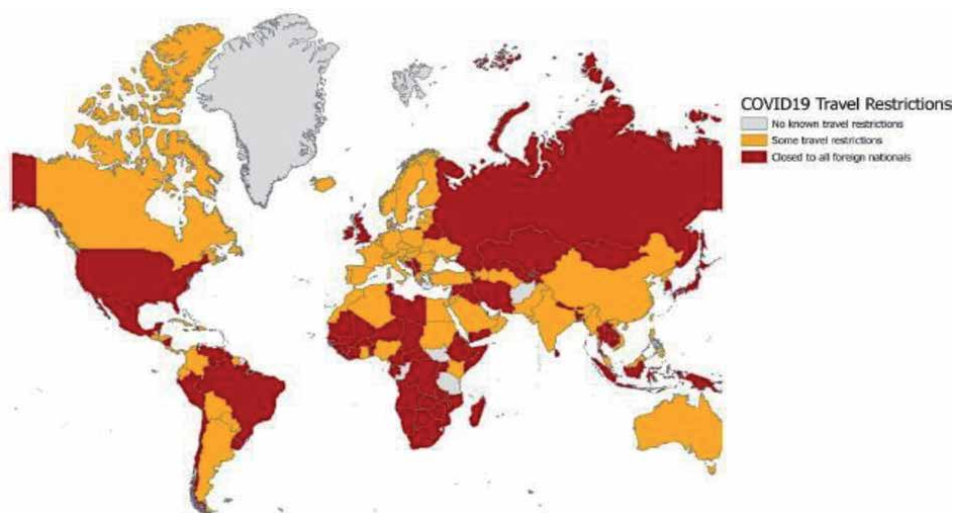
Figure 6.
Travel restriction on 31 March. Source: Gössling et al. [1].

significant reasons for imposing bans on cruise ships is indicated by Travel.State. Gov [11], they mention in their work, due to the close environment of the cruise it is a high possibility that the Covid-19 spread among the traveler very quickly and therefore it will also be hard to provide help and assistance immediately.

On the other hand, some of the positive attributes have also been observed due to the Covid-19 impact of the tourism sector—one of the crucial factors found in the rapid downfall of air pollution. Due to the massive lockdown number of airlines grounded their air craft's, which ultimately reduces the air-pollution. As the airline industry accounts for about 2.5% of global CO_2 emission, and it is also predicted that until 2050 the airline industry will averagely increase 1.5 degrees Celsius worldwide [12]. After the lockdown, the clean environment has been observed worldwide, not only in highly industrialized countries, more specifically in European countries due to the lockdown situation, and the concentration of NO_2 emission in the air rapidly decreased. It has alone been observed after a long time, in Italy due to lockdown and tourist restriction marine line start running in the canals of Vince. The change in terms of environmental change, which we are experiencing at the moment due to the lockdown situation in terms of clean air and clean water channels will not be long-lasting. It is expected that once in the world normal life cycle starts, we will again experience massive air and other pollutions [13].

Due to the deep concentration of tourism in the economy of numerous countries, many tourism business are associated with the global food market due to low cost, which generates employment for the local state. Similarly, on the other hand, there is a high volume of food waste involved in the tourism industry. Due to the Covid-19 outbreak, food waste and supply are declining, but on the other hand, it also becomes the cause of job losses for the people who work in the food industry [14].

It is right to argue that, due to the lockdown situation and downward trend of tourism, the natural beauty around the world is restored. One of the critical factors which are noticed is the reduction of waste and trashes. Covid-19 provides us with a chance to restore our natural beauty. Besides tourism, another significant factor contributing to the decrease in pollutions (water and air) is less transporting activities. Thus due to lockdown, most people working from home, on the other hand, a massive number of industrial units not operational at the moment, which also decreased air pollution.

Due to the lockdown activities and the non-operational tourism sector, environmental quality is improved worldwide. Various gases such are CO_2, NO_2, and SO_2 concentration decreased within the air. Furthermore, the critical factor which increases air quality around the world is also due to less operational activities of the airline industry. The figure given below presents the air quality which is observed in some of the cities in Europe (**Figure** 7).

On the other hand, in the country, China's economy is considered one of the world's top growing economies due to its industrialization. However, due to the Covid-19 outbreak and lockdown in china, its air quality increased as well. Similarly, as we have stated earlier, China also bears massive losses due to the downfall of the tourism sector. One of the critical factor which can be noticed that due to the lockdown situation and decline in tourism sector indicatively impact on overall energy consumption. More especially in China, energy consumption also declined due to the Covid-19 lockdown, which eventually affected its production. Less production of energy increases air quality as less coal consumption is used in the production of energy—figure, present coal consumption in Jingjinji city by five energy-generating plants (**Figure** 8).

However, lockdown and the downward trend of the tourism sector provide an opportunity for the world to move toward renewable sources. It the responsibility of the government at the movement to spread awareness of green economy within
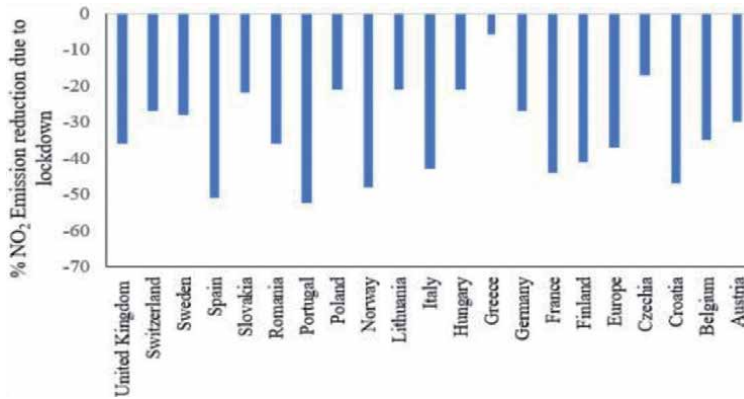
Figure 7.
Change in NO₂ emission due to lockdown in Europe. Source: Centre for Research on Energy and Clean Air.

Figure 8.
Coal consumption by five generating plants in China. Source: Centre for Research on Energy and Clean Air.

their countries and further set upset those on tourist spots, which can efficiently operate with renewable energy sources, ultimately it will also reduce air pollution in the future. Similarly, after once pandemic crises will over, it is also highly recommended that, for local and international tourists, the authorities should arrange those vehicles for traveling purposes which consume renewable energy sources.

3. Conclusion and recommendations

This chapter aims to discuss the association between Covid-19's outbreak and the tourism sector. The debate indicates that Covid-19 indicates an adverse effect on tourism activities. Due to the lockdown, thousands of people lost their jobs. Many airlines, restaurants, bars, and hotels are nearly to become bankrupt. On the other hand, our discussion reveals that global lockdown creates a positive impact on environmental sustainability. Also, air and water pollution have been reduced significantly, which creates a positive impact on fauna and flora.

Further, we predict that in upcoming years, due to the restoration of environmental beauty, the global tourism industry will boom. However, the age of booming may not be very long. Because, once the world engine starts after Covid-19, air and water pollution will occupy the space of greeneries. It is the right time to formulate

sustainable strategies and policies to maintain the beauty of the world. The following are the recommendations that will help policymakers and regulatory bodies to develop a master plan and integrate sustainable practices in the tourism industry.

- The airlines, and especially tourist operators, should adopt green and eco-friendly practices in their businesses to improve environmental sustainability.

- Governmental bodies should formulate strict eco-friendly policies for the tourism sector. Also, regulatory bodies encourage firms to adopt ISO certification

- Regulatory bodies may encourage renewable energy and green projects by providing subsidies and tax-exemptions to corporations that adopt eco-friendly practices.

- Governmental bodies embossed heavy penalties on the polluting firms, which will not only create pressure on firms to adopt sustainable practices but also motivate the eco-friendly firms.

- The regulatory bodies should evaluate enterprises' environmental performance and publicize the evaluation results, which will create competition between enterprises to be more sustainable.

Acknowledgements

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Chapter 5

Applying and Promoting the Seaport Quality System (SQS) and Spatial Interaction Model (SIM) for the Sustainable Development of the Recreational Seaport Industry in Malaysia

Mohamad Rosni Othman, Jagan Jeevan,
Nurul Haqimin Salleh and Noor Azwa Noralam

Abstract

The recreational seaport industry carries out many critical functions, including transport circulation, logistics, commercial, and spatial ones. They influence local economic growth and determine the quality of recreational seaport. However, the definition of recreational seaport quality has remained elusive among the community, at present. Hence, this chapter explores the current literature by using the Systematic Literature Review (SLR) to derive at the definition of seaport quality based on three categories: seaport effectiveness, seaport reliability, and seaport governance, which will be main pillars for the development of marinas. This chapter proposes the Seaport Quality System (SQS) and Spatial Interaction Model (SIM) as a way to develop approaches and strategies that support sustainable planning and management of recreational seaports and marinas in countries with extensive coastlines. It is proposed that in order to offer sustainable and quality services, marinas must adopt the SQS model based on identifying and managing quality and risks. In addition, SIM can be utilised to improve the marinas operations by adopting key components in cruise activities, economic corridors and seaport regionalisation. The combination of both models are essential to enhance the growth momentum of marinas in this country.

Keywords: recreational seaport, seaport quality system (SQS), sustainable development

1. Introduction

Tourism plays a vital role in Malaysia's economy. Many plans and programmes have been implemented in Malaysia over the years to develop tourism and recreational activities in places like Langkawi, Perhentian and Redang Island [1]. Owing to limited capacity and regulations to explore seaport tourism, it has been suggested

that seaport tourism makes full use of facilities in seaport, especially from the perspective of 'Portscape'. 'Portscape' is defined as the collective visual imprints of the build environment and nature sceneries at seaports, which can be used as a marketing/promotion tool to boost regional economic development through this specific form of tourism activity [1].

The significance of seaport tourism would be improving the quality and performance of both industries: seaport and tourism. The SQS model and certified quality management systems can be used to strengthen seaport tourism for economic prosperity. The total contribution of the tourism industry to Malaysia's Gross Domestic Product (GDP) from 2007 to 2019 did not exceed 2% [1]. This calls for a thorough investigation to improve the contribution of this core service sector to the nation's GDP.

The status of seaport is now heading towards the sixth generation (6GP). Its evolution is prompted by advancements in information technology (IT) and innovation in the transportation industry. The ballooning of shipping capacities to 50,000 TEU megaships in the future, for instance, will probably cause a shift of cargoes between seaports to those able to handle huge vessels and significantly larger cargo traffic on the land side [2]. From the Malaysian seaport industry perspective, embracing 6GP can be initiated by using the seaport infrastructure for seaport tourism. Hence, the primary aim of this chapter is to propose ways to improve the performance of seaports in Malaysia in terms of efficiency from different perspectives.

A good practice to observe in order to develop seaport activities is to add value from time to time. In terms of quality services and the creation of a systematic and efficient organisation, for example, one good way is to nurture a strong relationship between seaport owners and its users. Good quality services and overall performance will most likely be good for the customer satisfaction index, too. In comparison with offerings from the fourth and fifth generations, the 6GP will lead to less congestion and pollution at seaports. This will lead to a healthier environment around seaports and port cities overall. In fact, it might even improve productivity [3, 4].

Existing literature notes that the quality of seaport is distinguished by three categories: seaport effectiveness, seaport reliability and seaport governance [5].
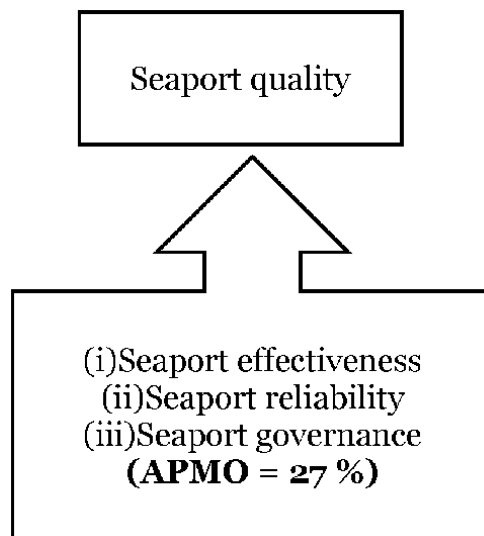
Figure 1.
Overview of SQS model by SLR approach [6].

Chapter	Proposed ISO 31000:2009 Clause Number	Chapter	Existing ISO 9001:2015 Clause Number	Risk + quality NewModule (seaport quality system—SQS)
1	Scope	1	Scope	This standard specifies requirements, principles and generic guidelines for a quality management system and risk management.
2	Terms and Definition	3	Terms and Condition	For the purpose of this document, the terms and definitions given in ISO 9001:2015 and ISO 31000:2009 apply.
3	Principles		None	For quality-risk management to be effective, an organisation should at all levels comply with the principles of ISO 31000:2009.
4	Framework	4	Context of the organisation	Using a framework to assist the organisation to integrate quality-risk management into its overall management system.
	None	5	Leadership	Top management of all departments in an organisation shall demonstrate leadership, commitment and be responsible for every decision making. Brainstorming is the best way to decide what is best for the organisation.
	None	6	Planning	When planning for quality-risk management, the organisation shall use the issues referred to in Chapter 4.
	None	7	Support	Internal and external communications and also reporting mechanisms are needed for the establishment, implementation, maintenance and continual improvement of quality-risk management based on Chapter 7 of the ISO 9001.
	None	8	Operations	Related to the ongoing management process based on framework and context of the organisation as stipulated in Chapter 4 of the ISO 31000 and ISO 9001 and daily activities of the organisation.
5	Process	9 & 10	Performance evaluation & improvement	Consists of ongoing evaluations to ensure controls are functioning as designed and taking corrective actions to enhance control activities, if needed. Risk assessment relates to the organisations' process of evaluating the impact and likelihood of events and prioritising related risks based on Chapter 5 (ISO 31000) and combination of Chapter 9 and 10 (ISO 9001).

Table 1.
Integration of the SQS model and certified risk management.

The identification of this quality has been determined using the SLR approach. By using the Average of Percentage Majority Opinion (APMO) result, 27% of 110 relevant journals sourced focused on seaport quality for reference (**Figure 1**).

However, from these 27%, limited references on seaport quality constitute the major limitation of this chapter. This chapter will focus on the contributing factors, as indicators to develop Malaysian seaport competitiveness and also to analyse the impact of seaport quality on Malaysian seaports. The aims are to make local seaports as efficient and effective as possible to aid the nation's economic growth. This concept of seaport quality can be merged with seaport tourism to promote and innovate competitiveness in the industry. Exploring standardised seaport tourism policies will strengthen networking among seaport cluster in the maritime industry. This can be done by collaborating and cooperating to achieve the goals of promoting seaport tourism. Networking will also serve as an efficient and effective solution for the good of the nation's economy. This fact is supported by the Malaysian Trade Statistics' volume trade published in 2017. The volume trade witnessed a growth of 1.5% in this region, from 1.463tn in 2015 to 1.485tn in 2016 [5].

1.1 Integration SQS model and risk quality management systems

Table 1 shows the integration of the SQS model and certified risk management system. The integration of both elements—SQS model and risk management system—will reveal and create a new module for seaport tourism by extending the existing standard that can be used in the recreational seaport management of tourism. The ISO 31000 focuses on minimising deviations from objectives, while ISO 9001 focuses on maximising achieving customer requirement specifications [7, 8].

2. Maritime tourism in Malaysia

In the challenging, modern lifestyles, stress has emerged, especially from continual demands to meet basic needs, increasing demands in the workplace as well as difficulties in personnel relationships. In general, tourism can be defined as activities of people travelling to and staying in places outside their usual environments for leisure, business or other purposes for not more than one consecutive year. Therefore, tourism has become a competitive and dynamic sector that entails the capacity of adaptability towards changes in customers' demand, level of satisfaction, availability of safety procedures, and variations of enjoyment levels among tourists.

Malaysia has a total coastline of 4675 kilometres (2905 miles), where the one in Peninsular Malaysia spans 2068 kilometres (1285 miles) while East Malaysia has 2607 kilometres (1620 miles). These coastlines have the potential for the development of new marinas to cater to the increasing demand for marine-tourism activities. However, its development was deemed not competitive by Parliament on August 15, 2018. Due to competition, the SQS model, together with the certified quality management system, has been suggested to achieve a high standard in water quality, pollution, prevention, safety and security.

Malaysia offers a wide range of cultural activities, natural heritage and leisure activities. As indicated in **Table 2**, based on statistics from the Economic Planning Unit (EPU) 2016, the total value of the Malaysian Gross Domestic Product (GDP) showcases an increasing trend from 2007 (841.36 billion) to 2015 (1287.97 billion) [9]. However, contributions from the tourism industry to the GDP indicate the opposite trend on average—declining from 1.94% in 2007 to 1.48% in 2015. However, contributions from the tourism sector did encounter positive developments along the way, especially in 2009, 2013 and 2015. On the other hand, this

Year (s)	Total gross domestic product (MYR billion)	GDP of tourism (MYR million)	Contribution of tourism in GDP (%)	Changes of the tourism in GDP
2007	841.36	16.4	1.94%	—
2008	1003.33	12.7	1.26%	−0.68%
2009	879.22	13.4	1.52%	+0.26%
2010	1108.57	13.1	1.18%	−0.34%
2011	1295.18	12.7	0.98%	−0.2%
2012	1366.58	13.0	0.95%	−0.3%
2013	1405.26	13.7	0.97%	+0.2%
2014	1687.07	14.2	0.84%	−0.13%
2015	1287.92	13.5	1.48%	+0.64%

Source: Adapted from EPU [9].

Table 2.
Total revenue of Malaysian tourism industry (2007–2015).

industry faced downfalls in 2008, 2010, 2011, 2012 and 2014, for instance. In a nutshell, contributions from the tourism sector are not significant. On the average, its contribution is about 1.23% only annually.

Momentous innovation is required in the tourism industry to boosts its contribution to be equivalent to industries such as mining and quarrying (98.2 MYR billion in 2016), agriculture (93.6 MYR billion in 2016), manufacturing (254.2 MYR billion in 2016), construction (50.4 MYR billion in 2016) and other services (MYR 594.0 billion in 2016) [10]. In comparison, the number of tourists embarking and disembarking in Europeans seaports totalled more than 400 million in 2016 (Eurostat 2017). However, in Malaysia, only about 6,841,493 passengers were recorded at Malaysian seaports in 2016 [10]. Unfortunately, the number of tourists arriving at Malaysian terminals has declined substantially in recent years. For example, the number of tourists/passengers handled in 2010 was 18,968,152, but it plummeted to 7,257,803 in 2015 [10]. Based on this scenario, this chapter proposes turning recreational seaport into a new cluster in the maritime business. This is done by unveiling its growth prospects that can enhance its contributions to the national GDP through the adoption of the SQS model. In addition, this chapter will explore the opportunities to assimilate seaport and the tourism sector that can, together, bring benefits to the country.

The development of recreational seaports has become increasingly important for Malaysia due to the very strategic and competitive geographical position within the region, which already has thriving maritime clusters located in neighbouring countries such as Indonesia, Thailand, Singapore, Brunei, Vietnam and the Philippines. Since Malaysia has a total coastline of 4675 kilometres (2905 miles)—comprising 2068 kilometres (1285 miles) in the peninsula and 2607 kilometres (1620 miles) in East Malaysia; it, thus, possess the potential to create new marinas to cater to the increasing demand for marine-tourism activities. So far, Malaysia has developed nine public marinas (see **Figure 2**) that can be used to promote marine-tourism activities. However, based on the audit findings reported to Parliament in 2018, these public marinas are not competitive. To be competitive, public marinas should have quality management by applying the SQS model, paying special attention to the possibility of achieving a certified quality and risk management system based on high standards in water quality, pollution prevention, safety and security.

Figure 2.
Location of the Malaysian public marinas [11].

3. Methodological approach and conceptual framework

Firstly, this research paper uses the Systematic Literature Review (SLR) to carry out its work through a three-stage procedure: planning, execution and reporting. [12]. The first stage focuses on using academic literature reviews that focuses on seaport quality. This stage also identified all relevant articles, journals and conference papers that touched on seaport qualities, such as management, social and policies. The second stage of this research categorised all the articles, journals and conference papers into three categories: seaport effectiveness, seaport reliability and seaport governance. This is done by summarising the relevant items in each category.

Next comes the introduction of the SQS model to do systematic analyses that aim to protect the natural environment in the marinas. The integration of the SQS model, ISO standard and recreational activities forms the basis for the expert's platform that will serve as the future systematic and sustainable development of the marinas, incorporating the knowledge and experience gained from the implementation of environmental certification, such as ISO standard (see **Figure 3**).

SQS Model + ISO standard + Recreational activities (Development Marina) = Seaport tourism

Figure 3.
Summary of integration of the model and tools for seaport tourism. Source: Authors.

4. Findings and result

According to **Table 1**, the integration of the SQS model and certified risk management can be adopted for the recreational seaport management. In addition, the SQS module is the risk and quality management system that can be used for training purposes (**Table 3**). The content of this module in the sample SQS model of risk management and total quality management (TQM) must be linked together

Chapter	Content	New module: seaport tourism
1	Scope	Scope of this module must be extended to recreational activities like marine environmental protection.
2	Terms and definitions	Terms and definitions of recreational activities must be extended towards seaport tourism
3	Normative reference	According to this chapter, the quality-risk management should extend to the risks of recreational activities, such as safety and security of tourists, and comply with the principles of ISO 31000:2009.
4	Principles	The recreational activities framework must be adopted in this chapter to assist and integrate towards the overall quality-risk management.
5	Framework	Integrate the three tools of the SQS model, certified risk management and seaport tourism. Using this tool to extend the new model of quality risk management in seaport tourism.
6	Management board	The participation of top management to demonstrate leadership, commitment and responsibility to decide the best way to achieve the goals of seaport tourism.
7	Planning	The implementation, maintenance and continual improvement of quality-risk management based on Chapter 7 of ISO 9001 must be well-planned through the reporting system and also via efficient internal and external communication networking.
8	Operations	The context of organisation, as stipulated in Chapter 4 of ISO 31000 and ISO 9001, and the daily activities must be related to the seaport tourism management process based on framework and organisation.
9	Performance evaluation	The corrective actions of the evaluation must be done and linked together with the objectives of seaport tourism, such as risk assessment, whereby they relate to the organisation's process of seaport tourism.
10	Continual Improvement	Continual improvements must be pursued to improve seaport tourism

Table 3.
The new model of seaport tourism [7, 8].

with the recreational activities at marinas to protect the marine environment. The determination of influential factors, comprising seaport effectiveness, seaport reliability and seaport governance, must involve certified risk management in seaport tourism for achieving the quality of seaports.

5. Spatial interaction model to boost seaport tourism

Besides providing a thorough definition of seaport quality corresponding to tourism, the application of Spatial Interaction Model (SIM) is also proposed to infuse the theoretical notion in seaport tourism because this specific model has been applied in tourism and leisure, including trade activities [1]. This model is being proposed because of its capability to incorporate cruise activities, economic corridors and seaport regionalisation. SIM is effective for seaport tourism research due to its aptitude to explore, analyse, explain and summarise ergonomic mobility, goods and information over space (**Figure 4**).

In general, marinas are related to coastal tourism, and their importance is their potential to dramatically increase economic revenue. In contrast, the concept of marinas in Malaysia remains underutilised. Hence, the application of SIM to assist SQS is very much needed. Three main components in SIM can be utilised to boost marinas' operations that are closely connected to seaports. For example, distance
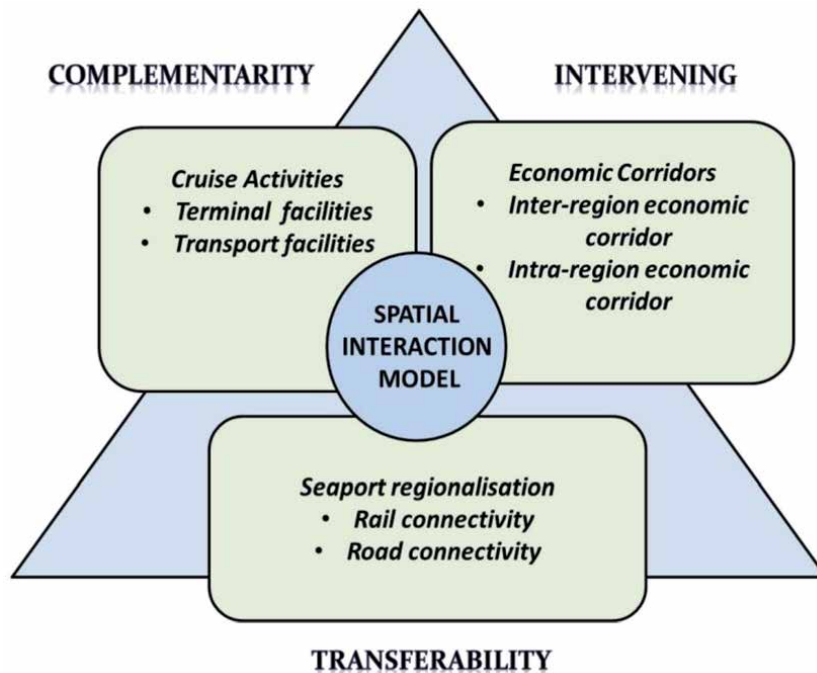
Figure 4.
Spatial interaction model in Malaysian seaport tourism [1].

of the location (complementary), travelling cost (transferability) and accessibility (intervening) can be utilised for the development of this new agenda in Malaysian seaport tourism.

In Malaysia, cruise tourism is one of the National Key Economic Area (NKEA) with the aim to increase the number of tourists to Malaysia. Currently, Penang, Langkawi, Port Klang, Malacca, Sabah and Sarawak are where some of the seaports can be found. They operate dedicated cruise terminals in their respective areas, but these terminals and transport facilities need to be improved to ensure they operate effectively. For example, providing additional facilities for immigration clearance and allocating separate passenger gate and guided by highly trained workforce will enhance the safety procedures at seaports. These will increase the potential of these venues to be the hub for tourism activities. For example, cruise terminals at Klang and Penang in Malaysian are supported by adequate terminal facilities. However, cruise terminals at Kuantan, Bintulu and Kota Kinabalu are not fulfilled by complete terminal facilities. In addition, in terms of transport facilities, all cruise terminals need to be provided prior notice before berthing and no berthing facility provided in Bintulu cruise terminal. These conditions limit the marketability of Malaysian tourism industry in selective area. In that case, it will affect the growth of marinas in these regions.

Northern, Central, Southern and East coast freight corridors are main intra-region economic corridors in Malaysia. All these corridors are connected to main seaports and inland facilities. All these corridors are well connected to all regions in Peninsular Malaysia, and in total, about USD 767 million have been invested to boost tourism and other related activities, such as agriculture, logistics, capital development and others. The development of rail linkage and introduction of second bridge in Penang Island have great possibility to enhance the seaport tourism especially in Kuala Kedah and Penang Port. Currently, inefficient rail network for passenger transportation and critical congestion at Penang bridge in northern

corridor limit the growth of marina's industry in this region. The central is well equipped with infrastructure which can be utilised for marinas development. However, over congestion and overuse of existing facilities reduce the attractiveness of the tourism venues in this region. Therefore, utilisation of alternative transport network especially rail is essential for the enhancement of Malaysian marinas. The rail network is very important to connect the tourist and the tourist attractive places. In the Eastern Corridor, there are some attractive tourist spots including Lake Chini, Teluk Chempedak and Cameron Highlands. Although extensive road connectivity is available along this corridor, the absence of rail link limits potential venues to be explored especially in Terengganu and Kelantan which are main tourist spot in this corridor.

On the other hand, there are also three inter-regional freight corridors, comprising Malaysia, Thailand, Singapore, Indonesia and Brunei. This includes the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT), Indonesia-Malaysian seaports as a hub for tourism activities, Malaysia-Singapore Growth Triangle (IMS-GT) and the Brunei-Indonesia-Malaysia-Philippines-East Asean Growth Area (BIMP-EAGA). These national and international freight corridors can be used to boost marinas in Malaysia by offering attractive promotional packages. Enhancing short-sea shipping (SSS) between the participating countries will also introduce the availability of attractive places and also enhance seaport tourism activities and increase the fascinating roles of seaports in the country. The land bridge system and road network between Thailand and Malaysia allows the manufacturers from Thailand to travel between these countries. The emergence of IMT-GT has potential to improve cross border tourist movement between Malaysia, Thailand and Indonesia. The northern region of Malaysia has strong potential to generate a high volume of tourist from this network which will be beneficial for Malaysian GDP because of its location adjacent to the southern Thailand and Indonesia. Therefore, the marinas especially in Penang and Klang have a great advantage and manage to provide significant connection for the leisure activities to the tourist.

Seaport regionalisation represents a different dimension in seaport development, whereby the efficiency of a seaport system is determined by the integration of the inland freight distribution system [1]. Currently, limited coverage of rail network reduces the opportunity for tourists from neighbouring countries to enjoy the beauty of marinas in Malaysia. Besides SSS, inland transportation plays an important role in enhancing the connectedness to marinas from various locations. This is because limited access to the inland from seaports limits the progress of the tourism sector and preventing the development of seaport tourism in Malaysia. Limited transport connectivity between the different states in Malaysia affects the complementary, transferability and the intervening during access from seaport towards inland, and vice versa.

6. Implications and conclusion

Recreational seaport capacity utilisation is one of the indicators that must be considered seriously in managing recreational seaport. This is because underutilisation of existing capacities will affect internal operations and, at the same time, obstructs the external network, such as logistics. The integrated approach of quality risk management is facilitated by the fact that ISO 31000 and TQM standards have elements and common principles. The Integrated Risk Management and TQM that is collectively called the Seaport Quality System (SQS) is a sustainability stimulus for recreational seaport. The implementation of the Integrated Risk Management and TQM module on recreational seaport can help bring about quality products

and/or services. The SQS model is required to interrelate all stakeholders in the recreational seaport (internally & externally) sector. The SQS model places emphasis on customer (internal & external) orientations and involves all recreational seaport units. It requires the active involvement and empowerment of staff and is based on a long-term commitment to the continuous improvement of the management paradigm.

If the Malaysian government merely continues to increase capital expenditure to improve recreational seaport annually, the end result will be dismal. It will have limited positive impact on the recreational seaport attractiveness. Rather than allocating large amount of money solely for capacity expansion in recreational seaport, the same amount should be used to enhance the quality of management and embed the quality culture in the recreational seaport management and operations. Thus, for recreational seaport to be sustainable and be competitive in the face of risks, there is a need to manage these risks. Knowing how to identify risks, facet a value and a priority scale, design actions and device to minimise risks, and constantly monitoring them are essential to ensure recreational seaport survives and gives sustainable value. From a researcher viewpoint, it is interesting to use the SQS model in recreational seaport. It may provide the best strategic approach for recreational seaport at present and in the future to carve out a competitive edge.

This chapter recognises the importance of introducing the SQS model in any recreational seaport. Further, this research, which has reviewed existing research on seaport quality, has contributed to improving the understanding of what seaport quality is. The main finding of the definition of seaport quality, and from my viewpoint, is that it is a very broad subjective matter to define. However, from the findings of existing literature, its definition would be categorised into three categories: seaport effectiveness, seaport reliability and seaport governance. In addition, this chapter helps recreational seaport managers and users understand clearly about recreational seaport quality. In short, this chapter serves as a guideline for the recreational seaport community to improve the quality of all relevant elements to improve the performance of recreational seaport.

The attractiveness of recreational seaport is no longer based on strategic location but on the provision of efficient, prompt and quality services, excellent logistics and also land transport infrastructure and sea transport network. Recreational seaport has become commercial services and gateways. In fact, recreational seaports play a vital role in the domestic and international markets, if they can manage the services effectively and efficiently and be able to prevent unwanted consequences. Thus, constant evaluations need to be done by recreational seaport operators on its operations or processes, especially those related to providing marketing and selling of services to the end-users. It can be said that by improving the quality of the recreational seaport system and activities from any angle could improve the performance and competitiveness of this sector. Thus, to be sustainable and remain competitive in the face of risks, by adopting the SQS model can significantly reduce those risks and provide very good quality services and sustainable development of the recreational seaport industry.

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Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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Chapter 6

Tourism Impact on Environmental Sustainability: A Focus on the Cruise Industry

Kirkland Robert Anderson

Abstract

The growth of the Global Economy and in particular the Caribbean Islands has been for the last two decades fueled by the cruise shipping industry. However, the growth in this industry gives rise to the expansion in ship size and the number of destinations. Unfortunately, the cruise line industry is responsible for the largest volume of waste, pollutants and destruction to marine lives when compared to other maritime industry sector. This chapter seeks to highlight the correlation between the industry and the growing global need for vibrant economies, a high quality of life, while protecting the environment and sustaining the world's natural resources. A review of several literature has shown that within the last twenty years, the cruise lines have invested a lot of time and money correcting the negative environmental impacts created. Several proactive and green shipping initiatives designed to improve environmental management were successfully implemented by the industry. These diverse initiatives are group as follows: Research and Innovation, Corporate Social Responsibility (CSR) and Marketing, Awareness raising/environmental education initiative, and Green technologies. Emanating from these initiatives are: reduce or obviate of harmful environmental emissions and environmental management improvements and ultimately an environment that is experiencing an increased level of sustainability and economic activities.

Keywords: pollution, green technologies, global economy, environmental management, dynamic positioning

1. Introduction

1.1 Overview of the cruise industry

The Cruise Shipping Industry has evolved tremendously over the years. It experienced changes - from the era of transoceanic transportation and tropical vacations for the wealthy, privileged elites of society only, to the multimillion tourism and leisure industry today, offering affordable vacation options and comfort to match the average citizen. With the increasing growth of the cruise industry comes the expansion in ship sizes and the variety of destinations to meet the demand of customers. As such, the grandeur of the destinations, and their natural beauty are critical to the increasing demand. The cruise industry is definitely linked to environmental performance and compliance. However, studies show that the cruise line industry generates significantly more volume of waste and pollutants than any other maritime industry sector. The industry carries thousands of people around the world in just a single voyage and

these people generate a lot of sewage, gray water, oily bilge water, solid and hazardous waste. Unfortunately, the waste is hazardous to the fragile marine environment. Even the least harmful substance can damage the flora and fauna in its surrounding [1].

With the high level of waste and pollution that is produced, comes the need to implement methods of sustaining the industry's environment. The central notion of sustainability is that the goals of environmental preservation and the goals of business need not be disparate and conflicting. Throughout its history, the cruise industry has responded to vacation desires of its guests and embraced innovation to develop new destinations, new ship designs, new and diverse onboard amenities, facilities and services, plus wide-ranging shore side activities. Cruise lines have also offered their guests new cruise themes and voyage lengths to meet the changing vacation patterns of today's travelers [2].

Shipping is indeed the most significant international transport substructure in the world. It fuels the Global Economy and helps in the development countries. The cruise industry has grown significantly over the last two decades. *"In fact, between 2012 and 2017, it grew by 20.5 per cent with 2017 been a record breaking year of 25.8 million global ocean cruise passengers a 4.5 per cent increase over 2016, which had a record high of 24.7 million. This growth in cruise passengers results in both Florida-Caribbean Cruise Association (FCCA) and Cruise Lines International Association (CLIA) member cruise lines added nearly 22,000 lower berths through six new ocean-going vessels in 2017."* Growth in the industry continues through exciting features, a more personalized guest experience, customizable onboard technologies, media initiatives including even television shows and movies to display what cruising offers [2].

2. Marine environment: international laws and conventions that governs its protection

International Maritime Organization (IMO) is the world most influential organization on the prevention and control of marine pollution. IMO is guided by international conventions, protocols, guidelines and recommendations such as the International Convention for the Prevention of Pollution from Ships (MARPOL), and its annexes. Although, the International Maritime Organization does not have a set of regulations for cruise vessels, it provides requirements for ships, which have also become applicable to cruise vessels [3].

The International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 (MARPOL 73/78), regulates and prevents pollutions arising from the operations of vessels. Its main concern is that of mitigating oil spills whether it is operationally or accidentally caused. MARPOL 73/78 comprises of six annexes which are used to prevent all possible forms of pollutions from vessels [3].

- Annex I prevention of pollution by oil & oily water

- Annex II control of pollution by noxious liquid substances in bulk

- Annex III prevention of pollution by harmful substances carried by sea in packaged form

- Annex IV pollution by sewage from ships

- Annex V pollution by garbage from ships

- Annex VI Prevention of air pollution from ships.

Sewages is defined by MARPOL 73/78 *"as any drainage and other wastes from any form of toilets and urinals, drainage from medical premises (dispensary, sick bay, etc.) via wash basins, wash tubs and scuppers located in such premises"* [4]. Sewage is known to contain harmful viruses, bacteria and pathogens, all of which are harmful to the well-being of human beings. Sewage is rich in nutrients such as nitrogen and phosphorus, which helps algal to grow much faster. The growth in algal reduces oxygen in the water and cause eutrophication which kills fishes and destroys the aquatic life at sea. In most cases of enclosed or semi-enclosed seas where the water exchange rate is slow and the discharge amount of sewage is high, the eutrophication is faster and harmful to the marine life [4].

MARPOL Annex IV regulates the discharge of sewage. Except in situations where the ship is at a minimum distance from the nearest land, or has in operation an approved sewage treatment. Furthermore, the discharge rule does not apply when ships are under the jurisdiction of a state which has less stringent discharge requirements [3]. MARPOL 73/78 has prohibited the disposal of Annex V (pollution by garbage from ships) within the Caribbean waters due to the fact that it consists of a sensitive ecosystem and heavy maritime traffic.

The cruise lines also emit 'Gray Water'. This includes "drainage from shower, dishwasher, washbasin drains, bath and laundry. However, drainage from toilets, and urinals are excluded. Gray Water contains a mixed composition of different components such as; detergents, oil and grease, metals, organics, petroleum hydrocarbons, food waste, nutrients, fecal coliform bacteria and medical, dental waste. Gray Water represents ninety per cent (90%) of the total liquid waste generated by cruise ships [5]. Because of its high level of faucal coliform bacteria, and the oxygen-demanding materials, Gray water is dangerous for human and marine life [5].

MARPOL Annex V regulates the discharge of gray water and provides separate provisions for 'Special Areas'. Solid waste disposal by cruise vessels has also been an issue, one that needs to be properly censored. Daily operations of the cruise ship generate solid waste in the form of packaging materials, food waste, transportation and storage products. Some solid waste can be recycled while others are non-recyclable. This can be very dangerous to marine life if they become marine debris. It will result in an alteration to the composition of the ecosystems, interference to gas exchange between overlying waters and benthos, degradation of quality at surface waters and beaches, physical injuries to humans and the ingestion of particles by marine animals [6].

MARPOL implements regulations for garbage disposals in order to mitigate gray water pollution and to achieve sustainability. One such regulation stipulates that ships of less than 400 gross tonnages should make entry of procedures in either the Garbage Record Book, or in the ship's official log-book [5].

Finally, Annex III of the MARPOL convention elaborates on the Prevention of Pollution by harmful substances carried by sea in packaged form. This Annex makes provisions for the issuing of detailed standards on packing, marking, labelling, documentation, stowage, quantity limitations, exceptions and notifications. Annex 111, defines harmful substances *"as those which are identified as marine pollutants in the International Maritime Dangerous Goods Code (IMDG Code), or which meet the criteria in the Appendix of Annex III."* Hazardous substances are said to be corrosive and toxic. These are produced from activities such as dry cleaning, equipment cleaning and photo processing. Other hazardous waste can result from paint waste, crushing of aerosol can, incinerator ash, batteries, pharmaceuticals and used fluorescent and mercury vapor light bulbs [7].

It is through the executions of these conventions that all vessels, including cruise ships will perform their daily operations keeping in mind that the

marine environment is of utmost importance. Adhering to the rules and requirements of these conventions, environmental sustainability can be achieved and maintained [7].

2.1 Theoretical framework on sustainability

The International Maritime Organization, outlines sustainable development as a form of development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It further states that, *"it contains two key concepts: the concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs."*

Theories of sustainability attempted to prioritize and integrate social responses to cultural and environmental problems. There are different theories of sustainability, each prioritizing its own component of what must be sustained. The ecological model of the sustainability framework is essential to this literature, henceforth, this model alludes to biological diversity and ecological integrity [3].

Sustainability covers largely the environmental dimension of the triple bottom line (social, environmental and economics). On the one hand, some forms of environmental degradation are both relatively easily reversed and highly noxious in the present (many forms of air and water pollution) (Baker, 2016) [8]. It is a process that helps create a vibrant economy and a high quality of life, while respecting the need to sustain natural resources and protect the environment. It is based on the principle that future generations should live in a world that the present generation has enjoyed, but not diminished [9]. Ecological models propose means to sustain biological diversity and ecological integrity. Rather than focusing on opportunity or capital as the key unit of sustainability, they focus directly on the health of the world. There are two major ways of deciding which ecological goods to sustain. From an anthropocentric point of view essential natural resources should be sustained, as should those ecological systems and regenerative processes on which human systems rely. From an eccentric point of view, species should be sustained for their intrinsic value, as should ecological systems as generators of creatures with intrinsic value [10].

2.2 The importance of the cruise industry to the local economy

Since the last two decades, the Caribbean Region has been one of the most favored cruise destination. It accounts for more than a thirty- five per cent (35.4%) of the global deployment capacity market share. The region's yields and ticket pricing continue to increase respectively, aided by a strong United States economy and consumer sentiment.

Globally, but especially the Caribbean Region, individual governments invested large amounts of money to erect high quality infrastructures to meet the demands of increase colossal ships that dock at ports in the region, and the thousands of passengers that arrive at these destinations. It is suggested that the cruise industry has the potential to provide many economic benefits to the port's state, which arise from five principal sources [11]:

a. spending by cruise passengers and crew;

b. the shore side staffing by the cruise lines for their headquarters, marketing and tour operations

c. expenditures by the cruise lines for goods and services necessary for cruise operations;

d. spending by the cruise lines for port services;

e. expenditures by cruise lines for maintenance.

"During the 2011/2012 period cruise ship calls brought 15.44 million passenger visits and 2.7 million crew to the thirty -five participating destinations, which generated revenue of US $1.48 billion and US$261.9 million in spending respectively. In addition, cruise-related expenditures generated directly 45, 225 jobs throughout the studied destinations. Cruise generated jobs paid US$728.1 million in wage income to the residents. There is also increased job opportunities in areas indirectly related to tourism, due to the provision of new facilities. Local shops are replaced by new ones. the interactions between residents and cruise passengers results in the exchange of culture, it offers the residents the possibility of learning about the world, and explore new life perspectives" [12].

Records demonstrated a substantial increase in all the above data during the 2014/2015 financial period. *"Cruise ship calls brought 23.63 million passenger visits and 4.5 million crew to the thirty -five participating destinations, which generated revenue of US $3.16 billion and US$302.2 million in spending respectively. Cruise-related expenditures generated directly 75, 050 jobs throughout the studied destinations. Cruise generated jobs paid US$976.5 million in wage income to the residents"* [13].

In addition, tourism of which the cruise shipping industry is a large part has been found to be a significant driver in the creation of positive environmental externalities such as environmental care and the protection of nature [14].

2.3 Negative impacts of the cruise industry on the local environment

The previous section highlights the economic merits of the cruise lines to regional and global economies. However, it is worth reiterating that literature documents that the industry is most damaging to the marine environment. Impacts on the environment ranges from the construction of the port infrastructure to its operation [15]. Activities having the greatest impact on the marine environment include: discharge of ballast water; dredging and the disposal of dredged waste (spoil); physical damage to marine habitats by ships' hulls (e.g. grounding); use of antifouling paints; noise emissions; disposal of waste materials and sewage; oil spills from routine activities or accidental incidents [16].

In order to facilitate the Royal Caribbean's new mega-ships at the Falmouth Cruise Ship Pier, Jamaica, some thirty-five million (35,000,000) cubic feet of coral reef, and two square miles of mangroves was buried under the now pulverized reef material. Additionally, in order to accommodate the mega ships, the developers had to create a twenty chain-wide opening in an offshore barrier reef. Both living and dead coral were dredged, along with the rock substrate, after which the materials were taken inland by trucks to a two-square-mile dump site; situated on the outskirts of town that was once a thriving red mangrove swamp, to the demise of marine life [17].

Dredging is a port operations activity carried out so as to construct or maintain harbors, docks and channels. Dredged materials, or spoils, are either uncontaminated, if materials are dredged in areas remote from pollution sources, or contaminated if material is dredged from urbanized or industrial harbor in which there are heavy metals and a variety of organic compounds. The dredged materials are disposed of in one of three ways: on land; at or near the dredged site; or at sea. Therefore, there is no doubt that the impacts of dredging can affect the

environments of both the port and ocean. The potential impacts of dredging include: *"smothering seabed organisms; clogging fish and invertebrates' gills; reducing the light available to plants; releasing nutrients and toxic trace metals from contaminated sediments; bio accumulating toxins from contaminated material in organisms and possibly the food chain; depleting dissolved oxygen in the water column; and reducing water quality"* [18].

Interestingly, it is said that even the enduring boom of the industry has a negative impact on the environment of the cruises themselves. The more people that go on a cruise, the more ships will be sailing on the seven seas, thus generating even more waste, and causing more damage. The cruise ships carry large numbers of humans, and this generates significant piles of waste for which there is not much space. The regulation of waste disposal at sea is limited, partly because the cruise industry is not subject to the same environmental standards as land based industries and because it is hard to control or enforce [19].

The average cruise ship produces the following immense amount of pollution every day*: "25,000 gallons of sewage from toilets; 143,000 gallons of sewage from sinks, galleys and showers; 7 tons of garbage and solid waste; 15 gallons of toxic chemicals; and 7,000 gallons of oily bilge water. These wastes, if not properly treated and disposed of, can be a significant source of pathogens, nutrients, and toxic substances with the potential to threaten human health and damage aquatic life. One simple example of the pervasive nature of this pollution is that a plastic bottle thrown overboard may take up to 400 years to break down, and during that time such pollution can move great distances and cause negative impact to marine life"* [20, 21].

Ballast water is critical to the safe and efficient operation of shipping, it provides balance and stability for the ships. The disposal of this water, pose a risk to the marine ecosystems as it results in the introduction of new marine species in other parts of the world. For example, in the 1980s, the disposal of ballast water in the Black Sea resulted in the introduction of new species such as zooplankton and fish-egg feeding comb jellyfish. Since then there has been dramatic changes in the pelagic system of the Black Sea, which impacted in a significant way the food chain, resulting in the collapse of commercial anchovy fisheries. The introduction of exotic marine species to the local marine environment, and the translocations of existing marine pests to new locations are major hazards associated with the discharge of contaminated ballast water. The establishment of exotic species can result in the alteration of an entire ecosystems and habitat and the extinction of indigenous species by predation or competition [22].

Cruise ships are insulated on the inside for noise and vibration. Unfortunately, there is no insulation on the outside, thus disrupting the communication and sonar of sea mammals. Research shows that the noise produced by ships can travel long distances, and marine species who may rely on sound for their orientation, communication, and feeding can be harmed by what is called sound pollution. Furthermore, wildlife collisions marine mammals, such as whales and manatees, risk being struck by ships, causing injury and death. *"For example, if a ship is travelling at a speed of only 15 knots, there is a 79 per cent chance of a collision being lethal to a whale"* [16].

A ship generally has a damaging impact on the oceans and its sea life. Ninety (90) countries worldwide have reported severe damage to their coral reefs due to anchorage, and sewage disposal. *"An anchor drop for just one day can destroy as much as 3100 square meters of coral reef. No doubt, it is extremely, necessary to maintain comfort and profit, while simultaneously decrease harm to coral reef. The cruise line has also impacted the air quality of the environment due to the fact that shipping has traditionally relied on heavy diesel fuels which result in the emission of significant quantities of pollutants. A large percentage of ocean liners run on giant diesel engines; this equipment,*

along with smaller auxiliary engines, can emit dangerous levels of Sulfur dioxide." By curbing these emissions millions of premature, air pollution-related deaths could be prevented by 2020. This means that all players must take appropriate steps to minimize the emission of greenhouse gases and adapt to the potential impacts of climate change [23]. The world two larges ships (*Oasis of the Seas* and *Allure of the Seas*), have been touted by the Royal Caribbean International as environmentally friendly ships, yet they burn bunker fuel, which is the dirtiest and most dangerous fuel in the world. This is essentially a tar-like refinery by-product in which the non-combustible particles blacken the sky and pose a major health hazard to everyone within a hundred-mile radius [20]. In order to prevent the discharge of wastewater into the sea, governments or its agencies must enforce the guidelines for the discharging of waste by ships stopping at its ports as was outlined at the Ballast Water Management convention, adopted in 2004. A number of guidelines have been developed to facilitate the implementation of the Convention.

The Convention will require all ships to implement a Ballast Water and Sediments Management Plan. All ships will have to carry a Ballast Water Record Book and will be required to carry out ballast water management procedures to a given standard. Existing ships will be required to do the same, but after a phase-in period [3]. Additionally sustainable environment can be further enhanced if the appropriate government agencies enforce green practices in all operations relating to transport such as minimize consumption of non-renewable resources to the sustainable yield level, reuses and recycles its components [24].

2.4 Sustainable practices employed by the industry and its major cruise lines

Sustainability in the cruise industry is a result of making optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity. The Sea Trade Insider made it absolutely clear that sustainable transport is recognized as one of the biggest challenges of the 21st century. Whilst shipping is relatively safe and clean, compared with other transport modes, the industry does have a significant impact on the environment. Within the last few decades several proactive efforts to encourage environmental management improvements within the shipping industry were successfully implemented (Sea Trade Insider, 2010) [25]. These have been referred to as sustainable or green shipping initiatives, which are diverse, but can be grouped as follows:

Research and Innovation - these are initiatives which aim to reduce or eliminate harmful environmental emissions. It includes investments into research aim to develop new technological design for safer and more sustainable ships. R and I initiatives are divided into high and low investment for specific solutions, that could be applied to many ships in order to reduce their negative environmental impact.

Corporate Social Responsibility (CSR) *and Marketing* – this area helps companies to integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis.

Awareness raising/environmental education initiative- this aims at encouraging environmental management improvements across the sector. Nonetheless, *Green* cruising might seem like an oxymoron for an industry that some say pays little attention to the natural resources that fuel its success, but it is indeed the path to achieve sustainability [25].

Green technologies such as solar panels, exhaust scrubber systems that help minimize emissions, advances in hull design that let ships cut through the water more efficiently, cooking oil conversion systems and energy efficient appliances are being incorporated into newly built ships and are also retrofitted into older

ones. It is further explained that some cruise lines also collaborate with nonprofit organizations and government agencies to collect data about the ocean's health and climate changes. Cruise lines continue to make important strides to improve their environmental policies. Some lines do so more extensively than others. Whereas, recycling, incinerating and waste-processing were cutting edge on cruise ships just over a decade ago, such processes today are basic and expected. The Carnival Cruise Line, Disney Cruise Line, and Royal Caribbean, for example, are some of the most popular lines that make attempts in achieving sustainability [25].

The carnival cruise line has made steps in achieving sustainability, by offloads a multitude of materials (plastic, glass, aluminum, scrap metal, cooking oil, petroleum oil, toner cartridges, electronics, refrigerants and photo processing liquids) from its ships for disposal on land. Ships process and incinerate solid waste onboard whenever possible or send it to an approved shore side facility for treatment, recycling or disposal. Even oily bilge water is subjected to its own three-step engineering process. Furniture, linens, small appliances, kitchenware and clothing are some of the two dozen items donated to charities instead of sent to landfills [24]. There has also been a shift in the cruise line usage of eco-friendly detergents for its linens and dry cleaning, and developing a new, energy-efficient and non-polluting engine for its newer ships. The larger Carnival Corporation (which incorporates Carnival Cruise Line along with brands like Holland America and Princess) has installed exhaust gas cleaning systems (EGCS) technology on 60 ships in its fleet as early as 2017; more than 85 vessels will be outfitted with EGCS by 2020. This exhaust gas cleaning technology utilizes a proprietary technology to remove the oxide of sulfur that come from combustion of fuels that have sulfur, is a win for the environment and a win for the company and the environment [25].

Carnival Cruise lines established a Health, Environment, Safety, Security & Sustainability Policy & Governance (HESSS). This policy drives the cruise lines commitment to environmental protection. Like other critical business matters in the cruise industry, assigning this policy and governance is of top priority to the cruise lines. Fuel is the primary source of energy consumed for ship propulsion and generation of on-board hotel power. "*As such Carnival Imagination, Carnival Inspiration and Carnival Miracle use shore-power technologies while in port in Long Beach, California. By connecting to the Port's electrical grid, air emissions are managed and regulated under the emission control requirements at the power plant supplying it. Unfortunately to date only five ports worldwide are currently utilizing this practice and there are an additional three ports with shore power projects under construction*" [26].

In additional to onboard policies employed by the cruise line, crew members also undertake various sustainability initiatives. Carnival Cruise Line employees regularly attend training sessions relating to waste management while on board. In collaboration with the International Sea Keepers Society, Carnival Cruise has installed scientific devices on four of its ships mainly; Legend, Miracle, Spirit and Triumph). The aim of these devices is to monitor ocean water quality and other climatic information. The data generated by this practice are shared via satellite with Environmental groups, various governmental agencies and universities worldwide. The data provided by the cruise line are analyze by the various recipients in order to determine; ocean pollution, climate change and weather patterns. Carnival Vista is the cruise line's first ship to receive the ECO Notation designation from the maritime classification society Lloyd's Register, which recognizes that the Vista exceeds current maritime environmental regulations. Sustainability efforts have also been extended to the passengers. The cruise line participates in beach cleanups and other community programs through its affiliation with the Florida Caribbean Cruise Association [25]. Specially marked containers are placed strategically throughout each ship in the fleet in order to encourage recycling by cruisers. These designated

bins are located in areas such as; steward stations, galley, crew areas, room service, pantries and bar pantries in order to collect items of food, glass, aluminum and plastic products [26, 27].

"Disney Cruise Lines processed more than 1,900 tons of metal, glass, plastic and paper for recycling or reuse since 2014. All of the recyclables are separated and made ready for unloading in the ships garbage room. The Cruise Line used cooking oil from the galley which has been collected in special containers each week; and whenever the ship arrives in ports, the oil is taken to the backstage area and mixed, then used as fuel for small vehicles in the respective islands." One hundred per cent of used cooking oil is offloaded and recycled each week, some of which is used to create biodiesel fuel for a fleet of vehicles in the Bahamas [25]. Other initiatives focus on energy, water-saving efforts and fuel efficiency [15]. Excess heat from power generators is rerouted to power evaporators that help turn seawater into drinkable water. Even the condensation from air-conditioning units is reclaimed and reused to wash the decks, saving more than thirty million gallons of freshwater each year. On Castaway Cay, which is a private Bahamian island owned by Disney, solar panels are used to heat water for their crew members residing there. The ships are also equipped to plug into shore power, whenever it's available in port [25]. Results depict that the utilization of renewable energy in logistics operations will reduce emissions, improve; the health of citizens, environment and economic growth [28].

All four ships used the service of onboard environmental officers who oversee shipboard recycling and waste minimization efforts. The officers also supervise shipboard environmental safety programs for crew. Furthermore, Disney encourages cruisers to help conserve water and energy by reusing bath towels, and to recycle with marked bins provided in staterooms and on deck. The line also shows a "Behind the Waves" video series that educates passengers on the line's various environmental practices and ways in which they can assist in helping those efforts during their voyage [24]. Passengers and crew members are asked to support the Disney Wildlife Conservation Fund, which provides support for the study of wildlife, protection of habitats, development of community conservation and education programs in critical global ecosystems. Additionally, the fund provides special grants to connect children with nature. The fund has raised an amount exceeding US$45 million, which was used to support more than 330 nonprofit organizations in 115 countries worldwide [26, 27].

Royal Caribbean Cruise Lines has improved substantially its environmental performance. *"They qualified for both ISO14001 and ISO9001 certification, which established an environmental management plan. Ships also have environmental managers aboard and environmental training for all staff, requiring them to be able to explain the environmental policies to all guests"* [26]. The cruise line is currently using Dynamic Positioning on two of its vessels (*Oasis of the Sea, and Allure of the Sea*), which is a new alternative for anchors. Oasis of the Seas, which can accommodate 5400 passengers is powered by liquefied natural gas fueled engines. These engines are equipped with pollution scrubbers that completely eliminate all Sulfur emissions, cut nitrogen oxide emissions and CO_2 by more than 20%. It is one of the first cruise ship to have a large tropical park filled with thousands of plants and natural features [27].

The Royal Caribbean Cruises family, Royal Caribbean, Celebrity and Azamara participate in an above and beyond compliance policy, geared toward optimized environmental practices. This includes the Save the Waves Program, which, at its core, employs an advanced wastewater purification system that treats wastewater onboard to levels that regularly exceed international standards. The company recently introduced a line of designated sustainable shore excursions, in partnership with Sustainable Travel International, which highlight outings that emphasize

destination stewardship and sustainable tourism [24, 25]. Over the past five years, the major cruise lines have spent an average of US$2 million dollars per ship in order to upgrade vessels with better systems for dealing with waste management and emissions. Decades ago, the cruise industry paid very little attention to the environment. Today cruise lines have made a 180 degree turn. They are now spending large amounts of time and money cleaning up their act, and in essence are helping to bring sustainable practices to a wider group of players in the travel industry [27, 29].

3. Conclusion

In investigating the impact of the cruise shipping industry, it is interesting to note that its educational value is immense. There are several theories relating to the sustainability of the marine environment. Nonetheless, this cannot be attained unless users of the marine ecology make it a top priority. The cruise industry provides an efficient global network for the supply chain. With that being said, we must be cognizant of the fact that there is a great need to strive toward sustainable development; that each dimension (social, economic and environmental) must work in unison. While the marine environment continues to play a vital role in our food security and coastal protection, the cruise ship industry must and in many cases have taken necessary mitigating steps to protect the environment on which it also depends. The operations of vessels and hence environmental sustainability are governed by international conventions such as:

a. The International Maritime Organization – is the United Nations specialized agency with responsibility for the safety and security of shipping and the prevention of marine and atmospheric pollution by ships (IMO)

b. The Law of the Sea Convention or the Law of the Sea treaty (UNCLOS)

c. The international treaty for the prevention of pollution from ships, 1973, as modified in 1978 (MARPOL 73/78)

In the final analysis, this chapter gives a clearer understanding as to how the cruise shipping industry impact environmental sustainability. However, this chapter is limited to the fact that a larger per cent of the information garnered is over five years old. It is therefore, the desire of the researcher to pursue future studies in the area by the analysis of primary data. The outcomes of such study will assist policy/decision makers both public and private to establish and implement plans that will environmental sustainability a concern of the past.

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Chapter 7

Development of a Destination Image Recovery Model for Enhancing the Performance of the Tourism Sector in the Developing World

Phillip Farayi Kanokanga, Marian Tukuta
and Oliver Chikuta

Abstract

This chapter is based on a doctoral thesis on the development of a destination image (DI) recovery model for enhancing the performance of the tourism sector in Zimbabwe. The study was prompted by the failure of African destinations to develop DI image recovery models. A pragmatist paradigm, a convergent parallel mixed methodology research approach and a cross sectional survey were adopted. A sample of three hundred and nineteen comprising international tourists, service providers and key informants was used. A structured, semi-structured question-naire and semi-structured interview guide were used respectively. Quantitative data was analyzed using the Statistical Package for Social Sciences (SPSS) and AMOS version 25 while qualitative data was analyzed using NVivo version 12. Tests were conducted using descriptive statistics, exploratory factor analysis, and confirmatory factor analysis. Structural Equation Modeling (SEM) was used to analyze the multiple independent variables. The major findings were that price, ancillary services and amenities significantly influenced affective image while ancillary services significantly influenced destination performance. The study recommended that the Ministry of Environment, Climate, Tourism and Hospitality Industry trains tourism stakeholders including the host community in order to achieve sustainable destination image recovery.

Keywords: destination image, recovery, model, performance, tourism, Zimbabwe

1. Introduction

Travel and tourism has become the world's largest and fastest growing industry, and its growth shows a consistent year to year increase [1]. The sector contributes directly to 5% of the world's GDP, one in 12 jobs globally, and is a major export sector for many countries, both in the developing and developed world [1]. The increase in global tourism numbers (1 billion in 2012) compared to 710 million in 2000 [2] has resulted in intense competition between destinations to grow their market shares. According to [3], international tourist arrivals rose by 6% in 2018 to

hit the 1.4 billion mark from 1.3 billion in 2017. The [3's] tourism forecast which was published in 2010 suggested that the 1.4 billion arrivals would be attained in 2020, yet the rapid tourism growth on the international scale has seen that target being attained two years ahead of time [4]. This growth has seen tourist destinations wrestle fiercely not only for the tourist's expenditure but also for their voice and mind.

The intangibility of tourism products means that their image is the only way which potential tourists have of comparing destinations and choosing between them and therefore it is important to create and transmit favorable images to potential tourists in target markets [4]. As tourism services are intangible, images become more important than reality [5]. This makes the tourist's perceptions of the product not only a fundamental component of the decision-making process, but also a key determinant of the performance of the tourist destination. The idea of DI was introduced into tourism studies in the early 1970s by [5–7] and Pike [4], and has since become one of the most researched topics in tourism-related research [8] due to its association with tourism performance [9]. However, there is a less marked mention of DI recovery and performance in literature, that is, the DI recovery-performance correlation has been marginalized. Some studies have focused on DI and tourist loyalty [10, 11]. Others have examined DI and technology (film, Internet and others) [11–13]. There is therefore an interstice in research on the DI recovery and performance nexus.

Globally, France, Switzerland, Austria, Germany, the United States, Spain and China continue to top the rankings in terms of both international arrivals and receipts in 2018 [14]. The sound performance of these tourist destinations tended to suggest a strong DI. The European continent continued to lead in terms of arrivals in 2017 (713 million, plus six percent) [15]. Africa's weak image was generally attributed to political upheavals, disease, a poor infrastructure, poverty, and frequent droughts [16]. These factors negatively impacted the economies of the African destinations and specifically, the tourism economies. [16] identified Africa's 'unfortunate' image as an obstacle to the region's competitiveness in the global tourism market, ascertaining that there is overwhelming evidence to suggest that Africa faces a huge challenge in counteracting the continent's prolonged negative image and perceived risks as a tourist destination. This was part of the reason why in 2018 Africa attracted only five percent of the international overnight visitors, accounting for 67 million international tourists [3] against a global total of 1.403 billion international tourists. Tourist arrivals in sub-Saharan Africa grew by 6% with the island destinations, namely Cabo Verde, Reunion and Mauritius registering strong growth [3]. What seems to be emerging from the above discussion is that many African destinations, including Zimbabwe, are faced with a challenge of a weak DI and an equally weak performance of the tourism sector. There is a dearth of research on destination performance [17]. Scholars who have explored tourism performance include [17–23]. However, these researchers did not explore DI and the performance of the tourism sector jointly. This study sought to fill this interstice.

The [14] has made efforts to react to the tarnished image through various promotions focusing on rebranding as an exceptional ingredient in order to give the country's tourism a facelift [24]. This has seen Zimbabwe as a tourist destination rebranding three times between 1980 and 2011 [24]. However, it appears that the negative image has remained in place, well after the hosting of the highly touted UNWTO General Assembly. Zimbabwe's tourism arrivals and receipts indicate that the sector has been on an unstable path in the last decades, with fluctuating performances in tandem with the deteriorating local economic conditions and the global economic crisis in 2008 exacerbated by the global economic crisis/credit crisis

which affected mostly developed world tourism markets and led to many traditional tourists cutting back on their travel and leisure expenditure [25]. In Zimbabwe, tourism is one of the four pillars anchoring economic growth after Agriculture, Mining and Manufacturing [26].

1.1 Statement of the problem

Zimbabwe is grappling with a negative tourist DI and a decline in the performance of the tourism sector. Despite several studies, for example [23, 27–29] which have been carried out to improve the performance of the country's tourism sector, image and performance remain problematic. Zimbabwe's travel and tourism competitiveness index (ranking) has not been impressive. In 2015, Zimbabwe was ranked 115 out of 141 tourist destinations across the world and an equally low 114 out of 136 destination in 2017 [30]. In terms of prioritization of travel and tourism, Zimbabwe was at 105 out of 136 while it scored a very low 134 out of 136 destinations for its business environment in 2017 [30]. In terms of international arrivals, the 2011 figure of 2423 20 was marginally better than the 2017 figure of 2,422,930 [14]. This suggested a lack of tangible growth in terms of arrivals. The country's image in the source markets is still associated with political instability, policy inconsistency, and disease outbreaks [30]. There is a strong market perception that the destination is not price competitive and that the overall product is tired [14]. In [25], it is noted that [14] has been promoting tourism through beauty pageants, carnivals and sporting events such as soccer tournaments. The ZTA website has also served as a promotional tool [14]. However, as indicated by [26], Zimbabwe is still failing to gain its previous position as a destination of choice. Furthermore, the goal of a middle income economy for Zimbabwe by 2030 may remain a pipe dream unless there is an improvement in the economic, social and political environments [26]. Although Zimbabwe's tourist figures have increased here and there since 2008, as a destination, it is still struggling to restore itself to its former glory as a competitive force in southern Africa. Zimbabwe's negative perception hinders its visibility in the international markets as a tourist destination which in turn is reflected in weak demand among international tour operators and travel agencies [4]. Negative perceptions of tourist destinations lead to the poor performance of the industry [31]. The highest number of tourists the country has received (2579974) in 2018 almost equals that of 2007 (2505988), that is, twelve years ago. Unless this problem of a weak image is resolved, Zimbabwe's negative perception in the source markets will remain, and the performance of the tourism sector will remain depressed resulting in a low tourism multiplier effect. The study will benefit tourism and hospitality stakeholders such as tourists, the Zimbabwe Tourism Authority, tourism and hospitality researchers, planners, policy formulators, tourism and hospitality business operators and local communities.

1.2 Research objectives

The major objective of the study was to develop a destination image recovery model to enhance tourism performance in Zimbabwe. The specific objectives of the study were to assess the current situation with regards to destination image and performance of the Tourism sector in Zimbabwe, examine the determinants of destination image and performance of the tourism sector in Zimbabwe, investigate the extent to which destination image affects performance of the tourism sector in Zimbabwe and develop a destination image recovery model for enhancing performance of the Tourism sector in Zimbabwe.

1.3 Research hypotheses

H1: Price is significantly positively related to affective image.
H2: There is a significant and positive relationship between amenities and affective image.
H3: Ancillary services have a significant relationship with affective image.
H4: Accessibility has a significant positive influence on affective image.
H5: Price significantly influences performance.
H6: Amenities significantly influence performance.
H7: Ancillary services significantly influence performance.
H8: Accessibility significantly influences performance.

2. Literature review

Literature review entailed describing, comparing, contrasting and evaluating the major theories, arguments, themes, approaches and controversies in the scholarly literature on DI and performance of the tourism sector. Literature review was also conducted to identify gaps in literature with regards to DI and performance of the tourism sector. This was done in order to fill such gap or gaps with new knowledge thereby contributing towards extending the frontiers of knowledge in terms of DI recovery and tourism performance.

2.1 Theoretical framework

The study on which this chapter is based was premised on the stakeholder theory [32] and the [33] tourism performance model. Its tenets are that organizations depend on a wide range of audiences or groups of stakeholders in order to realize their objectives [34]. Modern life and tourism in particular is affected by a wide range of variables which include technology, social dimensions, political developments, environmental factors and others. The stakeholder groups cited in this theory include clients, end users (the other theories above do not make this distinction), employees, suppliers, pressure groups, local communities and the media and each stakeholder makes a decisive role in the organization's future. This theory is currently popularly used in tourism development and in destination image recovery and in the enhancement of tourism performance.

According to [33], there are eight drivers of tourism performance which are indicated here in their order of importance: (1) tourism and related infrastructure; (2) economic conditions; (3) security, safety, and health; (4) tourism price competitiveness; (5) government policies; (6) environmental sustainability; (7) labor skills and training; and (8) natural and cultural resources. This theory links quite well with destination image recovery in that it focuses on attributes which are central to destination image recovery. The [30] noted that these destination attributes are important in generating a destination's appeal. However, the limitations of this theory are that it assumes that any factor outside these eight may not as critical as those included on this list.

2.2 Perceptual images of a tourist destination

Most frequently, the concept of DI has been operationalized as consisting of two components: A perceptual-cognitive component that captures knowledge and beliefs about a destination's attributes and an affective component that describes feelings towards a destination [35]. The cognitive component of the image refers to

a person's beliefs and knowledge about a destination and its attributes, which together help to form an internally accepted mental picture of the place [36]. It also includes a set of attributes that mainly correspond to the resources of a tourist destination [37, 38]. Those resource attributes generally involve the natural environment (scenic beauty, weather, beaches); Amenities (hotels, restaurants, service quality, shops); Attractions (water sports, well - known attractions, a variety of tourist activities); Accessibility (convenient transportation, developed infrastructure, ease of access, Social Environment (personal safety - security, friendly local people, good value for money, a clean environment) [37]. All these can induce an individual to visit a specific destination. The affective component refers to the evaluation stage, concerning the feelings that the individual associates with the place of visit [38]. The affective component generally covers a number of categories: distressing -relaxing, unpleasant-pleasant, boring-exciting, sleepy-lively [39]. The destination should conjure the right emotions in the potential visitor for it to earn a visit [40]. The Conative component (behavioral intention) of DI has been considered by several researchers in DI formation [31, 41, 42]. For these researchers conation is part of the image formation process which is "analogous to behavior evolving from cognitive and affective images" [43] denoting the "intent or action component" [44]. Understanding tourists' intention or the likelihood of visiting a destination is crucial for destination marketing managers.

Destination image comprises functional characteristics, psychological characteristics, common and unique dimensions [45]. Common psychological attributes refer to the friendliness of the locals or beauty of the landscape, whereas unique psychological factors include feelings associated with places of religious pilgrimage or some historic event. [46] indicates that functional characteristics can be easily measured while psychological characteristics, on the contrary, cannot be easily measured. However, together they influence the formation of DI explaining why the use of mixed methods in DI studies has gained prominence [46–48].

2.3 Determinants of destination image and performance of the tourism sector

The determinants of DI include natural resources; general infrastructure; tourist infrastructure; tourist and leisure recreation; culture, history and art; political and economic factors; the social environment and the atmosphere of the place [49]. However, this view tends to marginalize the role of the tourist's reasoned and emotional interpretation in DI formation. Most studies [50, 51] tend to consider image to be a concept formed by the consumer's reasoned and emotional interpretation as the consequence of two closely inter-related concepts: perceptive/cognitive evaluations referring to an individual's own knowledge and beliefs about the object, and affective appraisals related to the individual's feelings towards the object. The combination of these two factors produces an overall, or compound, image related to the positive or negative evaluation of the product or brand [52].

2.4 Demand (tourist) factors as determinants of DI and performance

The demand side of determinants of DI and performance relates to issues which pertain to tourists' socio-demographic factors [53], tourists' nationality [52, 54] tourists' level of awareness or familiarity with a particular destination [55]. In [56], internal factors influencing the image construct include socio-demographic factors. Specifically, the social and cultural environment relate to socio-demographic aspects of a human being [57]. It is postulated that today's tourists play a leading role in image projection [58]. They have become an active agent who use Web 2.0
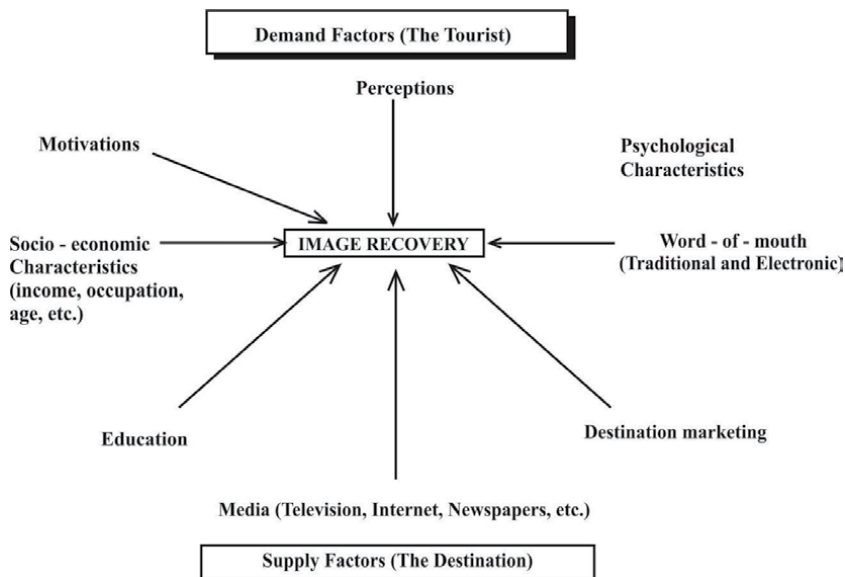
Figure 1.
Factors influencing DI recovery. Source: Adapted from Harahsheh (2009, p. 78).

tools to disclose their opinion, experiences and feelings about the destination visited [59]. **Figure 1** depicts factors which influence DI recovery.

2.5 Supply factors as determinants of destination image and performance

According to [60], the natural resources are the main attraction of the tourism destination. Thus, they influence destination perception and performance [33]. Scenery for example, constitutes one of the dimensions used by researchers to measure DI [61]. The natural environment is one of the three dimensions of DI and performance [33]. The first dimension comprises the socio-cultural amenities such as wonderful cultural traditions, interesting local arts and interesting cultural diversity. Second, natural amenities such as: beautiful mountains, outstanding natural wonders, wonderful sightseeing opportunities, and appealing opportunities for exploring wilderness and nature. And third, climate attributes interrelation: appealing winter climate, appealing summer climate. Nature tends to feature prominently in the classifications of the destination-image management dimensions by different scholars. In [62], for example, came up with nine dimensions/attributes that determine the perceived DI of an individual. These include natural resources such as weather and its variations, beaches and their variations, wealth of countryside such as protected nature reserves and variety and uniqueness of flora and fona.

2.6 Effect of destination image on performance of the tourism sector

Literature does not directly point out the direct effect which DI has on performance of the tourism sector. It spells out the effect of DI on value, satisfaction and loyalty of the tourists [63, 64] and not that of DI and destination performance. However, given that a direct relationship between DI, satisfaction and revisit intentions [65], it follows that there is a relationship between DI and destination performance but it appears that it is more of a derived effect than a direct one. In [64], it is found out that the tourism image is a direct antecedent of perceived

quality, satisfaction, intention to return, and willingness to recommend the destination. In [53], it is conducted a study on DI, perceived value, tourist satisfaction and loyalty focusing on Mauritius. They reported that their results supported the proposed destination loyalty model, which advocated that DI directly influenced attribute satisfaction; DI and attribute satisfaction were both direct antecedents of overall satisfaction; and overall satisfaction and attribute satisfaction in turn had direct and positive impact on destination loyalty. The implication of these relationships seems to that it is important to develop positive images of a tourist destination in order to increase the number of tourists and tourist receipts [53].

2.7 Strategies to improve destination image

In [16], it is proposed two broad categories of DI recovery: the cosmetic and strategic approaches both of which emphasize the role of the media. Media strategies in the cosmetic approach try to change the destination's image without really changing the reality behind it; the destination's problems are not solved or managed but the local decision-makers try to potray it in a positive light, by using advertising or public relations campaigns [66]. Strategies within this category include ignoring the image crisis problem, disassociation from the problematic location, association with prestige locations, acknowledging a negative DI, delivering a counter-message to the negative stereotype, spinning the negative characteristic to positive and ridiculing the stereotype [16]. However, these strategies are associated with a low level of change in the destination's characteristics including its performance while those which use the strategic approach tend to be associated with a high level of change (**Figure 2**).

Destinations host major events to attract visitors, gain positive attention from the media and improve their image [16]. Zimbabwe has used special events which include hallmark and mega events to improve DI and ultimately destination performance. Special events describe specific rituals, presentations or anniversaries specifically planned or designed to mark a specific occasion, cultural or organizational goals [67]. Special events can include national days and celebrations, important civic occasions, unique cultural performances, major sporting fixtures, corporate functions, trade promotions and product launches [68, 69]. However, it appears that very little has been achieved by way of improving image and performance of Zimbabwe as a tourist destination.
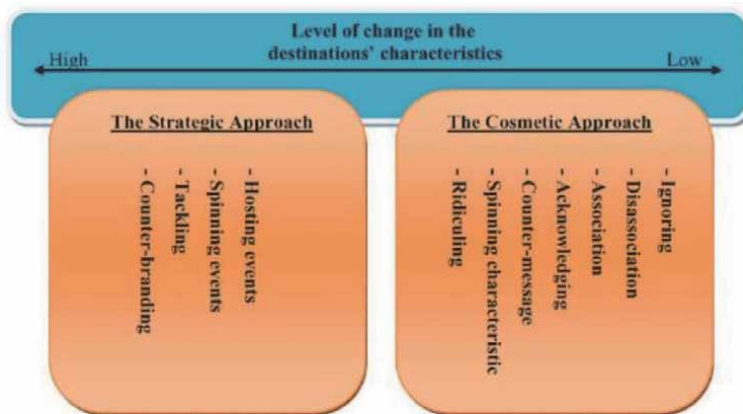
Figure 2.
The strategic vs. cosmetic approach for altering prolonged negative images. Source: Avraham and Ketter (2013).
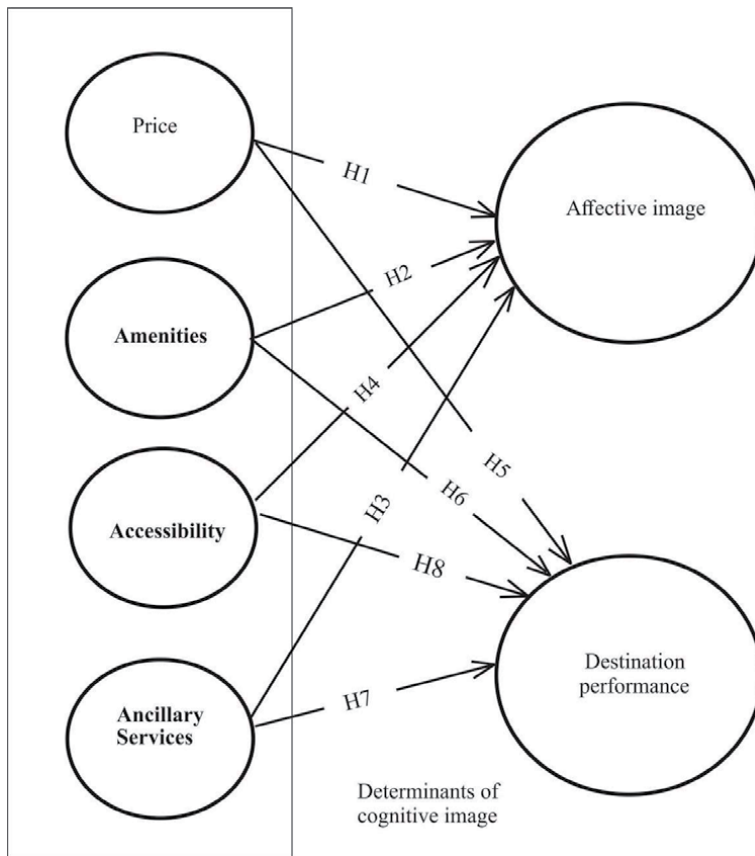
Figure 3.
Conceptual framework. Source: Author's compilation (2018).

2.8 Conceptual framework

The conceptual framework depicts the study hypotheses, that the components of the cognitive image, in this case price, amenities, accessibility and ancillary services impact both affective image and destination performance (**Figure 3**). Affective image which derives from the potential tourists' feelings towards the destination contributes to the improvement in overall destination image especially after visiting the destination [70]. This will ultimately result in; enhancing the performance of the tourism sector (destination performance) as the tourists spend money in the destination.

3. Research methodology

This study adopted the pragmatic research philosophy. This philosophy is a position that contends that the research question is the most important determinant of the research philosophy adopted for the study [71]. A mixed research methodology was used. Literature shows that the use of qualitative and quantitative research methodologies separately would not yield the best results for this study. Mixing quantitative and qualitative approaches is increasingly popular in DI research, although it appears that there is insufficient theoretical rationale for doing so [72]. However, [73] highlighted that the mixed methodology adds value in terms of increasing confidence in the research findings.

3.1 Research design

The research design was more of quantitative than qualitative. The large amounts of quantitative data came from the tourists who far outnumbered the service providers and key informants who together provided mostly qualitative data. Research designs can be classified into three broad categories, namely quantitative, qualitative and mixed methods research designs [74]. Creswell [74] describes this design as concurrent procedures, in which the researcher converges quantitative and qualitative data in order to provide a comprehensive analysis of the research problem. This view is corroborated by [75] who highlighted that the purpose of doing this is to best understand or develop a more complete understanding of the research problem by obtaining different but complementary data. Both forms of data are collected simultaneously and the information is integrated in the interpretation of the overall results. Data analysis is kept independent and there is need to look for convergence, divergence, contradictions, or relationships of the two sources of data [76]. The convergent parallel mixed methods design supported the research requirements. It was the most appropriate research design in that allows for the collection and analysis of both qualitative and quantitative data separately [76]. This was consistent with what the research sought, that is, to collect qualitative data from service providers in the tourism sector and quantitative data from tourists. These two groups were mutually exclusive thus facilitating the independent collection and analysis of data. This would be followed by a comparison of the results to see if the results confirmed or disconfirmed each other. The result would be used to develop a DI recovery model which enhances and improves tourism performance in Zimbabwe.

A structured questionnaire was used to collect data from international tourists and a semi-structured one was applied on the service providers. For both tourists and service providers, the closed questions included a Five-point Likert scale: (For tourists) 5-Very Good, 4-Good, 3-Unsure, 2-Poor and 1-Very Poor and another one, 5-Very Important, 4-Important, 3-Unsure, 2-Somewhat Important and 1-Not Important. For service providers: 5-Strongly Agree, 4-Agree, 3-Neutral, 2-Disagree and 1-Strongly Disagree. Semi-structured interviews were conducted on key informants. Semi-structured interview is a term that typically refers to a context in which the interviewer has a series of questions that are in the general form of an interview guide but is able to vary the sequence of the questions [77]. This type of interview is used to find out what is happening, it seeks new insights, identifies general patterns and helps to understand the relationship between variables [78]. It uses a combination of open and close-ended questions and hence it is consistent with the mixed methodology research design. Data was collected from 240 international tourists, 62 service providers and 17 key informants. **Figure 4** shows how the study was conducted. Price, amenities, accessibility and ancillary services are some of the determinants of cognitive image.

3.2 Data analysis

Descriptive analysis was applied on demographic data and on interval-scaled (Likert scale) data. Frequency table analysis and proportion percentage analysis was used to transform raw data into a form that would facilitate easy understanding and interpretation. Descriptive statistics were thus used to analyze and profile the perceptions (attitudes) and future intentions of the sampled international tourists. Quantitative data which was obtained from the tourists and some from service providers was analyzed using the Statistical Package for Social Sciences (SPSS) and AMOS version 25. The study used inferential statistics in order to analyze the
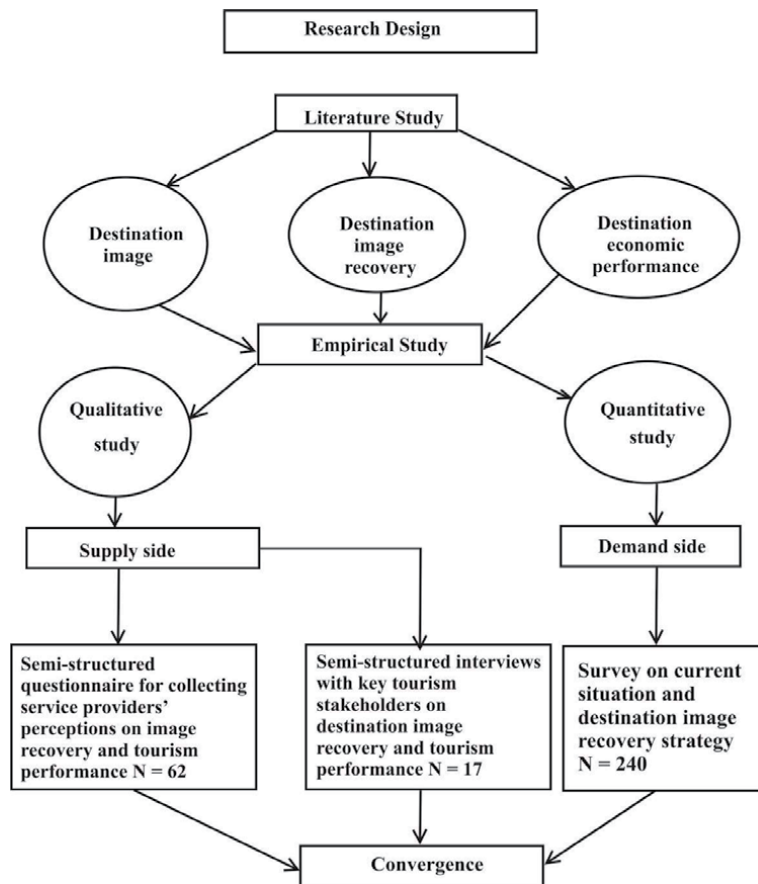
Figure 4.
Research design adopted in the study. Source: Author's compilation (2018).

multiple independent variables. Structural Equation Modeling (SEM) was used to analyze the multiple independent variables which included accessibility, amenities ancillary services and prices as well as dependent variables such as affective image and performance. Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's test were used to test data for validity. Cronbach's Alpha was used to test for data reliability. Overall, the Alpha value was 0.7 and above. SEM is one of the most often used statistical techniques used by researchers to test complex models which involve a number of dependent and independent variables [79]. Similar studies have used SEM [35, 46, 53]. Multivariate analysis was used to test hypotheses because it is optimal for analyzing multiple relationships [75]. Factor analysis was applied on the thirty eight destination image attributes which tourists rated on a Likert scale. These destination attributes were classified into constructs which included price, accessibility, amenities, ancillary services, affective image and performance. This was done in order to facilitate data analysis. Quantitative data was presented using tables and graphs.

Documentary analysis was adopted to establish the trends which were emerging from international aircraft and passenger movements provided by CAAZ from 2016 and 2018 and the international arrivals provided by ZTA during the same period. Data was first captured on a template before it was cleaned (edited). Qualitative data from key informants and service providers was analyzed using NVivo version 12, thematic coding. The goal was to identify, analyze and describe patterns, or themes, across a data set [77]. Word cloud, Word tree, Hierarchical charts, Word

popularity (Word frequencies) including Word query were used to analyze data. Thematic analysis was used because it allows for the classification into themes of various and divergent views from the respondents and it is a flexible research technique which is not tied to a specific philosophical orientation [77]. This approach was therefore quite consistent with the pragmatism research philosophy which informed this study. Results which emerged from the qualitative analysis were compared and contrasted with those which were obtained from quantitative analysis.

3.3 Ethical considerations

Respecting the respondent's rights, needs, values and desires is emphasized when collecting research data (Creswell, 2014). Research which includes human input should ensure that they are well informed and consent sought from relevant authorities. Permission was sought from international tourists, service providers and key informants to carry out research. Various organizations which included the ZTA, CAAZ, Zimbabwe Parks and Wildlife Management Authority, the Ministry of Tourism and the Ministry of Tourism and Hospitality Industry issued letters to the researcher granting him permission to conduct the research at Robert Gabriel Mugabe International Airport. Research assistants were trained to ensure that they behaved ethically as they went about administering research instruments.

4. Results and discussion

4.1 Response rate

Response rate refers to the total number of responses divided by the total number in the sample after ineligible respondents have been excluded [78]. A total of 397 respondents comprising 293 international tourists, 90 service providers and 17 key informants was targeted. However, the actual tally was 319 giving a response rate of 80% which was quite commendable [78]. This total of respondents consisted of 240 international tourists, 62 tourism and hospitality service providers and 17 key informants (**Table 1**).

4.2 Demographic characteristics of respondents

In a study sample of 319, fifty three percent were males while forty-seven were females. The slight dominance of males could be due to the fact that men traveled more for tourism than their female counterparts and feel more motivated to meet their need for sport and adventure experiences than females [80]. The [80] further noted that there were more men than women in the business world and a lot of

Narration	Targeted respondents	Actual respondents	Response percentage	rate
International tourists	293	240	82	
Service providers	90	62	69	
Key informants	17	17	100	
Total	400	319	80	

Source: Field Survey (2018).

Table 1.
Response rate.

business travel occurs across the world and as a result, men tended to travel more than females.

The variation suggests that gender can influence perceptions of destination's appeal. This is in line with [81] who asserted that females tended to engage in long-haul travel more than their male counterparts. Respondents aged between 25 and 35 years old formed the largest group (25.2%) followed by those aged between 35 and 44 years old (18.1), 17.2% of the respondents were in age group 45–54 years old, 15.1% of the respondents were in age group 55–65 years old, age group 66 or older constituted 13.4% of respondents, and age group 18-24 years old were 10.9%. The results showed that most of the tourists ranged from young to middle aged. The study findings resonate with those by [82]. A Visitor Exit Survey which was conducted at Zimbabwe's ports of entry by [82] revealed that the majority of visitors to Zimbabwe were young (35–39) years (16.4%) and middle-aged (40–49) years (13.9%). A study which was conducted in Egypt by [83] focusing on cultural dimensions, demographics, and information sources as antecedents to cognitive and affective DI found out that tourists in the age ranges 26–35 and 36–50 were more likely to use the Internet, while younger (aged 18–25) and older (51–65) were less likely to use it. This finding in terms of age was similar to that of tourists in that most of the international tourists were fairly young. This may create a scenario whereby the young tourists are served by young service providers. This can help to create telepathy and rapport between the tourist and the server. This may enhance both employee and customer satisfaction leading to improved firm and destination performance. These results show that most of the respondents were well educated indicating that their responses were given from a position of enlightenment and knowledge.

Most of the tourists (37.5%) received an income of US$50000 and more before tax per annum followed by those who were earning between US$10001 and US$20000 (17.9%), and those who earned between US$20001 and US$30000 (11.9%), those who earned between US$30001 and US$40000 (10%) and those who earned US$ 40,001 to US$50000 (10%). There is limited research which has directly examined the relationship between destination attractiveness and income of the tourists. In [84], it is noted that in a study conducted in Taiwan, it was found that income was an influencer of tourist behavior. Tourists with a higher income tended to travel internationally more and were likely to stay in luxury hotels. On the other hand, travelers with less income tended to be associated with domestic trips rather than international vacations. In that regard, income was found to be an important determinant of destination choice [84].

4.3 Reliability analysis

Reliability analysis is used to determine the extent of internal consistency that is represented by a set of items in a construct [85]. For this study, reliability analysis was used to determine the extent to which the items within each and every construct were consistent. According to [86], the optimal minimum alpha statistic is 0.7. However, other scholars such as [87] argue that even alpha statistics of 0.6 are still reliable. The reliability tests for each and every construct will be presented.

The Cronbach's Alpha statistic was 0.900, and being greater than 0.7, it follows that the construct price was internally consistent and reliable (**Table 2**). Further, assessing the corrected item-total correlation, none of the items had a coefficient less than 0.3 as recommended by [88] and this means that all the items extracted using PCA were reliable. For affective image, the Cronbach's alpha statistic was 0.881. This was greater than the threshold of 0.7, and thus validates that affective

		Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha if item deleted
Price	0.900				
Lodging Prices		12.42	6.011	0.582	0.938
Prices of Restaurant Food		12.53	4.969	0.892	0.826
Prices of Restaurant Beverages		12.51	5.004	0.883	0.830
Prices of Goods and Services		12.41	5.542	0.767	0.874
Affective Image	0.881				
Destination's capacity to Relieve Stress		16.22	10.162	0.729	0.852
Destination's Capacity to Provide Relaxation		16.16	10.223	0.793	0.838
Destination as a Pleasant Place		16.04	11.278	0.682	0.865
Destination as an Arousing Place		16.46	9.779	0.696	0.862
Destination as a Provider of Excitement		16.41	9.985	0.703	0.859
Amenities	0.842				
Conference Facilities		11.08	7.261	0.726	0.776
Facilities for Young Children		10.88	7.433	0.729	0.775
Facilities for People living with Disabilities		10.65	7.841	0.724	0.779
Shopping Facilities		10.67	8.766	0.533	0.857
Ancillary Services	0.759				
Cleanliness		16.80	6.030	0.569	0.702
Tourist Information		16.97	5.629	0.602	0.688
Quietness		17.15	5.580	0.548	0.709
Friendliness of Local People		16.72	6.631	0.514	0.725
ICT Readiness		17.14	6.100	0.431	0.753
Accessibility	0.801				
Zimbabwe's Accessibility as a Destination		12.17	5.384	0.524	0.793
Infrastructure at the entry point		12.29	4.295	0.736	0.685
Service at Immigration		12.20	4.679	0.685	0.714
Accessibility Destinations		12.00	5.926	0.533	0.789
Value	0.854				

		Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha if item deleted
Value as a Vacation Destination		7.24	2.248	0.633	0.612
Value as a Business Destination		7.44	2.329	0.553	0.711
Overall Quality of the Destination		6.97	2.615	0.571	0.688
Attractions	0.636				
Natural Landscape		4.32	0.591	0.472	.
Climate		4.48	0.433	0.472	.

Table 2.
Reliability analysis.

image was internally consistent. On the other hand, none of the items had a corrected item-total correlation that was less than 0.3. Effectively, this meant that all the items were internally consistent. The Cronbach's alpha for amenities was computed to be 0.842 and this was greater than 0.7. These results validate that the construct amenities were reliable. Regarding the corrected item to total correlation, the minimum observed was 0.533. This again, does fall below the 0.3 threshold set by scholars. In this regard, the researcher confirmed that amenities as a construct was reliable. With respect to ancillary services, the construct was internally consistent since the alpha statistic was 0.759, which is greater than the minimum expected 0.7. With respect to the corrected item-total correlation, the minimum was 0.431 and being greater than 0.3, none of the items were to be dropped.

From the results above, the Cronbach's alpha for accessibility was 0.801 and being greater than 0.7, it follows, therefore, that the construct was internally consistent and reliable. With respect to the corrected item-total correlation, the lowest observed was 0.524 and because this was greater than the minimum 0.3, the researcher confirms that all the items making up the construct.

accessibility were reliable. The next construct that was tested was value/performance. The corresponding Cronbach's alpha for value/performance was 0.754 and being greater than 0.7, we can confirm that the construct was reliable and internally consistent. With respect to the corrected item-total correlation coefficient, the lowest observed was 0.553 and being greater than 0.3, it followed that all the items were very reliable. The construct attractions had a Cronbach alpha statistic of 0.636, this was less than the expected minimum of 0.7 and effectively, this meant that the construct was not so reliable. This is, however, despite that the corrected item-total correlation coefficients were greater than 0.3. Overall, from the reliability analysis, it was confirmed that the reliable constructs were: Price, Affective Image, Amenities, Ancillary Services, Accessibility and Value/Performance.

4.4 KMO and Bartlett's test-destination image recovery and performance

In order to ensure that the conditions for the use of factor analysis were satisfied, [89], argue that the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's tests ought to be tested. With respect to the KMO test, which measures the adequacy of the sample, the lower expected threshold should be 0.5, with higher values being more desirable [90]. With respect to the Bartlett's test, which is

a measure of multivariate normality, the p-value ought to be significant at $p < 0.05$ [88]. These tests were computed and the results are summarized in **Table 3**.

The results above show that the KMO statistic was 0.843, and being greater than the minimum 0.5, it follows that the sample adequacy condition was satisfied. On the other hand, the Bartlett's test was significant at $p < 0.01$ and this confirms the assumption of multivariate normality was met. The results above show that the KMO statistic was 0.843, and being greater than the minimum 0.5, it follows that the sample adequacy condition was satisfied. On the other hand, the Bartlett's test was significant at $p < 0.01$ and this confirms the assumption of multivariate normality was met.

4.5 Modeling process

The modeling process below looked at price, amenities, conducive environment, affective image, accessibility and performance. The research instrument comprised of 38 items that measured the determinants of destination image recovery and performance of the tourism sector in Zimbabwe. With a view to establishing the principal factors behind these determinants of destination image recovery and destination performance, [91] recommend the use of exploratory factor analysis (EFA) dimension reduction techniques. According to [92], these dimension reduction techniques help in the classification of items that share a common underlying structure into a set of similar items collectively known as components [88]. One of the major dimension reduction methods recommended by scholars is factor analysis and this was considered in this study to be the optimal dimensionality reduction technique as prescribed by [93]. To achieve this dimensionality reduction, the principal component analysis (PCA) was used as the factor analysis component extraction method.

4.5.1 Factor extraction

Because the normality assumption was met, the Principal Component Analysis (PCA) was used in this study as the component extraction method, instead of the principal axis factoring, which works best when the normality assumption is not met [92]. With a view to simplifying the factors extracted, rotation was used. The components were assumed to be uncorrelated and o this effect, orthogonal rotation was done instead of oblimin rotation [90]. For the orthogonal rotation, Varimax was selected and this was done with Kaiser Normalization as prescribed by [89].

4.5.2 Communalities matrix

Having run PCA, the communalities that emerged are presented in **Table 4**. Generally, the communalities inform us on the extent of correlation between one item and the rest of the other items [88]. The higher the common variance, the

Kaiser-Meyer-Olkin measure of sampling adequacy	.843
Bartlett's test of sphericity Approx. Chi-Square	4170.258
Df	703
Sig.	.000

Source: Data Survey.

Table 3.
KMO and Bartlett's test.

	Initial	Extraction
Zimbabwe's Accessibility as a Destination	1.000	.606
Infrastructure at the Country's Immigration (entry point used)	1.000	.809
Service at Immigration (entry point used)	1.000	.717
Accessibility of Tourist Destinations within Zimbabwe	1.000	.697
Road Condition	1.000	.600
Inland Transportation/Taxi/Bus	1.000	.526
Natural Landscape	1.000	.730
Climate	1.000	.506
Tourist Attractions	1.000	.653
Opportunities for Learning Ethnic Customs	1.000	.751
Local Cuisine	1.000	.600
Outdoor Activities	1.000	.520
Cleanliness	1.000	.639
Tourist Information	1.000	.665
Quietness (Noise Pollution)	1.000	.565
Friendliness of Local People	1.000	.649
Nightlife/Entertainment	1.000	.644
Attitude of Service Personnel	1.000	.685
Safety and Security	1.000	.476
ICT Readiness	1.000	.624
Conference Facilities	1.000	.660
Facilities for Young Children	1.000	.800
Facilities for People living with Disabilities	1.000	.795
Shopping Facilities	1.000	.617
Lodging Facilities	1.000	.726
Restaurants	1.000	.721
Lodging Prices	1.000	.757
Prices of Restaurant Food	1.000	.864
Prices of Restaurant Beverages	1.000	.863
Prices of Goods and Services	1.000	.735
Destination's capacity to Relieve Stress	1.000	.753
Destination's Capacity to Provide Relaxation	1.000	.798
Destination as a Pleasant Place	1.000	.724
Destination as an Arousing Place	1.000	.712
Destination as a Provider of Excitement	1.000	.734
Value as a Vacation Destination	1.000	.751
Value as a Business Destination	1.000	.689
Overall Quality of the Destination	1.000	.727
Extraction Method: Principal Component Analysis.		

Source: Data Survey (2018).

Table 4.
Communalities-destination image recovery and performance.

higher is the validity of the item, and [85] recommend communalities to be at least 0.5 in magnitude.

From the results, only one item had a communality that was less than 0.5 and this was safety and security and the respective correlation coefficient was 0.476. Effectively, this was discarded off from the results. The rest of the other coefficients were considered to be significant for accurate factor extraction, with the highest communalities being 0.864 and 0.863 for prices of restaurant food and prices of restaurant beverages respectively. The resultant model is presented in **Figure 5** below.

The corresponding table with the detailed results is presented in **Table 5** below.

From the results above, the strongest relationship was found to exist between ancillary and affective image, whose standardized coefficient was 0.345 and this was seconded by price and affective image, with a standardized coefficient of 0.320. The p-value was less than 0.05 for the relationship between Price and Affective Image (p < 0.01), amenities and affective image (p < 0.05), ancillary services and affective image (p < 0.01) as well as ancillary and value. It should be noted that only one of the four hypotheses linking performance was significant. The conclusions to the research hypotheses are indicated below:
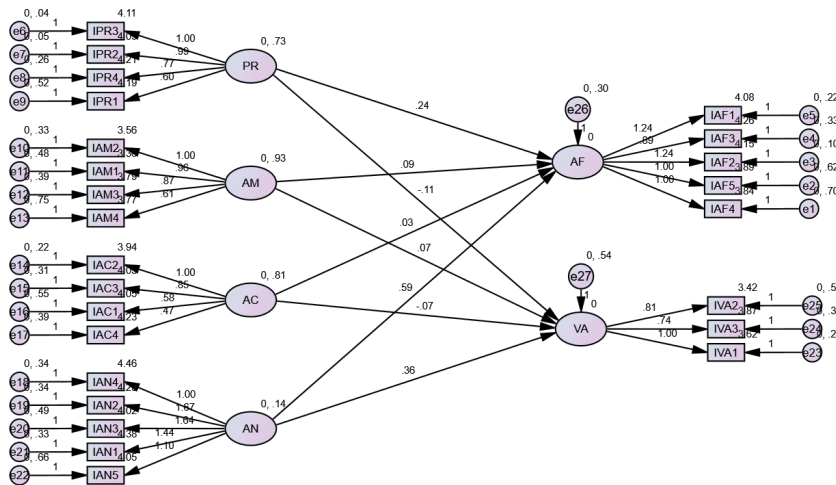
Figure 5.
Structural equation model. Source: Data survey (2018).

			Estimate	S.E.	C.R.	P	Standardized
AF	<−−	PR	.237	.051	4.681	.000	.320
VA	<−−	PR	−.114	.065	−1.750	.080	−.128
AF	<−−	AM	.089	.044	1.995	.046	.135
VA	<−−	AM	.072	.062	1.173	.241	.091
AF	<−−	AC	.025	.046	.543	.587	.036
VA	<−−	AC	−.070	.066	−1.071	.284	−.083
AF	<−−	AN	.586	.146	4.003	.000	.345
VA	<−−	AN	.356	.172	2.066	.039	.175
Source: Data Survey (2018).							

Table 5.
Structural equation model - regression weights.

4.5.3 Dependent variable: Affective image

With respect to the dependent variable, affective image, the key hypothesis decisions are summarized below:

H_1: Price is significantly positively related to affective image.
SIGNIFICANT (CR = 4.681; p = 0.000 < 0.05).
The hypothesis is therefore accepted.

H_2: There is a significant and positive relationship between amenities and affective image.
SIGNIFICANT (CR = 1.995; p = 0.046 < 0.05).
The hypothesis is therefore accepted.

H_3: Ancillary services have a significant relationship with affective image.
SIGNIFICANT (CR = 4.003; p = 0.000 < 0.05).
The hypothesis is therefore accepted.

H_4: Accessibility has a significant positive influence on affective image.
NOT SIGNIFICANT (CR = 0.543; p = 0.578 > 0.05).
The hypothesis is therefore not accepted.

Table 6 presents hypothesis testing results.
From these findings, it was established that the significant factors affecting the affective image were price, amenities and ancillary services. Further review into the respective magnitudes, using the critical ratios, the findings above do confirm that the most significant of the three is the issue of price. In other words, lodging prices, prices of restaurant food, prices of restaurant beverages and prices of goods and services play the most significant role towards improving the affective image. On the other hand, ancillary services such as cleanliness, tourist information, quietness, friendliness of local people as well as ICT readiness were found to be the second most important factor that has a significant positive influence on affective image. Amenities, while significant, was not so important, comparing with the above two that is price and ancillary services.

		CR	p	Result	Decision
H1	Price is significantly positively related to affective image	4681	0,000	p < 0,05	H1►S
H2	There is a significant and positive relationship between amenities and affective image	1995	0,046	p < 0,05	S
H3	Ancillary services have a significant relationship with affective image	4003	0,000	p < 0,05	S
H4	Accessibility has a significant positive influence on affective image	0,543	0,578	p > <0,05	H4►R
H5	Price significantly influences performance	1759	0,080	p > <0,05	R
H6	Amenities significantly influence performance	1173	0,241	p > <0,05	R
H7	Ancillary services significantly influence performance	1066	0,039	p < 0,05	S
H8	Accessibility significantly influences performance	1071	0,284	p > <0,05	R

Key: *S: Hypothesis Supported. R: Hypothesis Rejected.*

Table 6.
Hypothesis testing.

4.5.4 Performance

With regards to the second dependent variable, that is, value/performance, it emerged that there was only one significant determinant and this was ancillary services as shown below.

H_5: Price significantly influences performance.
NOT SIGNIFICANT (CR = -1.759; p = 0.080 > 0.05).
The hypothesis is therefore not accepted.

H_6: Amenities significantly influence performance.
NOT SIGNIFICANT (CR = 1.173; p = 0.241 > 0.05).
The hypothesis is therefore not accepted.

H_7: Ancillary services significantly influence performance.
SIGNIFICANT (CR = 1.066; p = 0.039 < 0.05).
The hypothesis is therefore accepted.

H_8: Accessibility significantly influences performance.
NOT SIGNIFICANT (CR = -1.071; p = 0.284 > 0.05).
The hypothesis is therefore not accepted.

From the outcome above, accessibility, amenities and price were not significant determinants of performance. However, ancillary services were. One of the key aspects in the ancillary services category was the friendliness of local people. In this regard, it follows that the value of tourists was shaped more buy ancillary sub-factors such as friendliness of local people, more than traditionally known factors such as accommodation, amenities and price. The lack of significance of tourism resources such as amenities could be an indication of the evolving nature of the type of tourists now visiting Zimbabwe. Generally, the friendliness of local people is a known attribute that is valued by drifters and explorers, or rather allocentric and near allocentric tourists [94]. The lack of significance of amenities could mean that the nature of the tourists visiting Zimbabwe has drifted from being mass tourists, who from the literature, are divorced from the local people, to being drifters and explorers, who tend to interact with the local people, and will try to blend with the host community. This is further validated by the fact that attractions such as the natural landscape and climate had been dropped as not being valid, again, another indication of the evolving interests of tourists, from focusing on the attractions to showing interest in mixing with the host community. This tends to suggest the need to develop community and cultural tourism. Cultural tourism entails interacting with the local people in order to understand their history, present and future [95].

4.5.5 Squared multiple correlations

The researcher went on to evaluate the overall squared multiple correlations for the two dependent variables, that is, affective image and value. The corresponding results are presented in **Table 7**.

	Estimate
VA	.204
AF	.467
Source: Data Survey (2018).	

Table 7.
Squared multiple correlations.

From the results above, the r-square for value was 0.204 while that for affective image was 0.467. It follows from the above finding that the independent variables price, amenities, ancillary services, accessibility and attractions explained the greatest variance in affective image (46.7%) than in value (20.4%). What this means is that the independent variables determined more of the destination's capacity to relieve stress, the destination's capacity to provide relaxation, the destination as a pleasant place, the destination as an arousing place as well as the destination as a provider of excitement than they defined the value of the destination.

4.5.6 Research model equation

The research model originally comprised of two endogenous variables as well as four main exogenous variables and these are presented in the quotations below:
Initial Eq. 1:

$$AF = PR_{ai1\ldots ai4} + AM_{bi1\ldots bi4} + AC_{ci1\ldots ci4} + AN_{di1\ldots di5}$$
$$+\varepsilon_{ai1\ldots ai4} + \varepsilon_{bi1\ldots bi4} + \varepsilon_{ci1\ldots ci4} + \varepsilon_{di1\ldots di5}$$

Price, amenities, and accessibility had four items each, and hence *i1-i4*, while ancillary services had five items, and hence *i1-i5.* The equation in simple terms was,

$$AF = \alpha PR + \varphi AM + \vartheta AN + \eta AC + \kappa_1 + \varepsilon_1 \ldots [1]$$

Where:
i: Items.
κ: intercept.
ε: Error term.
α, φ, ϑ, η: Path coefficients.
PR: Price.
AM: Amenities.
AN: Ancillary services.
AC: Accessibility.
AF: Affective image.
Initial Eq. 2:
Again, for Eq. 2, price, amenities, and accessibility had four items each, and hence *i1-i4*, while ancillary services had five items, and hence *i1-i5.*

$$VA = PR_{ai1\ldots ai4} + AM_{bi1\ldots bi4} + AC_{ci1\ldots ci4} + AN_{di1\ldots di5}$$
$$+\varepsilon_{ai1\ldots ai4} + \varepsilon_{bi1\ldots bi4} + \varepsilon_{ci1\ldots ci4} + \varepsilon_{di1\ldots di5}$$

The equation in simple terms was:

$$VA = \beta PR + \varepsilon AM + \chi AN + \lambda AC + k_2 + \varepsilon_2 \ldots [2]$$

Where:
i: Items
κ: Intercept.
ε: Error term.
ε, β, χ, λ: Path coefficients.
PR: Price.
AM: Amenities.
AN: Ancillary services.
AC: Accessibility.
VA: Performance.

From the above, $\varepsilon, \beta, \chi, \lambda, \alpha, \varphi, \vartheta, \eta$ were all weights of the exogenous variables that were used to predict the endogenous variables. κ was the intercept and ε was the error term, or residuals. Nevertheless, upon testing the structural equation model, some of the variables were dropped off after their p-values were found to be non-significant (p > 0.05). In this regard, the original equations were subsequently revised. Upon structural equation modeling, for Eq. 1, accessibility was dropped off as it did not have a significant effect on affective image and the subsequent equation comprised one endogenous variable and three exogenous variables as shown below:

Revised Eq. 1:

$$AF = \alpha PR + \varphi AM + \vartheta AN + \kappa_1 + \varepsilon_1 \dots \tag{1}$$

On the other hand, for Eq. 2, price, amenities and accessibility did not have a significant impact on value (performance), and in this regard, these were dropped off and the subsequent equation comprised one endogenous variable and one exogenous variable as shown below:

Revised Eq. 2:

$$VA = \chi AN + k_2 + \varepsilon_2 \dots \tag{2}$$

Where:
κ: Intercept
ε, χ: Path coefficients.
AN: Ancillary services.
VA: Performance.

4.5.7 Model fit test

With a view to testing the validity of a structural equation model above, several goodness-of-fit tests are carried out as prescribed by [96]. There are three broad categories of model fitness tests, and these include absolute fit indices, the relative fit indices as well as the parsimonious fit indices [89]. For the absolute fit indices, the CMIN/DF is the most common, and the chi-square test p-value should be greater than 0.05, while the CMIN/DF ought to be less than 3.0. On the other hand, for the relative fit indices, Goodness-of-Fit Index (GFI), Comparative Fit Index (CFI), Incremental Fit Index (IFI) and Normed Fit Index (NFI) are the most common and this ought to be greater than 0.90. With respect to the parsimonious fit indices, the most common include the Parsimony Normed Fit Index (PNFI), Parsimony Comparative Fit Index (PCFI) as well as the Root Mean Square Error of Approximation (RMSEA) according to [97]. Nevertheless, the most common is RMSEA and according to [98], the maximum acceptable is 0.08. Satisfying the goodness-of-fit at these three levels qualifies the structural model being tested to be accurate and valid [89, 97]. The model fit indices from the study are presented from Table 5.24 to Table 5.27. From the results, with respect to the absolute fit indices, CMIN/DF = 1.730 and this was less than the prescribed maximum of 3.0, and this was the first validation of the model. **Table 8** shows absolute fit.

Further validation was accomplished by the relative fit indices for which IFI and CFI were 0.941 and 0.940 respectively against the expected minimum threshold of 0.90. **Table 9** shows relative fit.

Regarding the model parsimony, PNFI was 0.755 and PCFI was 0.816 > 0.50. Again, both parsimony measures were greater than the expected minimum 0.50 and this confirmed that the model parsimony was not violated. **Table 10 s**hows the parsimony measures.

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	70	487.929	282	.000	1.730
Saturated model	351	.000	0		
Independence model	26	3752.085	325	.000	11.545

Source: Data Survey (2018).

Table 8.
Model fit-absolute fit indices.

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.870	.850	.941	.931	.940
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Source: Data Survey (2018).

Table 9.
Relative fit indices.

Model	PRATIO	PNFI	PCFI
Default model	.868	.755	.816
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

Source: Data Survey (2018).

Table 10.
Parsimony-adjusted measures.

Lastly, with respect the RMSEA statistic, this was found to be 0.052. Because the observed statistic was less than the expected maximum of 0.08, if follows, therefore, the model was valid. **Table 11** depicts the RMSEA statistic.

To test for the sampling adequacy for the model, the researcher considered the use of the Hoelter's statistics as prescribed by [99], Barrett (2007) and [100]. **Table 12** shows sampling adequacy. [89, 100] argue that a critical N of 200 or higher indicates a satisfactory fit. From the results above, both the independence model and the default model had Ns greater than 200, and thus confirming the adequacy of the samples used for this study. Overall, the above tests confirmed the validity of the model as well as the model results. **Table 12** shows sampling adequacy.

The conceptual framework suggested the relationships between four components of the cognitive image, namely price, amenities, accessibility and ancillary services and affective image and destination performance. In order to improve

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.052	.044	.060	.313
Independence model	.198	.193	.204	.000

Source: Data Survey (2018).

Table 11.
RMSEA.

Model	HOELTER 0,05 0,01
Default model Independence model	397
	404
	245
	248

Source: Data Survey (2018).
Minimization: 0.703.
Miscellaneous: 3.219.
Bootstrap: 0.000.
Total: 3.922.

Table 12.
Sampling adequacy.

destination image, the study found that ancillary services were more significant than accessibility. This was because ancillary services had a bigger influence on affective image than accessibility. Also, price did not significantly influence tourism performance. Amenities tended to influence tourism performance much more than price. This tended to contradict general perceptions among tourism and hospitality stakeholders. This also contradicted conventional wisdom. Price, amenities and ancillary services had a notable influence on affective image while price did not significantly impact tourism performance**.** This suggested that the conceptual framework was logical and did not deviate much from what the proposed destination image recovery model revealed. In summary, the conceptual framework was supported by the model with regards to the significant influence of ancillary services on affective image and the significant influence of ancillary services on performance. Affective image is known in literature to be a significant factor in image formation [64].

5. Conclusions and implications

The conclusions of the study were derived from the study findings. In terms of the research objective to do with the Current situation with regards to DI and performance of the tourism sector in Zimbabwe, Zimbabwe was mainly visited by tourists traveling for purposes of visiting friends and relatives (VFR). Most of the tourists traveled alone and some in groups followed by those who traveled as couples. The VFR market is known to stay in private homesteads, avoiding hotel accommodation. Africa and Europe contributed most of the tourists who visited Zimbabwe and these were mostly educated males, highly educated with an annual income of at least US$50000 per annum. However, they spent very little in the destination (at most US$1000). This was not surprising given that the destination mainly hosted the VFR market. The national airline lacked capacity to adequately fly tourists into the country and to various tourist destinations in Zimbabwe. Thus the destination's accessibility was compromised.

The second research objective covered determinants of DI and performance of the tourism sector in Zimbabwe. The most important factor which influenced image and performance of the tourism sector was the price charged by lodging facilities. It was followed by overall quality of the destination and the value tourists attached to Zimbabwe as a vacation destination. Immigration infrastructure and facilities for young children were rated highly. The ZTA and the Tourism Business Council of Zimbabwe (TBCZ), representing the government and the private organizations respectively in tourism and hospitality, were well positioned to influence DI

recovery and tourism performance in Zimbabwe. However, both lacked funding to conduct image recovery activities. This implied that DI recovery could take long.

The third research objective looked at the extent to which DI affected performance of the tourism sector in Zimbabwe. Most of the service providers and key informants indicated that they had been affected by Zimbabwe's unfavorable image to a large extent. Most of them were considering relocating their businesses to neighboring countries. Tourists spent more on food and beverages than on accommodation supporting the prevalence of the VFR market or transit business. The small expenditure by tourists in the destination also indicated the huge effect which DI had on performance of the tourism sector.

The fourth research objective dealt with developing a proposed DI recovery model for enhancing performance of the tourism sector in Zimbabwe. According to the proposed model, price, amenities and ancillary services had a significant influence on affective image. Ancillary services had a significant effect on tourism performance. Accessibility of Zimbabwe as a destination was found not to be significantly affecting destination performance. It can be derived from this that accessing the destination on its own is not the panacea for tourism firms to grow sales and profitability. This is because the tourist could still be constrained by prices when they are in the destination. From the study, the strongest relationship was found to exist between ancillary services and affective image. This suggests that a destination's support services could influence a tourist's feelings towards a place. In literature, a lot of attention tends to be put on tourist attractions-both natural and man-made and their capacity to draw tourists to the destination. It appears that the role of ancillary services in shaping DI is underrated. In view of the high prices of goods and services in Zimbabwe, accessibility becomes more of a hygiene factor than a key determinant of destination image and tourism performance. This finding suggested that accessibility would only be relevant in Zimbabwe's tourism matrix only if the more important drivers of image and performance such as prices, amenities and ancillary services were right. The study showed that in terms of improving the affective image and value of Zimbabwe as a destination, the first thing which needed to be reviewed were the ancillary services then the price.

5.1 Implications for theory

The model has implications for theory. Past destination image recovery models assume that image recovery is synonymous with tourism performance. There was no attempt to isolate factors which influence image and the extent to which they do so and to identify factors which influence performance of the tourism sector and establish the extent to which they influence performance. This study has contributed to knowledge in that it identified specific components which form the cognitive image, measured them and established the extent to which they influence destination image. The challenge with using spinning as suggested by [16] is that there is an assumption that the tourists and potential tourists are not quite informed about the source of the problem at hand. The proliferation of modern technology makes it very difficult for destination marketers to depend on spinning nowadays. It is noted that mobile technologies which include smartphones, mobile applications and tablets have become the main devices for users to access the Internet.

5.2 Implications for policy and practice

The model has a number of implications for policy. It was established that price is a key factor in terms of the formation of the affective image. This implies that in order for tourists to have a favorable view of Zimbabwe as a tourist destination,

more attention should be given to pricing. The stakeholder approach which informed this study as indicated in the theoretical framework, needs to be adopted and utilized. Affective image influences potential tourists to consider the destination among many and influences destination choice. Also, it was established that the friendliness of local people played a critical role in the performance of the tourism sector in Zimbabwe. However, the host community needed motivation. In [14], it is noted that eco-tourism could be used to motivate the host community since it increases employment opportunities and it enhances the tourism economy. Evidence is there to show the importance of the host community in tourism performance. The study revealed a need to attach more importance to the logistics and transport sector represented by the struggling national airline. This sector was key in increasing international tourist arrivals and generally enhancing the quality of inbound tourism. Another implication was the enforcement by government of green practices in logistical and transport-related operations. This was vital in enhancing environmental sustainability, reducing criminal activity and in attracting international tourists [34].

5.3 Implications for further research

This study focused on tourists and those employed in the tourism and hospitality industry. Further research could include the ordinary person and also explore strategic public-private partnerships and destination image recovery in Zimbabwean tourism. Respondents were selected from major cities and resorts such as Harare, Victoria Falls, Kariba and others. Possibly, if data had been collected from more areas, the research quality could have been better. Also, future research could explore the value attached by the tourism and hospitality industry on research.

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Contribution of Domestic Tourism to Sustainable Tourism Development

Forbes Kabote

Abstract

Tourism literature is awash with evidence of the value of domestic tourism to the tourism industry in general. However; there is limited knowledge of how domestic tourism is contributing towards sustainable tourism development especially in developing countries. This study explored the contribution of domestic tourism to sustainable tourism development in Zimbabwe, one developing country in Southern Africa. Using qualitative methodologies, data were collected and thematically analysed. The study revealed that domestic tourism has both positive and negative contributions to sustainable tourism development in unique ways. In conclusion, it was noted that without domestic tourism, Zimbabwe as a tourism destination would be struggling to grow its tourism product offering and expand its market share on the global tourism market.

Keywords: tourism marketing, tourism value, destination management, Zimbabwe

1. Introduction

This chapter explores the contribution of domestic tourism to sustainable tourism development. In depth, interviews with 25 domestic tourists and 20 tourism suppliers from Harare, Bulawayo, Victoria Falls and Kariba revealed positive and negative contributions of domestic tourism to sustainable tourism development. Positive contributions of domestic tourism to sustainable tourism development were in the form of destination exposition, destination appreciation and economic development. Notable negative contributions were on destination degradation and low economic value.

2. Positive contributions of domestic tourism to sustainable tourism development

Positive contributions are those facets that seem to be adding value to the long-term sustenance of the destination and the tourism industry. A number of positive contributions portray domestic tourism as a vital dimension upon which to attain sustainable tourism development. These include destination exposition, destination appreciation and economic development.

2.1 Destination exposition

Destination exposition is when a community plays a part in ensuring that the destination becomes popular within and outside the local community. Well-travelled local people expose destinations visited to other tourism stakeholders such as inbound tourists, potential investors and government departments. According to Bessière [1], knowledgeable local people have a habit of taking new people who visit an area to local attractions they are familiar with. For example, David Livingstone was shown Mosi-oa-Tunya by knowledgeable local people [2]. He later wrote about it and renamed it to Victoria Falls. Today Victoria Falls is among a number of attractions that were exposed to foreigners by well-informed local people. Destinations like Victoria Falls and the wildlife sanctuaries around it became key attractions and destinations to regional and international tourists to Zimbabwe [2].

In order to expose tourism destinations to the outside world, domestic tourists assume various positions and functions within the tourism industry such as being information bureaus, ambassadors, role models and tour guides to attractions and destinations within their communities.

2.1.1 Domestic tourists as information bureaus

Domestic tourists act as information rich, well-researched and travelled unofficial information bureaus to potential tourists both domestic and international (see [3, 4]). They provide informal information through word of mouth and personal experiences that is not regulated, not packaged, free, available anywhere and anytime to both active and potential tourists. Domestic tourists as information bureaus are not place and time restricted providing inbound tourists with alternative sources of information.

Inbound tourists rely on unprocessed information gained through word of mouth when making travel decisions as they believe it to be the truth as compared to neatly packaged information from official information bureaus (see [5]). Tourists become more informed on the prevailing environment at the destinations keeping them up to date with changes that might affect their tourism experience. In so doing they become informed travellers which is critical for tourism development.

2.1.2 Domestic tourists as tourism ambassadors

Local people who travel outside their country become default tourism ambassadors when called upon to talk about tourism in their country to people they meet outside their usual area of residence [6]. Local people leave the country temporarily or permanently.

As temporary travellers, local people need to know their country better to allow them to answer any question foreigners may ask. This way they would be able to sell their country by giving factual information based on the personal experience. Such information on destinations and attractions generates curiosity among the foreigners who would want to visit the country in future widening the tourism base for the destination country.

Local people have also migrated to other countries in search of wealth and found value in foreign lands. In the case of Zimbabwe, these are the bulk that visits Zimbabwean destinations during their own holidays as international tourists. This implies that when they left the country they did not have sufficient resources which could be used for tourism purposes but now can afford to travel for tourism purposes. This is better understood through Reed's [7] insights derived from African Americans born of slave trade parents who see tourism to Africa as an opportunity

to connect with their past. Diasporeans visit local attractions along with friends and relatives to whom they explain their own experiences in foreign lands and how foreigners travel in their own country and abroad. This would inspire local people to also want to travel creating a strong foundation for future tourism from both domestic and international tourists.

Diasporians usually visit renowned destinations that their foreign friends hear, talk, enquire about and probably have visited in the past. This allows them to familiarise themselves with these destinations in order to convince their foreign friends that they too know their own country. However, fairly unknown destinations are also popular with domestic tourists.

Some tour operators believe that if well advertised to domestic tourists, small destinations have potential to have large volumes of tourists both domestic and internationals through referrals. This draws a comparison between efforts being employed by authorities in advertising small and big destinations in the country. There is too much attention on big destinations that are frequented by international tourists at the expense of small destinations common with domestic tourists. This deliberate neglect of small destination development is counter sustainable tourism development as domestic tourists are known as more influential in building future tourists to any destination through referrals (see [8]). The others would feel being left out and also visit these places to experience them for themselves expressing the egoistic tendencies inherent among human beings (see [9]).

2.1.3 Domestic tourists as role models

Domestic tourists also assume the position of role models and ones to set the pace for inbound tourists by first visiting local attractions and destinations. This creates curiosity among potential tourists from other areas who would also want to visit these attractions and destinations. The trend of inbound tourists following domestic tourists supports Hudson and Ritchie's [8] argument that domestic tourism provides the bedrock for sustainable tourism development in any destination as more tourists are inspired to visit the local destination in future.

2.1.4 Domestic tourists as tour guides

Through domestic tourism local people assume tour guiding roles. Knowledgeable local people lead inbound tourists around showing them local attractions every time they receive visitors not familiar with the local attractions. The provision of tour guiding services by local people reinforces information sharing through social exchange (see [10]). This gives a positive image of the conduct of local people which inbound tourists would take back home, share with friends and relatives widening the base for future tourism to the destination.

2.2 Destination appreciation

Attraction and destination attractiveness is built by the people who see value in the attraction and destination, retain the value and sell it so that others would also appreciate them (see [11, 12]). Host communities seem to share similar views in that Zimbabweans have developed a higher level of appreciating beauty in objects they used to take for granted. The various views seem to agree on a number of ways in which destinations are appreciated by the stakeholders. Destination appreciation is exhibited through local people being active participants in tourism, their degree of tolerance, conduct of stakeholders at destinations, sense of ownership, management style and the development of tourists.

2.2.1 Active participation

Well-travelled local people help form a stakeholder inclusive tourism industry that guarantees customer satisfaction preparing ground for future tourists to the destination in tandem with the stakeholder theory [13]. Informed local people have become more welcoming to the tourists as they appreciate them more through active participation in tourism as tourees or tourists. Local people see more value in hosting tourists in their communities. They see value in sharing information, ideas and experiences. They know what kind of stories to share with tourists and where to take them. They even have an appreciation of the different tourists' expectations hence they are better prepared to handle them.

Unlike in the past where travelling was restricted and associated with foreigners especially those from the west, these days there is a notable paradigm shift where an increasing number of local people are participating in tourism. Over the years, local people have come to realise the economic and social value of tourism for their communities and themselves through interaction with foreigners, observing them going on holidays and their psychological needs and desire to understand the environment in which people live in and how they came to be what they are.

This implies that travelling for leisure is contagious (see [14]). When people talk about their experiences or excitedly show off pictures and souvenirs obtained during their holidays, they inspire others to also want to travel. In the process, everyone will become part of the wave as people seek to be seen as moving along with times and being modernised. Modernisation theory which argues that everyone seeks to leave behind old obsolete ways of life to modern inspiring ways of life (see [15]) better explains this thrust.

2.2.2 Tolerance

During domestic tourism, people go to new places they are not familiar with where they interact with people whose way of life they do not know. They make friends with some even getting married. The development of long-term relationships during the interaction from being pure strangers to general friends into marriage partners reinforces the arguments of the uncertainty reduction theory as applied in tourism (see [16, 17]). This cements a once sceptical relationship with unfamiliar people, customs and values into a common ground or contact upon which future travellers to these places make use of. This increases the tourists' confidence to engage with the hosts fully aware that they have some common ground upon which to build better relationships.

However, it is not easy to build such relationships especially in a multilingual countries, for example in Zimbabwe there 16 official languages [18]. Language ignorance and counter accusations between different ethnicities aggravate animosity between domestic tourists and host communities especially when one visits areas that do not speak the same language as that of the tourist (see [19]). However, with more combined efforts, such diversity can be turned around into an advantage where the ethnic groups would visit each other as domestic tourists. This would help ethnic groups to better appreciate each other and hence lead to societal integration, peace and nation building. A situation that is ideal for tourism development in any country as tourists do not want to visit volatile destinations that they perceive as risky (see [20]).

2.2.3 Tourists conduct

Host communities were able to distinguish the attractions that appeals to international tourists compared to those that appeals to domestic tourists through

their conduct. Foreigners are believed to have more respect and place more value on local attractions because they have more curiosity as compared to domestic tourists. The attraction is bound to be new and a spectacle to a foreigner; hence, it generates a lot of interest, the need to understand the phenomena and how the local people live with such spectacular attractions.

On the other hand, domestic tourists seem to be excited when exposed to new attractions they are not familiar with in their everyday life. Some families in big cities grew only exposed to urban settings without any exposure to the life outside towns hence they have greater desire to explore the countryside. To them, all the flora and fauna make an exciting encounter, hence the increase in photo safaris. With increasing value in the attractions from both domestic and international tourists, the need to conserve them increases aiding in attaining sustainable tourism development.

2.2.4 Ownership of attractions and destinations

Local people feel they are part of the local cultures on display. As such they develop greater respect for historical and cultural attractions as compared to foreign tourists (see [21]). This helps maintaining the curiosity of the inbound tourist. The differences in approach and understanding of local values and rituals have had effects on tourists and tourism. For example, in Zimbabwe, there are both domestic and international tourists that disappeared in Mount Nyangani making the mountain a dark tourism site.

To date, there is no agreed explanation as to how these people disappeared. According to Mupira [22], the scientific explanation points to quicksands believed to be burying people though it has not been proven so. On the contrary, local people attributed the disappearing of people to angry spirits (see [22]).

It seems though that both the tourists and local people believe the local people's theories as exhibited by their actions. For example, before climbing Mount Nyangani, tourists consult local traditional leadership. The traditional leadership is perceived as the owners and custodians of local culture and values. The myths around the disappearance of people in Mount Nyangani present local communities with an opportunity to interact with inbound tourists. They use their knowledge of local systems as part of the broader national systems to share safety practices required by tourists for one to have a successful hike in the mountain. Knowledge exchange is based on indigenous knowledge systems [23] where local values need to be respected. Strict adherence to dos and do nots while at sacred places are agreed to as the best way of touring sacred places. Employment is created where local people act as tour guides for climbers where their knowledge of the area increases the success of such hikes. This would influence more climbers to visit this place in future knowing that it has become safer through engaging knowledgeable local people.

Dark tourism sites have gained international attention. People visit to experience the dark encounters and remember their loved ones who disappeared in these places. Some tourists will be trying to understand spirituality and ritualism practiced by local people believed to have power over what is happening at the sites (see [24]). Anthropologists will also seek explanations to the mysteries around the disappearance of people at these places. The continued polarisation of the two perceptions would keep the myth ongoing and the destination attracting more tourists.

In other incidences, through domestic tourism, local people have come to realise the value of resources available in their communities. This is a manifestation of the realisation that each area is unique in its offerings to the tourism industry and the need to have responsible local people. Host communities should take care of resources available within their communities by practicing sustainable resource utilisation, for example when fishing.

Domestic tourists felt that tourism was part of their heritage. This portrayed tourism as an inherent phenomenon that was practiced since time immemorial, visiting and enjoying the God-given attractions. However, the difference could be that unlike foreigners who travel and spend some days in some foreign land, domestic tourists do not cross international borders to be tourists. Instead, domestic tourists travel to get their mind together and in the process will be admiring nature and being healed by nature as tourists for the duration of their experience. Domestic tourists benefit personally from tourism just like their international counterparts. A situation which is better understood through the tourist gaze concept which argues that one does not necessarily need to spend at least a day away from home to be a tourist, but rather it is the engagement in touristic activities that makes one a tourist (see [25, 26]).

2.2.5 Destination management

To continue gaining tourism benefits, authorities that manage destinations especially dark tourism sites like Nyanga are investing more in scientific ways of ensuring the safety of tourists to these destinations. For example, to increase the safety of tourists to Mount Nyangani, the following may be adopted. Tourists to fully charge their cellular phones have torches with new batteries and spare batteries, be accompanied by a trained tour guide and encouraged to stick to walkways cleared by the authorities, avail and ensure all tourists wear reflective jackets, carry whistles and bells to aid in rescue mission in the event of someone disappearing.

Adherence to the rules is expected to maximise chances of successful trips and enjoyable experiences opening the destination to more risky averse tourists who are not comfortable visiting under the current conditions. These would visit in future as it becomes clearer through testimonies of how others have experienced dark tourism attraction site.

2.2.6 Development of tourists

Building on Urry and Larsen [26] tourist gaze concept, one can argue that domestic tourism is made up of various building blocks as local people appreciate the value of tourism and its healing power. This gives the impression that at first local people just walk around within their communities unaware that they are actually being tourists in the process, later they explore further afield before travelling internationally as 'tourists'. **Figure 1** shows the development stages and degree of tourism formalisation matrix.

Tourists undergo four stages of development that build on each other without clear cut off point but rather a gradual change. This is better appreciated through the lenses of Maslow's hierarchy of needs theory [27] that argues that a satisfied

Figure 1.
Tourist development and formalisation matrix.

need is no longer a motivator hence desire to go for another higher order unsatisfied need. Equally tourists start by exploring their local communities before going further afield. Through exposure they are motivated to explore more and further away from their local community and there is need for the right political and economic environment to prevail before that can happen.

The four stages identified in tourist development are when one is a backyard domestic tourist, micro domestic tourist, macro domestic tourist and international tourist.

2.2.7 Backyard domestic tourists

Backyard domestic tourists are local people who go out of their homes for some moments for leisure. They forget their everyday challenges without spending anything in tandem with the tourist gaze concept (see [26]). Everything being done at this stage is informal with people going out for different social reasons like managing domestic disputes as given by respondent 17 who said 'When you have a problem even at home with Madam (wife) you go for a breath of fresh air'. This portrayed backyard domestic tourists as mainly individuals seeking to rest and in need of time to recollect themselves and strategise on challenges they are facing.

In backyard domestic tourism are also young couples hiding from communal eyes especially during courtship. Young people would wonder off the beaten path in search of privacy and seclusion. It is during these moments that attractions are discovered as people wonder off from home. These new attractions become the bedrock of future tourism as tourists graduate from backyard purely informal domestic tourists towards formal international tourists going beyond their own country's borders.

2.2.8 Micro domestic tourists

Micro domestic tourists are local people who would be fully aware of attractions within their locality. They would take time to visit them. They would take along friends and relatives who would have visited them but not familiar with local attractions. Local people would explain to the visitors the various stories associated with the attractions. Some would even take their families for a day visit at these attractions for picnics [25].

At this stage local people would also visit official tourism sites located within their communities where they will have to pay to access the attraction. Thus, as one goes up from being a backyard domestic tourist towards being an international tourist, they become more formal. However, at this stage, local people would be spending the day out and come back the same day. Distance covered is subject to the exact location of the attraction though distance is not the key variable but the activities one does during that time when they are tourists. Typically they are recognised in tourism as excursionists though Urry and Larsen [26] and Cohen and Cohen [28] describe them as informal domestic tourists whilst Canavan [25] refers to them as micro domestic tourists.

2.2.9 Macro domestic tourists

On the third level are the macro domestic tourists who take their time to visit attractions within their country but beyond their locality. They spend some time travelling to and from the destination and within the destination [25].

Apart from the attraction, these tourists also need such facilities like guest houses, lodges, hotels and restaurants. They spend at least a day at the destination

to enjoy. They pay for almost everything they need to use and enjoy at the destination contributing to the formal tourism industry. At this stage, all they do is formal qualifying them to be called domestic tourists as they are restricted within the boundaries of the country.
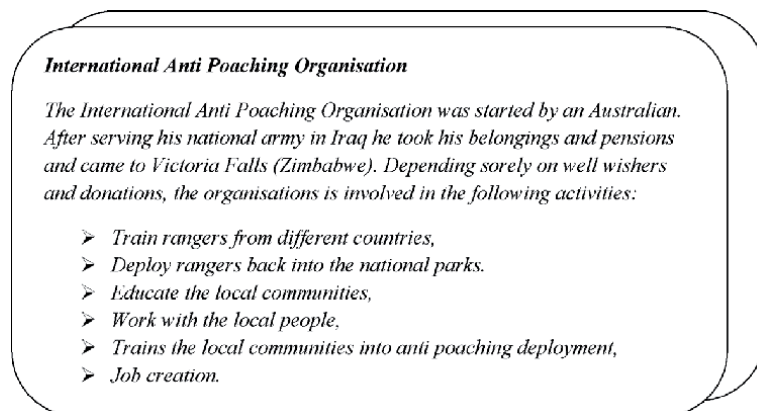
2.2.10 International tourists

The fourth and last stage is when tourists are now travelling beyond the boundaries of their country making them international tourists. At this stage, everything is formal and demands for proper planning and coordination as the people would need to cross borders, deal with foreigners, use foreign language and face unfamiliar economic, political and social environment.

The four stages of tourist development give insights into how domestic tourism can be nurtured according to the resource base of the various tourists. Those with minimal income being encouraged to stick to recreation at local attractions like community recreation areas. Whilst those with more money are encouraged to explore their country further before going international.

When local people evolve from backyard domestic tourists to international tourists they tend to have a better understanding of tourism and tourism resources. As a result they register behaviour change where they become active participants in tourism resource conservation aiding in environmental sustainable tourism development of the destination. Local people would come together and work with other interested parties to conserve nature for their own good and the good of others, present and future generations inclusive ensuring that tourism will thrive into the future satisfying the intergeneration sustainability of the tourism industry. **Figure 2** explains how local people and other organisations are working together in conservation.

This gives a community based resource management approach that all stakeholders are part of. With all conservation resources being donated by others, local people will also see value in the same resources as they also seek to understand why someone from as far as Australia would be interested in saving their God given natural resources. Tourism resources are protected from potential threats like poachers ensuring their continued existence into the future. At the same time allowing for coordinated harvesting of such resources in a manner that benefits all stakeholders through such facilities like CAMPFIRE (**Figure 3**).

International Anti Poaching Organisation

The International Anti Poaching Organisation was started by an Australian. After serving his national army in Iraq he took his belongings and pensions and came to Victoria Falls (Zimbabwe). Depending sorely on well wishers and donations, the organisations is involved in the following activities:

> ➤ *Train rangers from different countries,*
> ➤ *Deploy rangers back into the national parks.*
> ➤ *Educate the local communities,*
> ➤ *Work with the local people.*
> ➤ *Trains the local communities into anti poaching deployment,*
> ➤ *Job creation.*

Figure 2.
Example of mutual effort in conservation.

Text Search Query - Results Preview

can not benefit from them
outbreaks . Locals investing in conservation
Guided by the success of

campfire

Benefits . Community members trained are
was one programme that could
we need similar programmes in
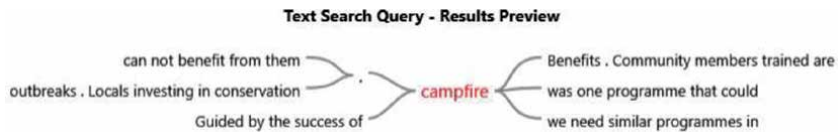
Figure 3.
CAMPFIRE activities on resource management in Zimbabwe.

Communities have benefitted from resources within their vicinity through infrastructural developments and employment creation [29]. This has motivated communities to conserve the resources that will benefit future stakeholders.

Accessibility concerns which can take the form of roads, rail, air, information, technology are real and of concern especially in remote destinations. With rural areas offering the bulk of tourist attractions Government is under pressure to make them accessible as a way of improving tourism (see [30]). Local people have structures designed to address their concerns. These include local councils, members of parliament and relevant ministries. Addressing accessibility concerns will benefit both present and future domestic and international tourists to the destination as the infrastructure developed to support them will last for some time and have long term effects to the communities and the tourism industry.

Domestic tourism allows local people to understand the different cultures among the indigenous people of a country. Tourists now understand that one has to enjoy the differences than destroy the other people and their culture. They should also help to conserve the other culture for everyone to enjoy from such cultures in future.

2.3 Attraction authenticity

Attraction authenticity is when an attraction remains consistent over time offering same benefits in the same manner as originally presented. On its own, Zimbabwe is believed to be a sustainable tourism destination as it still has its attractions intact. Zimbabwe still has its culture, flora, fauna, food, mountains and rivers unadulterated through modernisation. For example, animals are still available in the natural wilderness not zoos.

The continued practices of traditional cultures provide cultural tourists with essential attractions to enjoy. In the process allowing them to time travel back into the days when the same cultures were experienced by their forefathers through re-enactment of the experiences and listening to stories about the cultures (see [7]). Serving organic foods creates demand from healthy conscious tourists and food tourists. Making Zimbabwe a dream destination to visit that will satisfy their needs.

There are many other natural attractions available in the country that domestic tourists have helped to develop and maintain for the benefit of both current and future stakeholders. Even after the historic fast track land reform programme, there are new farmers who are investing in wildlife conservation as Zimbabweans realise that wild animals have more value from the tourism industry than just having meat. One such investor said:

> *I wanted to venture into game parking industry so I wanted to learn more about animals which can survive in this climate in Zimbabwe so I could adopt knowledge. I have a small area where the former white farmer used to have a game reserve that I want to revive (Domestic Tourist 7).*

These actions are indicative of a people that have realised their mistakes. Mistakes of destroying once vibrant game reserves and now have to revive them. This is indicative of the weaknesses of the fast track land reform programme. The programme that was adopted without due diligence on the possible short-, medium- and long term implications on communities and other stakeholders like the flora and fauna in the former white owned farms [31] which has bearing on environmental and economic sustainability of sustainable tourism development in the country.

In addition domestic tourists are helping in the discovery of new attractions with tourism value potential for the industry when they give feedback as to how visitor facilities and experiences may be improved, provide information that links different tourism sites in different parts of the country to give a complete story on available attractions.

By alerting authorities to the existence of local attractions with potential value to the tourism industry, domestic tourists are perceived as helpful in the development of tourism resource base enriching the tourism basket. Stories of how places are connected and developed establishing trails that help explain movements of earlier inhabitants of the country. For example through carbon dating, archaeological studies and fork tales educationists have been able to link Great Zimbabwe ruins in Zimbabwe with Mapungubwe Ruins in South Africa and many other ruins in Zimbabwe. As having been built by people of same origin that shared same ancestry. From cultural trails, authorities will be able to develop tourism trails through the related facilities providing a complete tour package to tourists interested in such related attractions and generating more economic benefits and enriching the social fabric of the local people hence aiding in the economic and social sustainability of the destination.

2.4 Economic development

Domestic tourism is a key driver of local economic development in destination regions [32–34]. The economic benefits of domestic tourism are felt everywhere where people visit and congregate for some time. Economic benefits cuts across informal and formal domestic tourism with some being direct whilst others are indirect.

Local economy is sustained by combined investment and expenditure of local and incoming visitors. Domestic tourists use money to buy tourism goods and services like artefacts to take back home from vendors, sleep in hotels, eat in restaurants and undertake activities. Profits generated are expected to benefit the local community through Corporate Social Responsibility by having tourism organisations donating to the local communities. Once happy with income from tourism the local communities would embrace tourism in their community making tourists feel welcome in these areas and reduce animosity and hostility towards the tourism industry. This situation is better understood through Doxey's Irridex Model (1975) where host communities and tourists interaction is normally antagonistic at first but improves as trust between the parties improves through continued interaction and flow of mutual benefits.

Profits generated in a destination are also expected to be used to develop the destination. Unfortunately it seems there is mismatch between what people believe they are paying for and what they are seeing on the ground. Interestingly local authorities were observed taking action such as repaired all the roads, filling pot holes and sometimes resurfacing a whole stretch. Street lights that last worked years ago were repaired. New bins were bought and placed at strategic places all over town. Grass was cut, rubbish picked from lawns and streets and regular refuse collection was done leaving the town clean.

These activities clearly show that the authorities have the ability to make the situation better in destinations but have little regard for the ordinary citizen and or tourist. Despite that they need the support of both local people and tourists to survive. This call for a massive paradigm shift in the way local authorities manage councils and provide services to both local people and tourists.

On the other hand, having MICE tourism whether domestic or international graced by the President helps in improving service delivery at destinations. The facilities presumably put to impress the President will remain well after the President has left to benefit the local people and the tourists. The image of the destinations will positively change in the minds of the future tourist who find the destination in an improved condition after the President's visit [35]. Taking with them positive perceptions of the destination to be shared back home.

Domestic tourists were also observed as keen lovers of traditional food items. As such, hotels and restaurants that offer such food items have to get them from local producers. Tourism financial resources will be spread to these communities expanding the reach of tourism income ripple effects in the destination region. Thus, almost everyone will feel and enjoy the value of tourism through indirect and direct benefits. This persuades them to continue supporting the tourism industry to ensure its sustainable growth.

3. Negative contributions of domestic tourism

Negative contributions are the negative impacts to sustainability of the tourism industry attributed to domestic travel. Zimbabweans who travel to various destinations have been blamed for a number of negative impacts they had on local attractions and destinations with potential to affect the long-term sustainability of the destinations. These were attraction destruction and minimal expenditure.

3.1 Attraction destruction

Conflicts have arisen in destinations as domestic tourists were seen destroying attractions. Domestic tourists have been to attractions that have been declared heritage sites and hence protected to undertake some cultural activities for example at Ngomakurira for rainmaking ceremonies. The exercises involve entering caves and clearing routes to sacred places. In so doing they got too close to the actual attraction exposing it to the natural destruction through such geological processes like weathering, rock falls, landslides and mudflows.

Other attractions that are used for cultural purposes such as Great Zimbabwe have also been threatened by local people. For example local people walk on stones at Great Zimbabwe hence loosening the whole structure exposing the site to destruction. Local people were hosts as in residents around the Great Zimbabwe who would herd their domestic animals within the heritage site. The people would walk on the stones whilst the animals would also loosen some stones exposing the site. Unlike the incoming tourists who see the magnificent work of man in the structure, local people are used to such features and hence do not value it much. This disposition is better understood through the Shona proverb that says 'chikomo chiremera chevarikure varipedyo vanotamba nacho' meaning (a hill is revered by those far away, those nearby play with it).

In different tourism organisations, there are regulations that govern the behaviour of stakeholders in an effort to make the destination sustainable. Unfortunately, domestic tourists were singled out as having little respect for regulations. Domestic tourists disregard for rules and regulations is better understood through Nozick's

Entitlement Theory [36], which argues that goods distribution is just when the goods were acquired and transferred legitimately. In this case, the domestic tourists are demanding what they believe is theirs yet is being controlled by authorities. Unless and until both parties come to appreciate the need to have the authorities manage the resources and the local people together with foreigners having to pay for upkeep of such resources, domestic tourists will remain a threat to sustainable tourism development.

The arguments fronted by the domestic tourists for not wanting to pay can also be understood through the ethnicity theory [37]. The theory postulates that ethnic minorities has unique cultural value systems that influence their behaviour. Thus equally in tourism, the theory would attribute tourism behaviour differences between people (domestic and international) to value differences based on sub-cultural norms unique to each tourist grouping. How much do they value such facilities compared to what they are being asked to pay to enjoy them.

Domestic tourists also have emotional attachments with attractions given their history as such they sometimes act in very different ways. Whilst some exhibit possessive characteristics and fight to gain control of tourism resources they believe are theirs, others would want to destroy the resources. For example, domestic tourists who visited Matopos in Zimbabwe wanted to deface what is written on the grave of Cecil John Rhodes whilst others wanted to urinate on it.

Various reasons may be proffered for wanting to destroy certain attractions. These include differences in political inclination where opposing opinions may lead to physical destruction of relics associated with the enemy or rival group. After which establish own systems as a manifestation of power over your subjects (see [38]).

The hatred for Rhodes can be attributed to his association with the history of Zimbabwe. Maylam [39] argues that Rhodes is seen as a symbol of colonialism and all the injustices experienced during the colonial era, death and suffering during the liberation war where some domestic tourists lost their loved ones. Thus, in a bid to revenge their suffering under Rhodesian systems, domestic tourists would want to deface and urinate on his grave, maybe as a way of belittling him even in death.

However, despite the emotions, Rhodes remains part of Zimbabwe's history. The history can be harvested through tourism to generate money for the country as a destination. Thus, continued emotional involvement by domestic tourists may damage the Rhodes relics such as his carts and furniture at Rhodes museum in Nyanga, Rhodes Nyanga Hotel on his once estate now a National Park and his grave at Matopos. This would remove some tourism attractions from the Zimbabwean tourism basket and is not good for sustainable tourism development in the country.

3.2 Minimal expenditure

Whilst domestic tourists are accepted as the bedrock of tourism in any country, their expenditure patterns have been low. Domestic tourists are presented as economically sensitive to distance and expenditure supporting earlier work by McKercher [40]. McKercher's [40] distance decay theory argues that when comparable offers are available between short distant and long distant destinations, domestic tourists tend to choose short distant destinations to save on time and money. However, instead of using their income to support local tourism businesses, domestic tourists do not support tourism businesses whose services they can do without. These include accommodation providers and restaurants. In so doing domestic tourism is not supportive of the broader tourism industry with only a few selected suppliers whose services are unavoidable doing business with domestic tourists. As such the quality and quantity of facilities on offer on the market is

compromised as service provider struggle to maintain standards as their income dwindles through minimal support from domestic tourists. This will have ripple effects on the tourism industry as international tourists will also shun Zimbabwe as a destination citing poor services that are not competitive.

4. Conclusion

In this chapter that explored the contribution of domestic tourism to sustainable tourism development, domestic tourism is seen as helping in exposing once unknown attractions and destinations to the outside world, having well-informed local people assuming various roles such as being quasi-information bureaus, de facto tourism ambassadors and role models and tour guides. Domestic tourism also increases destination value to the local people where they engaged in active participation as domestic tourists, develop high tolerance of incoming tourists and their conduct; exhibition of pride in attraction and destination ownership; increased investment in destination development and management and influence the growth of tourists from micro informal tourists to macro formal tourists. Positives were also noted in retaining attraction authenticity and economic development of destinations.

On the negative side, domestic tourism is blamed for attraction destruction as local people wrestled with authorities for ownership, management style, decisions on what to conserve, charges to accessing tourism resources and distribution of income generated from tourism. Domestic tourism was also blamed for the poor economic performance of some destinations since they were generally low spenders.

Evidence on the contribution of domestic tourism to sustainable tourism development suggest that without domestic tourism, Zimbabwe as a tourism destination would be struggling to grow its tourism product offering and expand its market share on the global tourism market.

5. Research limitations and future studies

This study was carried out in Zimbabwe, a developing country that was grappling with political and economic challenges. These challenges could have had an impact on how the research participants perceive the whole relationship between domestic tourism and sustainable tourism development. This might make generalisation of the results to other countries difficult limiting the study to Zimbabwe and other developing countries going through similar political and economic challenges.

Thus, recommended that similar studies be done in other developing countries that do not share similar economic and political challenges with Zimbabwe. It would also be interesting if similar studies are done in developed countries to see if the results will be comparable.

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Section 3

Tourism Trend in Different Countries

Chapter 9

Vein Thrombosis Risk in Women and Travel

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Abstract

Deep vein thrombosis (DVT) of the lower limbs is a serious condition that can lead to pulmonary embolism (PE) in about 15–24% of cases. If it is not diagnosed/treated timely, nearly 15% of these PE are lethal. The relationship between travel and staying in the same position for a long time is well-known since World War II. Generally, it is more frequent in air flights. It is also associated with the economic downturn in airplanes because passengers have limited space and have greater difficulty of moving. It is estimated that approximately 1–6% of long-haul passengers arrive at their destination with a clot in their veins, but most DVT are asymptomatic.

Keywords: thrombosis, travel risk factors

1. Introduction

The real incidence of deep vein thrombosis is not fully known, due to the fact that the studies were depended only on clinical data (the majority of the reported cases had no clinical signs) without confirmation by laboratory and ultrasound findings. A further reason is that the referred studies investigated either DVT or PE and rarely both of the diseases [1, 2]. D-dimers have prognostic value only in 50% of cases of deep vein thrombosis or pulmonary embolism [3, 4]. Most of the published studies indicate that there is an increased risk of venous thrombosis when the travel duration is more than 4 h [3, 4]. Deep vein thrombosis is a serious health issue involving at least half a million Americans each year, and at least 1 in 10 will die suddenly. It depends on the mode of travel either by air flight company or car, bus, and train based fully on all travel-related risks of thrombosis. It is estimated that the risk of such an episode occurring during a long travel is 3–5%, with no reliable international accurate data [5–8]. The reason for the increased risk

of venous thrombosis is an exclusive phenomenon of all travel-related thromboses, which play a role in clot formation. Stasis during the journey, the pressure of the "narrow" seat on the vessels, dehydration, and maybe reduced oxygen saturation are some of the factors that symptoms of venous thrombosis or pulmonary embolism do not always appear immediately. They may occur up to 8 weeks after the travel [9, 10].

Regardless of whether it is a trip by car, train, bus, or plane, travel thrombosis (for flight travel also named "economy class syndrome") will manifest up to 4 weeks after traveling according to the British Committee for Standards in Hematology up to 6 weeks after long-haul flights [9, 10]. It is estimated that 5–15% of all proven venous thromboembolism (VTE) occur in connection with long-haul flights [11, 12]. The risk is highest in the first week and then decreases continuously; the majority (approx. 60–75%) of all travel thrombosis are asymptomatic/low-symptom thrombosis exclusively located in the lower limbs, which is perceived as "unpleasant leg swelling/edema" due to long sitting with the legs hanging down [11, 12].

2. Epidemiology

The clinical relevance of these asymptomatic thromboses is questionable, but they may be the origin for the manifestation of deep vein thrombosis. So far, there is no prospective, controlled study with a sufficient number of cases (adequate statistical power) that proves an evidence-based association between air travel and the risk of venous thromboembolism (VTE). In order to demonstrate a significantly increased risk, a study including around 1 million passengers (+ controls) would be necessary [13].

The risk for VTE mainly depends on the flight duration, the number of flights within 3–4 weeks, and risk factors of each individual predisposing to VTE. According to meta-analyses from case-control studies, long-haul flights increase the risk of VTE by two to four times within the first 4 weeks. For every 2 h of extended flight time, the VTE risk may increase by 26%. The risk of VTE is not increased in healthy passengers without risk factors and a flight duration of less than 3–4 h. It should be taken into account in this context that the basic risk for VTE in healthy women under 35 years without hormone intake is 1–2/10,000/years and increases fourfold after the age of 40 [13–16]. Young women (<30 years) are up to three times more likely to experience VTE than young men. An observational study from France analyzed 116 pulmonary embolisms (PE) over a period of 13 years, which occurred immediately after landing. With approximately the same gender distribution of passengers, 78% of all PE affected women [13–16]. Overall, the incidence of PE was 0.61/1,000,000 female passengers (0.2/1,000,000 male passengers). With a flight distance of more than 10,000 km, this risk rises to 7.2/1,000,000 female passengers. According to another study to 4.8/1,000,000 female passengers with a flight duration over 12 h, the total rate of VTE in healthy women without oral contraceptives is estimated 1/5000 regardless of the flight duration [13–16].

3. Individual risk factors

At least 80% of all passengers (regardless of gender) have at least one identifiable risk factor for VTE (especially PE).

Air travel alone increases the risk of VTE by 1.8 (flight time 8–12 h) to 2.8 times (>12 h), factor V Leiden mutation by 13.6 times, and oral contraceptives even up

to 40 times; BMI > 30 kg/m^2 do not significantly increase the risk for air travelers. Already in 2003, Martinelli et al. referred to the increase in VTE risk on long-haul flights (>8 h) in connection with congenital and acquired thrombophilia (risk increase by 16 times) and oral contraceptives (risk increase by 14 times). According to a recent calculation model by Kuipers et al. based on data from a previous cohort study including employees from international companies, the estimated absolute risk for symptomatic VTE in women after long-distance flights (>4 h) and oral contraceptive use was 1/259 flights and with hormone replacement therapy 1/405 flights [2, 8, 17, 19].

The predisposing factors to VTE are mainly:

- Individual or family history of VTE.

- Presence of varicose veins.

- Pregnancy and the first month after giving birth.

- Oral estrogen-containing contraceptives: increased risk of VTE up to 20 times.

- Recent surgery.

- Cancer diseases.

Women with thrombophilia that had surgery or trauma within the last 3 months, taking oral contraceptives or being under hormone replacement therapy.

- Obesity.

- Height >1.90 or <1.60 m increased risk of VTE by 4–5 times [17–19].

- Obese patients with body mass index (BMI) greater than 30 kg/m^2 and risk of VTE increased by 10 times.

3.1 Risk factors in association to flights

Travel participation can expose passengers to a variety of risk factors that may have impact on their health. Health professionals can obtain information from the International Maritime Health Association and Aerospace Medical Association website (www.imha.net and www.asma.org), respectively.

3.2 Factors that may affect passengers traveling by plane

3.2.1 Cabin pressure

At a normal altitude of 36,000–40,000 feet, the cabin pressure equals that of 6000–8000 feet at sea level and is therefore at low levels resulting in a decrease in oxygen supply [20–22]. This is not dangerous for healthy people unless there are cardiopulmonary problems and hematological disorders, for example, sickle cell anemia. These problems are particularly pronounced when the airplane rises (because of the reduction in air pressure in the cabin, outflow from the middle ear and nasal cavities) and also during the cathode of the plane where there is an increase in air pressure in the cabin, inlet air, and the middle ear to balance the pressures. The reduced air humidity in the flight cabin of 10–20% (optimally

40–70%) in conjunction with other factors such as reduced drinking volume, excessive sweating, or increased diuresis due to increased alcohol/coffee consumption can promote the development of dehydration, respiratory diseases, and finally of deep vein thrombosis.

3.2.2 Moisture content

It is low in cabin <20% and can cause skin dryness and eye and nose discomfort. Moisturizing lotion and sunscreen are recommended, whereas contact lenses are contraindicated.

3.2.3 Ozone

It is a form of oxygen with a different structure to its molecule located in the upper layers of the atmosphere and can irritate the upper respiratory system, but eyes and nose are decomposed by heat and eliminated by compressors.

3.2.4 Cosmic radiation

There are no special effects for passengers on board of the flight. The total effective dose from natural radiation exposure in Germany averages 2.1 millisievert (mSv)/year. The International Commission on Radiological Protection recommends exposure of 1 mSv/year and 0.5 mSv/month as a guideline, within which there is no detectable risk of radiation damage. Internationally, radiation exposure during pregnancy of 1 mSv should not be exceeded totally, which is significantly lower than that associated with a potential health hazard (>20 mSv). The radiation exposure during air travel is clearly dependent on the route, altitude, and duration of the flight. The cosmic radiation in an altitude of 9–12 km is about 100 times higher than on the ground.

For short-haul flights (lower flight altitudes), a radiation exposure of on average 0.001–0.003 mSv/h and for long-haul flights (higher altitude, other flight route) of 0.005–0.008 mSv/h have been determined.

3.3 Motion sickness

It does not occur regularly except in case of atmospheric disturbances. If predisposed it is prudent to avoid alcohol and to supply appropriate medicines.

4. Recommendations

Nearly 50% of the passengers with DVT of one or more extremities may be asymptomatic. However, edema of the limb, pain, and signs as red and hot to touch skin are some of the symptoms. Unspecific symptoms of pulmonary embolism may be present, such as unexplained dyspnea, abnormal heart rhythm, chest pain, intolerance that may be aggravated by coughing or deep inhalation, coughing up blood, anxiety, dizziness, or a tendency to faint. Especially, people in high-risk groups should be informed about early recognition of these symptoms in order to seek for medical help. Preventive measures include sufficient hydration, avoidance of alcohol/excessive caffeine intake, and regular walking during the trip.

The risk of VTE is eightfold increased in patients with the factor V Leiden mutation that affects blood clotting. These passengers should be considered for heparin prophylaxis. According to the French Society of Cardiology, the probability

of venous thrombosis during an airline flight is multiplied by 2.81 in a healthy person, regardless of flight time. The risk is then increased by 26% for every 2 h of flight. Before traveling it is prudent to take the following recommendations into consideration:

Wear comfortable clothing, leave space under the front seat to allow mobility of the lower legs, change posture regularly, do exercises for feet regularly, and book aisle seat, if you are predisposed to VTE.

Walk regularly every 60–90 min, and drink a sufficient amount of fluids (at least 150–200 ml every 2 h) which is especially important for people at increased risk of thrombosis. In these passengers well-fitted elastic compression stockings until the knee are recommended and in high-risk passengers additionally the subcutaneous administration of low molecular weight heparin 2–6 h before traveling.

4.1 Pregnancy and travel

It is estimated that there is 1 pregnant woman per 1000 air travelers. Reliable data on the incidence of VTE in pregnant women with long-haul flights are so far not available. Considering an approximately fivefold increased risk of VTE during pregnancy (compared to nonpregnant women), various calculation models by Cannegieter and Rosendaal have shown an estimated incidence of venous thrombosis of 0.03–0.1% after one air travel in pregnancy. According to a cohort study including a small number of cases (26 thrombosis, 3 of them are pregnant women), the OR for DVT with air travel and pregnancy was 14.3 (95% CI, 1.7–121.0), corresponding to an estimated absolute risk of 1/109 flights [2, 23–25].

Overall, the absolute risk of VTE during pregnancy is 1–2/1000 pregnancies. This risk increases by fivefold in the puerperium. 20.4% of VTE manifest in the first, 20.9% in the second, and 58.7% in the third trimester; 95% of all postnatal VTE occur within 6 weeks postpartum. The risk of VTE in the puerperium is 20–80 times higher than that in nonpregnant women. Due to the increased production of coagulation factors and a reduction in fibrinolytic activity, hypercoagulability occurs in physiological pregnancy. Healthy pregnant women compensate this hypercoagulable state by pregnancy-induced hemodilution and the increased perfusion in microcirculation. According to the risk classification for VTE by Andersen and Spencer, pregnancy and the puerperium were considered as moderate risk for VTE (OR between 2 and 9), even in connection with long-haul flights [2, 23–25].

According to RCOG Guideline No. 37a 2015, air travel of more than 4 hours is an independent risk factor for VTE (evidence level III). This risk increases with additional individual risk factors for VTE which have to be considered in the consulting practice (overview at risk factors for VTE associated with air travel). Regardless of pregnancy, the following "thrombogenic" factors were discussed in connection with long-haul flights.

4.2 Immobilization

Long-term immobilization with sitting for hours in a "cramped" posture (especially kinking of the legs and pressure of the edge of the seat on the popliteal veins) may promote venous stasis in the lower extremities. Air travelers over 190 cm and under 160 cm height are particularly at risk. In this context, it should be mentioned that sitting by the window is associated with a twofold higher risk of VTE than sitting at the aisle. In passengers, with a BMI over 30, the risk of VTE is increased even by sixfold. Significant differences regarding the risk of thrombosis (measurement of the D-dimers) between the first/business class and the economy class have not yet been demonstrated; however, related data are limited [26–29].

Other risk factors associated with air travel are dehydration, reduced air pressure and humidity in the aircraft cabin, disruption of circadian rhythm and hypobaric hypoxia and their effects on changes in the coagulation system [30, 31].

4.3 Recommendations for prevention

So far there are no evidence-based recommendations for the prevention of VTE during air travel, but there are some based on expert consensus (mostly grade D) in various international guidelines. Only the RCOG Scientific Impact Paper No. 1 from 2013 and the ACOG Committee Opinion No. 443 of 2009 explicitly address air travel and pregnancy. A decisive prerequisite for adequate prevention (especially for pregnant women) is a careful individual assessment of risk factors by the doctor (gynecologist/family doctor) before starting the flight. This provides the basis for risk-adapted thromboembolism prophylaxis. A total of five guidelines make risk-related recommendations including risk classification for VTE after air travel [26–29].

According to the AWMF guideline 003/001 (S3), long air flights or bus trips do not require any special prophylaxis measures apart from general basic measures; in individual cases when there are risk factors, calf-length compression stockings should be considered.

If the risk is low, general measures are enough. With intermediate risk, e.g., pregnancy/puerperium, in addition to the general measures from a flight duration of 4 h, the wearing of graduated compression stockings up to the knee is recommended. The importance of compression stockings for thrombosis prophylaxis on long-haul flights (>4 h) also emerges from a 2006 Cochrane analysis (revised 2010) including 10 randomized trials [26–33].

The scientific studies (n = 2856) with moderate quality and different risk profiles for VTE were considered. The primary outcome criterion of this analysis was the rate of symptomatic and asymptomatic (diagnosed by sonography or phlebography) deep vein thrombosis. Wearing well-fitted compression stockings has shown to reduce the rate of asymptomatic deep vein thrombosis from 3.6 to 0.2% (OR 0.10; 95% CI 0.04–0.25; p < 0.00001); in addition, the frequency of leg edema was also significantly shown to be significantly decreased as reported by the LONFLIT-4 study [26–35].

If there is a high risk of VTE, in addition to compression stockings, the prophylactic subcutaneous administration of low-molecular heparin (LMH) after individual risk assessment should be considered; aspirin is not indicated in these cases [26–33].

5. General contraindications for air travel of pregnant women

Severe anemia <7.5 g/dl; otitis media and sinusitis; severe heart and lung diseases; recent gastrointestinal surgery, including laparoscopic surgery; bone fractures; risk of leg swelling, especially in the first few days after wearing one plaster cast; referred fear of flying are contraindications for air traveling [26–35].

5.1 Absolute and relative obstetric contraindications

It goes without saying that unclear symptoms such as bleeding, abdomen pain, gastrointestinal symptoms, or clinical signs of preeclampsia or thrombosis must be clarified before traveling, especially since most airlines issues demand a medical certificate about the safety air of travel. The 2nd trimester, especially the interval between the 18th and 24th week of gestation, is considered the safest time to travel because the risk of obstetric complications (e.g., premature labor) is lowest at this

time. In the third trimester, pregnancy risks, such as preeclampsia, intrauterine growth restriction, antenatal bleeding due to placenta previa, severe anemia, and the increased risk of premature birth (previous preterm birth, recurrent premature labor, and cervical insufficiency), should be excluded prior to the flight. Most airlines allow pregnant women with uncomplicated single pregnancy to travel up to (and including) 36th week of pregnancy and women with uncomplicated multiple-child pregnancy up to 32nd week of pregnancy, which is in accordance with the regulations of the International Air Travel Association. As shown in previous studies, there are still no uniform regulations for the transportation of pregnant passengers in civil aviation. It is therefore advisable to check the relevant conditions of carriage of the different airlines on their website before each flight; this also applies to the certification obligations. In addition, information about the destination/place of residence should be obtained before starting the flight, in particular about the climate, altitude, humidity, risk of infection, etc., and about the medical/obstetric (emergency) care on site [26–35].

5.1.1 Absolute contraindications

"Premature placental abruption" due to manifestation of contractions.
"Cervical insufficiency" premature labor, premature bladder jump.
"Suspected ectopic pregnancy".
"Vaginal bleeding".
"Impending abortion".
"Preeclampsia" (previous/current pregnancy).

5.1.2 Relative contraindications

"Abnormal child growth".
"Previous abortions/ectopic pregnancy".
"Maternal age <15 or >35 years".
"Multiple pregnancy".
"Placenta previa, placental disorders" [26–35].

6. Discussion

6.1 General effects of travel in pregnant women's health

The association between air travel and pregnancy outcome concerning early or late pregnancy loss, incidence of malformations placenta abruption, etc. is very limited. The average altitude for commercial long-haul flights is 10,000–12,500 m. The air pressure drops from 760 mmHg (at sea level) to 560 mmHg at flight level. This drop-in air pressure is largely compensated for by the cabin pressure in the aircraft (equivalence to an altitude of 1524–2438 m above sea level) so that an altitude of about 12,200 m is tolerated by the passengers without hypoxic stress. The partial pressure of oxygen in the arterial blood depends on the lung function (cave: chronic obstructive pulmonary diseases); in healthy passengers it drops from 95 mmHg to 53–78 mmHg in the airplane, and the arterial oxygen saturation decreases from 97 to 99% to 90–94% [36–41].

For healthy pregnant women who have sufficient oxygen saturation, this "relative" hypoxia in the plane poses no significant risk even for a healthy fetus. No influence on the fetal heart rate during short-haul flights was observed [30, 31, 42]. Due to the approximately 50% higher hemoglobin concentration compared to the

mother, the 20–30% higher oxygen affinity of fetal hemoglobin and the Bohr effect which guarantees a preferred oxygen release on the placental level, and negative effects on the fetuses are not to be feared. There is no need to fear mild hypoxia associated with air travel. However, this does not apply to pregnant women with reduced oxygen saturation due to underlying diseases (e.g., severe anemia, chronic obstructive pulmonary diseases) [41–48].

In general, a general attest must be introduced for the transportation of all pregnant passengers from the child's extrauterine viability, i.e., from the 25th week of pregnancy. The certificate should be issued in the period from approximately 1 week to 2 days before departure in order to guarantee that it is up to date to some extent. In addition to the exact gestational age, risks must also be specified which should be related to the health risk for both the mother and the child, and a distinction between single and multiple pregnancies should be documented. Concerning multiple pregnancies, long-haul flights up to the 28th week of pregnancy or short-haul flights up to the 32nd week of pregnancy in these cases are recommended to prevent premature birth. Short-haul flights are those routes on which an airport can be reached within 1 hour. Considering the average duration of pregnancy and birth in the case of single pregnancies, transport on long-haul flights up to the 36th week of pregnancy and on short-haul flights up to the 37th week of pregnancy is possible [41–48].

6.2 People's health problems and thrombosis

For all traveling people, the risk of VTE is slightly increased. It is significantly increased in passengers who have particular risk factors such as advanced age, taking estrogen-containing oral contraceptives or are at hormonal replacement therapy, obesity, and the presence of factor V Leiden mutation, at most high or very low body height [49–52].

The underlying mechanism responsible for travel-related thrombosis is not fully understood. But the fact that risk has been found for all modes of travel suggests that immobility and associated venous stasis may be a key factor in generating the disease. The reduction of oxygen levels may be an additional reason for the initiation of thrombus formation during long air travel in groups of people with specific risk factors.

Additional abovementioned thrombogenic risk factors increase the risk of VTE significantly.

Low air pressure and reduced blood oxygenation increase the risk of deep vein thrombosis in susceptible air passengers.

To date, deep vein thrombosis in air passengers has been mainly associated with the fact that they have been stationary for long periods of time as is usually the case in air travel.

Deep vein thrombosis occurs in the lower limbs when there are long periods of inactivity or sedentary activity.

The risk is that the clot can move through the bloodstream to the heart, lungs, and brain. This can happen hours, days, or weeks later after the initial formation of thrombosis. It is the cause of a heart attack or stroke.

Studies have shown that the risk of deep vein thrombosis of the lower limbs increases by two to four times after an air trip [49–52].

They believe that the main culprit is the hypoxia of blood resulting from low cabin pressure and reduced oxygen levels of passengers compared to what is happening on the ground. The decrease in oxygen concentration in the blood seems to activate the coagulation system leading to the formation of clots.

In addition, this research provides us with important information about who is at greater risk than others.

These include people carrying the Leiden-type factor V mutant of the blood coagulation system, women taking birth control pills, patients recently undergoing surgery, and some groups of cancer patients.

High-risk patients may be prescribed anticoagulant medicines such as aspirin, heparin, dipyridamole, clopidogrel (Plavix®), and others after medical evaluation and advice.

In addition, alcohol should be avoided in the flight, and passengers should be able to stretch their legs and do as much exercise and walking as possible. They can also wear special socks. These measures improve blood circulation and help prevent thrombosis and its consequences.

6.3 Air travel, pulmonary embolism, and thrombosis

Air travel can cause clots of the deep veins of the thigh and feet [49–52].

This thrombosis can in turn cause a pulmonary embolism which is a very serious condition which can cause death.

Thrombosis in the lower limbs (thighs, ankles, legs) is due to thickening phenomena that occur in the deep long veins due to the many hours that passengers remain seated.

Lack of physical movement, dehydration observed in passengers, and alcohol consumption in flight are considered to be among the factors contributing to the occurrence of dangerous thrombotic conditions and pulmonary embolism.

In addition, some people may have inherited diseases with an increased risk of thrombosis and thus be at greater risk than air travel.

To date, 100 cases of pulmonary embolism due to venous thrombosis of the lower limbs have been described. A significant number of cases have died due to this condition. A case of lower limb amputation due to thrombosis has recently been described.

Research shows that clotting problems occur in the lower limbs and in up to 10% of long-haul passengers.

In fact, this syndrome is called by some people the "financial position" syndrome because passengers in these places do not have enough space in front of them to move their legs and remain motionless for many hours.

Researchers believe the incidence of pulmonary embolism after a long plane trip is higher.

The reason they are not detected is because the passengers are not immediately aware of what is happening or because the clinical signs are manifesting themselves severely a few hours after disembarkation. Even sudden deaths on flights or on landings may be due to a pulmonary embolism.

Some even argue that the problem is even greater and that the incidents detected constitute a very small percentage of those occurring.

6.4 Precaution that must be taken into account during traveling

Passengers should drink plenty of water to eliminate the risk of dehydration.

Avoid drinking alcohol and excessive caffeine intake.

Passengers should be able to get up, walk, do small exercises, or even stretch or move their lower limbs. It is also not good to cross legs.

Patients with a personal or family history of thrombosis should consult their physicians prior to an air trip [5, 52–54].

Some researchers recommend that passengers wear special high-pressure socks to improve blood circulation to the lower limbs. This is especially true for people at increased risk for thrombosis.

For some passengers, taking low doses of aspirin before a long flight can be beneficial. The World Health Organization recommends [5, 52–55] the following:

- Do not leave space under the front seat to allow for freedom of movement for the lower extremities.

- Exercises for feet.

- Often stop by car to walk, or get up regularly for a bit of unwinding and walking on an airplane, train, or boat.

- Do not drink too much water and avoid drinking alcohol.

- For persons at high risk of thrombosis, elastic compression with special socks and sometimes administration of low molecular weight heparin are recommended (2–6 h before travel). The aspirin intake is controversial.

The mechanisms that have been implicated to date for this phenomenon are venous posture due to prolonged sitting posture, pressure exerted on the large vein behind the knee, blood buildup due to reduced intake and increased fluid loss, abnormalities in the system, and blood coagulation created in the subarctic and hypoxic environment.

Air travel or road trips, for many hours, run the risk of vein thrombosis in the legs and even more severe, pulmonary embolism. Posttraumatic thrombosis accounts for about 10% of all thromboses that occur.

According to the American College of Chest Physicians (ACCP) (2012) British Committee for Standards in Hematology (BCSH) (2011), British Thoracic Society (BTS) (2011) Traveler's thrombosis: International Consensus Statement (Wien 2008) [21, 57–59], low-risk, medium-risk, and high-risk factors for VTE after air travel are as follows:

Low risk

- No individual risk factors other than long-haul flights (ACCP, >6 h; BCSH, >6 h; BTS, >8 h/several flights in a short time (approx. 4 weeks)).

Medium risk

- Previous provoked VTE.

- Thrombophilia.

- BMI >30 kg/m^2.

- Positive family history for VTE.

- Pronounced varicose.

- Combined oral contraceptives.

- Hormone replacement therapy.

- Pregnancy.

- Puerperium: within 2 weeks (BTS) orup to 6 weeks (BCSH) postpartum.

- Height >190 cm/<160 cm (BTS).

High risk

- Previous idiopathic VTE.

- Cancer.

- Major surgery/trauma within.

- The last 4–6 weeks.

- Severe underlying diseases.

- Immobilization (e.g., plaster cast).

- Homozygous or combined congenital thrombophilia.

- ≥2 risk factors under B.

Recommendations for the prevention of deep leg vein thrombosis on long-haul flights are as follows:

Low risk

General measures:

- Physical activity: regular walking around in the corridor every 2–3 h.

- Movement of the legs (calf muscles, e.g., "foot rocker") at the seat.

- All 30 min, isometric exercises.

- Sitting in the aisle (freedom of movement):

- Feet should reach the floor.

- Cave: bending the popliteal veins.

- Avoid dehydration:

- Regular liquid intake (at least 250 ml every 2 h).

- No excessive alcohol/coffee enjoyment.

- Do not take tranquilizers/sleeping pills:

- Cave: prolonged sleep in a cramped posture.

Medium risk

Pregnancy, puerperium.

- Customized, graduated compression stockings to the knee (15–30 mmHg compression in ankle).

High risk

Previous VTE, symptomatic thrombophilia.
Additional (grade 2C/2D):

- Low molecular weight heparin (e.g., 5000 IU dalteparin s.c.) 6–12 h before the flight and 1–3 days after the flight (individual decision).

- No aspirin.

6.5 What causes vein thrombosis and pulmonary embolism?

Clots can be formed at various points, in the legs and in the thighs, with similar problems. All veins have valves every 10–12 cm, and some of them can form clots.

If the clot stays there, then the member has swelling and pain. Small fever may occur, and the member may be warmer. The most serious complication, however, is pulmonary embolism (PE), which occurs in 25% of cases with thrombosis. If the clot is detached, it is transported through the veins and eventually clamped to the lung. The condition can appear immediately or even 2 weeks after the long journey. The most common symptoms to suspect pulmonary embolism are sudden chest pain, dyspnea, dizziness, fever, hemoptysis, etc. Symptoms depend on the size of the plunger and the size of the vessel, the age of the person, if he or she is suffering from other diseases, etc. Immediate admission to the hospital is required for diagnosis and special treatment. In rare cases, a part of the clot can cause embolism in other organs, such as the brain.

People predisposed to thrombosis, as well as patients with previously mentioned illnesses, should be consulted by their physician prior to long journeys. In these individuals, it is recommended to inject antithrombotic (heparin) once 24 h before flight. It is also recommended to take aspirin before takeoff, except for pregnant women who are not allowed [5, 53–56].

6.6 Practical and useful tips

- Wear comfortable clothing.

- Leave space under the front seat to allow freedom of movement for the lower legs.

- Change your posture regularly and do exercises for your feet.

- Take regular breaks to walk.

- Drink plenty of liquids.

- For persons at high risk of thrombosis, elastic compression with special socks is recommended and sometimes administration of low molecular weight heparin (2–6 h before travel).

People suffering from diseases that increase the risk of venous thromboembolism should follow the guidelines above, and the possibility of administering low molecular weight heparin (2–4 h before or earlier before flying) may also be considered.

In patients receiving anticoagulants, the dose should be reassessed.

Overall, however, there is insufficient data on pregnancy complications after air travel.

Occasional air travel, especially in the second trimester, is safe for healthy pregnant women and their child, according to the current state of knowledge, and has no negative effects on the course of pregnancy. Before starting the flight, the gynecologist should carefully ascertain the patient's own (pre-existing illnesses) and obstetric history, as well as individually check the previous course of pregnancy (pregnancy-related risks) to identify pregnant women with risk factors who are advised against traveling by air. In any case, it is advisable to consider the different conditions of carriage of the airlines (including mandatory certification) and to obtain information about the destination of the flight. A drop-in air pressure, a reduction in partial oxygen pressure, and air humidity are generally not a problem for healthy pregnant women and their children. Dehydration during long-haul flights should be avoided. A radiation dose of 1 mSV should not be exceeded during pregnancy; pregnant women with frequent long-haul flights near the pole (e.g., Europe-North America) should take care of this. Most people believe that commercial air travel does not increase the risk of pregnancy complications (e.g., premature birth) in healthy pregnant women [5, 53–57, 60].

The estimated radiation dose for infants/toddlers should be 0.05 μSV/scan, which for the fetuses are negligible [61].

7. Conclusion

Travel thrombosis in connection with long-haul flights (>4 h flight time) are rare (about 1/4500 passengers) and mostly affect the deep veins of the calf muscles. The proportion of pulmonary embolisms is significantly higher for female passengers than for male passengers (flight duration > 12 h: 4.8–7.2/1 million). The risk of venous thromboembolism depends primarily on the duration of the flight, the number of flights within 4 weeks, and individual thrombogenic risk factors. As a result of hypercoagulability and venous stasis, the risk for pregnant women is increased, and it is estimated at 0.03–0.1%. Long-term immobilization is the most important predisposing factor; the importance of hypobaric hypoxia and dehydration is controversial.

Before starting the flight, especially pregnant women are advised to carefully assess their risks. To reduce risk, in addition to general measures (e.g., physical activity), wearing graded, well-fitting compression stockings is recommended and if there is a high individual risk (e.g., previous VTE), prophylaxis administration of low molecular weight heparin before and immediately after the flight.

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Manta Ray Tourism

Maulita Sari Hani

Abstract

Manta rays are flagship species for marine conservation because of a number of threats including anthropogenic, overfishing, plastics (microplastics), over tourism, commercial trade (gills for medicine), and chaotic shipping lines where they often injured or killed. Because of these reasons, manta ray face risk of extinction and listed on the Red List of IUCN. A number of studies present the value of this fish estimated millions of dollars per year from tourism which show much greater valuable alive than dead. Responsible manta ray tourism encourages stakeholders to protect the species by generating incentives from tourism while develop conservations initiatives to protect the species. Desk study on current literatures were reviewed to identify the role of stakeholders in supporting the sustainable management of manta ray tourism. This chapter explored the operations of manta ray tourism in Indonesia as the study areas. In summary, to reach the positive contributions from manta ray tourism, there is an important role of co-management between stakeholders to ensure the sustainable operations and conservation of the ecology, economy, and socio-culture.

Keywords: wildlife tourism, ecotourism, tourism experience, community-based, marine protected areas, elasmobranch, conservation, sustainable tourism

1. Introduction

In the past decade, researchers have conducted studies on the increasing numbers of tourists who are observing marine wild animals, including manta ray tourism around the world [1–6]. It is still debatable how wildlife tourism possible bring positive contributionsn while other type of tourism rae still struling to achive its sustianbility. This chapter will explore the current opartions of manta rays toruism in Indonesia and identify the possible benefits form this type of tourism while also reviewed other benefits from different areas worldwide.

2. Manta rays

Deakos [7] described manta rays as belong to the taxonomic family *Mobulidae* which consists of 2 genera, *Mobula* (9 species) and *Manta* (2 species). A recent study by using molecular biology (DNA) combined the genera *Mobula* and *Manta* as one genus (*Mobula*) and confirmed the presence of two manta ray species, *Mobula alfredi* and *Mobula birostris* (**Figure 1**). The genus *Mobula* is characterized by the presence of one lobe on each side of the head, wing-liked pectoral fins, terminal mouth and a stingless tail [8–11]. Unique characteristics possessed by manta rays are two head lobes (horns) and a frontal lobe for filtering plankton. **Figure 1**
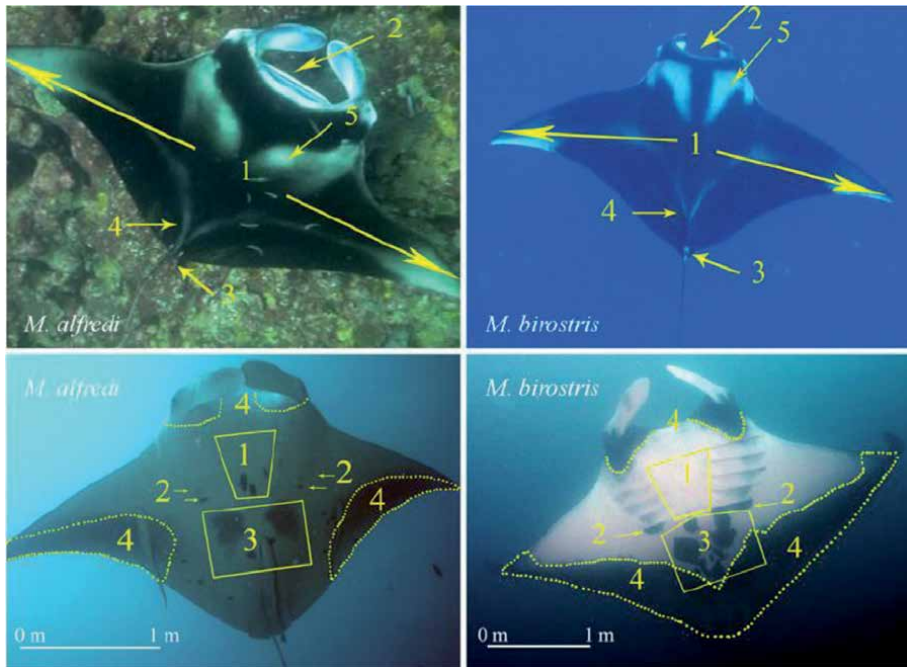
Figure 1.
Mobula alfredi *and* Mobula birostris *(photo by Csilla Ari/University of South Florida).*

shows the marks on the upper shoulders which form a pattern loosely resembling the letter "T" (*M. birostris*) or "Y" (*M. alfredi*) and serve as a marker for distinguishing the species. Furthermore, each individual manta ray has unique color variations, spotted patterns on the lower shoulders which can serve as fingerprints.

Among the largest fish species in the world, manta rays are gentle giants and are widely perceived as a charismatic species representing the ecological and social/cultural values of marine biodiversity. Manta rays are large planktivorous elasmobranchs generally found in tropical, subtropical, and temperate waters (**Figure 2**). Like other species in the mobulid family, manta rays are filter feeders [9]. Their frontal lobes help direct water to their mouths and over their highly sought-after gill rakers, where a great variety of planktonic organisms are filtered, including copepods, mysid shrimps, and arrow worms [12]. According [9, 13], they live for about 50–100 years and reach sexual maturity at an age of 10–25 years. **Figure 1** shows *Mobula alfredi*, which grows up to an average wingspan of 3 m to 4.5 m with a weight of around 1.4 tones [7]. *Mobula birostris* is larger with a wingspan of up to 7 m and weight of up to 2 tonnes [10, 14].

Much like many other elasmobranchs, manta ray populations are comparatively small because manta rays are slow to mature, slow to grow and reach maturity, and give birth to a small number of offspring with long gestation times, not to mention their large size [8, 15]. These characteristics make manta rays intrinsically vulnerable to overexploitation, as the recovery of depleted populations will be slow at best [8]. In 2014, the Indonesian Ministry of Marine Affairs and Fisheries (MMAF) declared Indonesia as the world's largest sanctuary for manta rays. MMAF prioritizes manta rays in Indonesian fisheries management under MMAF Ministerial Regulation No.4 of 2014 as a fully protected species based on Constitutional Act No.5, 1990. CITES has also listed manta rays in Appendix II meaning they are not necessarily imminently threatened with extinction, but trade in these species is controlled to avoid utilization incompatible with their survival. Furthermore, the

Figure 2.
Manta rays in Kofiau - Raja Ampat (photo by Patrick kun photography).

Convention on Migratory Species (CMS) listed manta rays in Appendices I and II while the International Union for the Conservation of Nature (IUCN) lists manta rays as 'Vulnerable' in the IUCN Red List [16].

3. Manta ray tourism

Charismatic species of marine wildlife become a driver for economic growth through marine wildlife tourism [17, 18]. Visitors want to experience seeing these animals first hand. Because of this reason, conserving marine species has benefits not just from non-consumptive uses, but also from the value of the ecosystem services provided by the species. According to [19]. Marine wildlife tourism is "any tourist activity with the primary purpose of watching, studying or enjoying marine wildlife". [20] gives a wider definition of marine wildlife tourism as activities that offer the acknowledgment of marine natural assets where the activities include fauna and flora whether marine or not. [21] describes marine wildlife tourism as offering different encounters between visitors and endangered species with a particular code of conduct where they are being cared for tourists' experiences. This statement is supported by [22] who emphasizes that the experience of wildlife tourism includes observation of the target animals in the wild, semi-captive, or captive environment. Marine wildlife tourism often provides encounter activities involving visitors which may be associated with limited seasons such as annual migration seasons and breeding times. Furthermore, [23] argues that, with some safeguards to protect the marine environment by limiting physical construction, this type of tourism can be sustainable. The role of government plays a significant role in providing guidelines and regulations requiring private operators to implement codes of practice for wildlife watching [20, 24]. In addition, marine wildlife tourism offers opportunities for education by encouraging awareness, knowledge, and attitudes about marine species and their environment as well creating an incentive for conservation to minimize human impacts [19, 20, 22, 24].

In the past decade, researchers have conducted studies on marine wildlife tourism, including manta ray tours, that showed a dramatic increase of global tourist numbers

[1, 2, 4, 19, 20, 22, 24, 25]. According to [4], manta ray tourism is a recreational activity to observe manta rays in the wild by diving, snorkeling, and observing from a boat (**Figure 3**).

Manta ray tourism has become popular with tourists because of the unique morphological characteristics and the behavior of these animals that are calm and friendly to humans. Manta ray encounters add an extra dimension to the visitor experience, in addition to their appreciation of conservation areas and related species. **Table 1** show global tourism hot spots for manta ray sightings.

Figure 3.
A tourist swimming with a manta ray in Kofiau - Raja Ampat (photo by Abdy Hasan/Conservation International Indonesia).

Australia	Great Barrier Reef Coral Bay
Ecuador	Isla de la Plata
Fiji	Kadavu Island
Hawaii	Kona & the Big Islands
Indonesia	Nusa Penida Island Komodo national Park Raja Ampat
Maldives	Throughout the Archipelago
Mexico	The Revillagigedo Islands Isla Mujeres & Isla Holbox Yucatan
Micronesia	Yap, Palau, Kiribati & Guam
Mozambique	Tofo Beach
Philippines	Manta Bowl, Donsol
Thailand	Koh Bon, Similan Islands
USA	Florida (Flower Garden Banks National Marine Sanctuary)

Table 1.
Manta ray tourism worldwide (adopted from [13]).

4. Manta ray tourism in Indonesia

Manta rays are found in the waters of Indonesia throughout the year but easily found at certain periods when 90% of tourists have the opportunity to see this fish. This condition makes the waters very unique and interesting to visit. These locations have also become the hotspots for manta ray tourism in Indonesia and combined make the second-largest manta ray watching industry in the world [4].

In 2010, Indonesia adopted the National Plan of Action for Conservation and Management of Sharks and Rays 2010—2014 as guidance and a documented commitment to implement sustainable management of sharks and rays in Indonesia. In alignment with policy at the national level, initiatives to protect the species at the regency level are also on the rise. Shark and ray protection and sustainable management policies are being formulated and implemented in several regions in Indonesia, mainly in areas where marine tourism is flourishing as a top tourist attraction and plays an important role in maintaining a healthy ecosystem. Pioneered in 2010, the Raja Ampat Regent enacted a decree to establish Raja Ampat waters as a shark and ray sanctuary, the first of its kind in the Coral Triangle. In 2012, the decree was then upgraded to Raja Ampat Regency Regulation Number 9 of 2012, leaving no loopholes in the law. Following this, in 2013 the Regent of Manggarai Barat formulated a similar decree addressing the protection of whale sharks and manta rays in Manggarai Barat Regency. Furthermore, in 2014 the Indonesian government declared full protection for both manta ray species and declared the entire Archipelago as a Manta Ray Sanctuary to support conservation and development of sustainable manta ray tourism.

There are a number of widely known manta ray sub-populations inlcuding in Raja Ampat, Komodo, and Nusa Penida based on studies conducted by Germanov and Marshall [26], Beale [27], and showed on **Figure 4**.

4.1 Nusa Penida

Nusa Penida is a sub district of Klungkung, Bali. Famous for its iconic landmarks, sandy beaches, and exceptionally high levels of marine biodiversity.
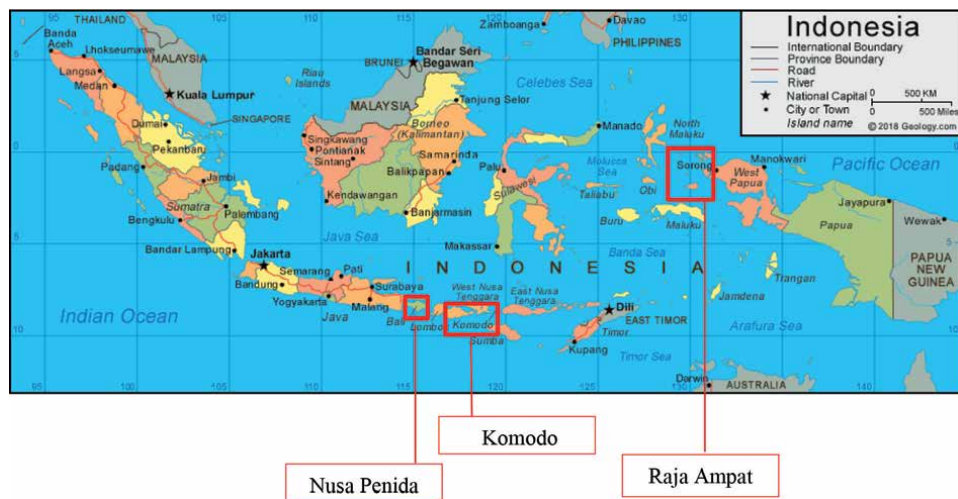
Figure 4.
Popular manta ray tourism in Indonesia (https://geology.com/world/indonesia-satellite-image.shtml).

Nusa Penida's underwater seascape invites thousands of tourists each year, especially since its designation as a priority site for tourist development. In recognizing Nusa Penida's potential for ecotourism as well as encouraging a blue economic growth, a part of it was established as a marine protected area. The Nusa Penida MPA is divided into different zones, with one particular zone allocated for marine tourism [28]. This led to a paradigm shift of socio-economic proportions for the people of Nusa Penida. Prior to its recognition, the people of Nusa Penida used to be farmers, fishermen, and craftsman. However, as the influx of tourists continues to increase, the demand for accommodation and amenities rises along with it. Rather than abandoning their previous occupations, the people of Nusa Penida instead integrate the new into the old. By mornings and nights, they tend to their farms and by day they tend to their jobs in the tourism industry. The community's shift to more tourism jobs is also, in part, fuelled by the local government's strict policy of mandating tourist operators and businesses to hire 50% of their work force from the local communities [29]. Nusa Penida is within the world's coral triangle and has high marine biodiversity. According to TNC, within the sub-districts of Nusa Penida, Nusa Lembongan, and Nusa Ceningan there are 1419 hectares of coral reefs, 230 hectares of mangrove forests, and 108 hectares of seagrass beds. Nusa Penida is famous for manta rays (**Figure 5**) and mola-mola.

4.2 Komodo National Park

Komodo National Park, established in 1980, is located between the islands of Sumbawa and Flores. This park's main purpose is to conserve the Komodo dragon (*Varanus komodoensis*) and its habitat, together with the entire biodiversity of the area. In 1986, UNESCO declared Komodo a World Heritage Site and a Man and Biosphere Reserve due to the Park's biological importance [30]. Komodo National Park has a total (land and water) area of 1817 km, with rich marine environments including coral reefs, mangroves, seagrass beds, seamounts, and semi-enclosed bays. More than 1000 species of fish, some 260 species of reef-building coral, and 70 species of sponges are found there, along with dugongs, sharks, manta rays, at least 14 species of whales and dolphins, and sea turtles. Manta rays in Komodo National park are a popular tourism attraction. In 2014, the Bupati of Manggarai Barat formulated a decree to address the protection of manta rays in Manggarai Barat Regency (**Figure 6**).

Figure 5.
A tourist swimming with manta rays in manta point - Nusa Penida https://www.viator.com/en-ZA/tours/Kuta/Nusa-Penida-Snorkeling-Day-Trip-Discover-Manta-Ray/d22290-135130P26.

Figure 6.
A tourist diving with manta rays in Karang Makassar - Komodo https://amazingkomodo.com/store/product/
diving-komodo-4-days.html.

4.3 Raja Ampat

According to [31] Raja Ampat encompasses more than 4 million ha of land and sea and is home to more than 1400 species of fish and 537 coral species (75% of all known coral species). Raja Ampat is located in the north-western tip of Indonesia's West Papua Province, and includes the four large islands of Waigeo, Batanta, Salawati, and Misool, with hundreds of smaller islands [31, 32]. This MPA is a globally significant biodiversity hotspot because it provides a vital source of nutrition and a basis for local livelihoods. Manta rays serve as a conservation icon for Raja Ampat regency [3]. Although manta ray populations have been severely depleted elsewhere in the region, they are still abundant in the waters of Raja Ampat and have become a wildlife viewing tourism attraction (**Figure** 7). In 2012, the Raja Ampat Regency established a decree (No.9/2012) for the protection of manta rays.

Tourist volumes in these three locations has increased gradually. According to [5], approximately 70% of all tourists visiting Komodo view manta rays. This number was confirmed by the dive operators in Labuan Bajo, who stated that their trip packages included manta ray tourism, komodo viewing, and trekking. The annual report confirmed there were more than 50% of the annual tourists who joined manta ray tours. Previous studies from Hani et al. [33, 34] also confirmed the number of manta ray tourists in Raja Ampat and Nusa Penida show more than 50%.

Theses tourists visited the areas during the best seasons to dive or snorkel with manta rays which varied between research locations but manta rays can be found year-round. The estimated average sightings of 1–10 rays applied for diving and snorkeling, viewing from a speed boat, fisherman's boat, or a live-aboard. The involvement of local community members ranged from boat rental, equipment rental, making or selling manta ray souvenirs, providing accommodation, working as employees in tourism, and rangers. Below table describes existing manta ray tourism operations (**Table** 2).

Based on above table, a number of user fee system and control are varied. In Raja Ampat under the government management agency (UPTD) the user fee system are allocated into UPTD (84%) and local government (16%). These income distribute for conservation activities including patrol, marine resources monitoring (including manta rays), community education and outreach, conservation and tourism information centre. **Figure** 8 described the its flow of transparency. In Komodo

Figure 7.
A tourist diving with manta rays in blue magic - Raja Ampat https://blog.nationalgeographic.org/2014/09/17/transforming-indonesias-manta-fisheries/.

	Nusa Penida	**Komodo**	**Raja Ampat**
Species	*M.alfredi*	*M.alfredi, M.birostris*	*M.alfredi, M.birostris*
Manta ray season	August to October	March to December	October to May
Tourist activity	Diving, snorkeling	Diving, snorkeling, viewing from boat	Diving, snorkeling
Average number of manta sightings	1–10 indvidual	1–5 indvidual	1–10 indvidual
Entrance fee (Foreigner)	U$D 5	U$D 17	U$D 68
Community engagement	Tourism services (owners & workers), park officer	Tourism services (owners & workers), park officer	Tourism services (owners & workers), park officer

Table 2.
Manta ray tourism in Indonesia (adopted from [33]).

and Nusa Penida, the user fee based on the quantity of tourists activities (snorkeling, diving, trekking, etc). There is a different amount of user fee between local (domestic) tourist and international tourist.

In order to ensure the responsible behavior of manta ray tourist, there are some instructions, designed as a guide for tourists activities while interacting with manta rays. The local patrol ensure the implementation of code of conduct by monitoring the tourist activities to limit any negative impacts. **Figure 9** shows a number of interpretation materials provided for the tourists in Raja Ampat. Rules applied in Manta Sandy site include information on restricted zones, entry and exit points for speed boats and tourists, standard operating procedures, code of conduct for tourist interaction with manta rays, and manta ray education. The officers intensively socialize the rules and monitor visitor activities including the tourists and the operators.
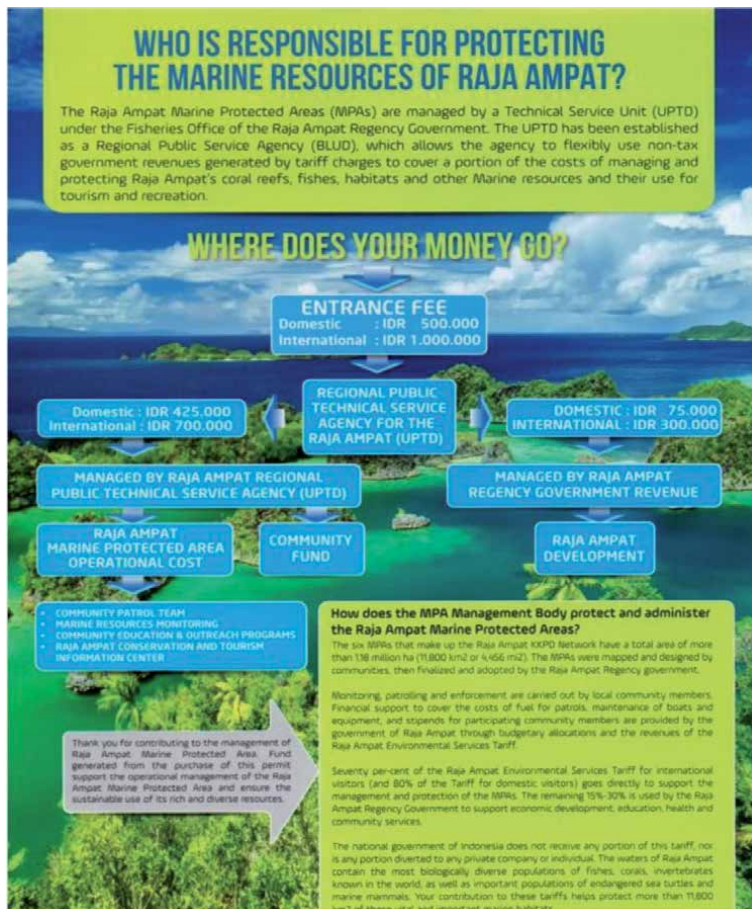
Figure 8.
Distribution of entrance fee in Raja Ampat.

In Raja Ampat, There is a facility named Manta Sandy Post (**Figure 10**) that was built in 2016 under an agreement between the stakeholders belonging to the Manta Rays Working Group (MRWG). The MRWG members comprise community leaders, tourism businesses, government agencies, professional associations, educational institutions, and non-governmental organizations (NGOs). Manta Sandy Post is run as a community-based management initiative where the stakeholders are engaged in supporting the funding and facilitate the physical operations. The officers are local people working under the BLUD, which manages the small MPAs scattered across the District. The BLUD officers are responsible for supervising the operation of sustainable manta ray tourism (tourists and operators) and tourist satisfaction, as well as monitoring violations and payment of fees for environmental services paid by tourists. Each tour operator is required to make a reservation at least one day in advance by phone or short message to the officer and to book for schedule availability. Based on the carrying capacity study conducted by [3], the limit for visitors allowed to be in Manta Sandy has been set at 20 divers and or snorkelers per hour. Meanwhile in Nusa Penida, a study of carrying capacity on manta ray sites has not been conducted so there is no limits on manta rays tourist numbers yet. In addition, The Komodo National Park has conducted related studies in 2017 and starting to implement a quota number on manta rays tourists on each site by working with the dive operators (**Figure 11**).

Figure 9.
Interpretation materials for manta ray tourists.

Code of conduct and carrying capacity are not the only tools to sustain the manta ray tourism. A number of other initiatives are also essentials by utilizing the engagement of all stakeholders. Conservation initiatives at the three research locations have shown genuine contribution both from public and private sectors. The local operators and tourists participate in collecting plastics while diving and snorkeling, the operators also initiating regular beach clean-up activities, waste management, recycling, monitoring and patrol, species monitoring and photo ID. Different initiatives implemented in different locations where in Nusa Penida focusing on education and plastic collection while in Komodo and Raja Ampat there were more varied activities including citizen scientist (CS) to monitor the sightings of manta rays. Monitoring plays an important role to ensure the continued existence of manta rays and thus the continuity of tourism. **Figure 12** shows the conservation efforts by Conservation International Indonesia in deploying satellite tagging to tract manta rays in Raja Ampat. The same method has also conducted in Komodo and Nusa Penida by Marine Megafauna Foundation. In addition, photo ID of manta

Figure 10.
Manta Sandy post.

Figure 11.
Deployment of acoustic receiver and tagging (photo Conservation International Indonesia, 2020).

ray also collected from tour operators, community groups, and visitor were encourages to participate in manta ray conservation management.

5. Discussions

Manta ray tourism operations in Indonesia show a number of engagement from stakeholders including public, tourists, tourism industry, government, park management, NGOs, community groups, schools, which enable them to establishment co-management of manta ray tourism. Co-management determines a joint effort from all related stakeholders to condense all aspects of the sustainability of tourism in one conservation initiative specially to catalyze sustainability within the tourism sector. Without sustainability, there cannot be tourism development that generates benefits for better livelihoods and preserves the species in question [35–38]. The concept of biodiversity is relevant when sustainable tourism affects the landscape, ecosystem, social and/or cultural processes where in this study manta ray as the charismatic species is the main tourism object. Charismatic species of marine wildlife become a driver for economic growth through marine wildlife tourism [39, 40], Visitors want to experience seeing these animals. For this reason, conserving marine species provides benefits from non-consumptive uses, but also from the value of the ecosystem services provided by the species. Wildlife viewing has been considered as a

Figure 12.
Economic value of manta ray in Indonesia "dead vs alive" (Conservation International Indonesia).

form of tourism based on the principles of making an active contribution to the conservation of natural and cultural heritage [41], emphasizing local participation in its planning and operation, so that it contributes to their wellbeing and empowers then in interpreting natural and cultural heritage to visitors. Previous studies confirmed a potential of significant economic generation from wildlife viewing, especially for remote island communities, has also been highlighted [22].

Studied conducted by Conservation International Indonesia together with other stakeholder showed the value of a single manta ray can be $1million while it is still alive, but it is only worth $500 when it is dead (**Figure 12**). Current study conducted by al Hani [42] identified the development of manta ray tourism in study locations encourage local community to establish small-scale tourism business including manta ray snorkeling tours and dive operators, manta ray souvenirs shops, homestay, guide, and others. The local engagement in various business allow them to receive economic incentives as well as encourage their business in conserving manta rays

with a number of conservation initiatives that has been mention earlier. Salazar [43], confirmed the community involvement in this type of business support the sustainability of the tourism assets (which is manta rays) to ensure their income generations.

Furthermore, a recent study [4] calculated an industry value of US $ 140 million per year worldwide. An economic valuation study at manta dive sites in the Maldives, estimated 143,000 dives and more than 14,000 snorkel trips each year during the period 2006–2008 [2], with an estimated economic value of around US $ 8.1 million per year through direct income.

The economic value of manta rays in Inhambane Mozambique province was also high, generating $ 10.9 million per year in direct income through diving activities with an estimated direct economic impact (expenditure during the tour) of US $ 34.0 million every year [44]. With no manta ray tourism, it was estimated that a value of between $ 16.1 million and $ 25.7 million would be lost to the region each year if manta rays are not carried out with a sustainability strategy. The results of a survey of tourists and stakeholders emphasize the importance of increasing protection of manta rays and their habitat through effective conservation area management for tourism [44].

In a different study emphasizes the importance of the effective role of conservation areas was identified as having implications for the environmental health of ecosystems and the manta ray ecotourism industry. This researcher explained that the manta ray aggregation areas in Sudan are protected by zoning rules and utilized for ecotourism. The ecotourism development involved local communities through employment and capital investment for tourism industry facilities but lead to a dilution of traditional Sudanese culture. A study to analyze the ecological value generated from manta ray viewing by utilizing video recordings to record tourist-manta interactions was carried out six feeding aggregation sites, and six cleaning stations, in Baa Atoll, Maldives Republic. The behavior of tourists was limited to passive observation, intentional obstruction, diving below or near manta, and deliberating contact with manta. In Indonesia (Raja Ampat and Komodo) a number of interpretation materials used to educate tourists and public, monitoring and patrol activities are conducted regularly, as well as carrying capacity studies to limit the number of manta ray tourists and many conservation initiatives to protect the species and its habitat.

In Indonesia, people has local belief that manta rays bring luck on their waters, many indigenous in Papua (including Raja Ampat), keep their traditional values from generations to generations to protect the species besides it is a flagship species for conservation. Research on social and cultural aspects was conducted on the social value of manta ray tours in Hawaii [45]. In 2017, a study of diving and snorkeling of manta rays resulted in conflicts. The survey from 444 participants showed 79% of snorkeling groups experienced conflict with other snorkelers, and 53% of scuba divers reported conflict with other divers. The physical interactions between individuals interfered with the experience. The forms of behavior during conflicts included crashing into people (up to 92%), unconsciousness (up to 73%), and people dazzling others with underwater flashlights (up to 56%). The level of conflict between groups was found to be less between different activities (snorkelers and divers) with some minimal social conflict such as negative prejudice, and no physical interaction between individuals.

6. Summary

Manta ray tourism has many positive contribution on economy, environment, and socio-culture. The benefits are varied, start from financial contributions to

community and conservations (animal welfare), education, economic incentives from manta ray tourism business, and others. However, there is an essential factor that play an important role to make this happened, is the implementation of co-management between stakeholders to work together and play their own role in supporting the sustainable management of manta ray tourism.

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Effective Leadership in the 21st Century: Lessons for the Tourism Sector in the African Continent

Portia Pearl Siyanda Sifolo

Abstract

Although Africa has been one of the world's fastest growing tourism regions, when comparing it to the rest of the world, tourism still lags behind. Tourism is a dynamic and a competitive industry that continues to develop whilst the tourists' preferences are changing. Consequently, leading and managing in the tourism sector is of great importance, particularly in the 21st century. The purpose of this paper is to explore leadership concepts to draw lessons for the tourism sector in the African continent. Leadership in the African continent remains questionable and controversial; the nature of effective leadership has been the subject of great debate. The findings reveal the prominent African leadership concepts from Ubuntu, Culturally embedded values, Communalism, Common good and Paternalism as some of the existing leadership concepts that could be applicable to an effective leader in the 21st century in the tourism sector in Africa.

Keywords: Africa, tourism, effective leadership, Ubuntu

1. Introduction

The employees play an essential role in the delivery of quality tourism products or services, therefore, Africa needs capable institutions and transformative leadership at all levels to achieve the African Union (AU) Agenda 2063 aspirations. Tourism is among the priority areas in the Agenda 2063 (a blueprint to drive Africa's development and transformation for the next 50 years) that have immediate potential for growth and job creation in Africa [1]. The tourism sector is identified as one of the diversified economy for expanded strength to outside financial stuns whilst being the sector that would see intra-African trade escalating [1]. Moreover, the United Nations World Tourism Organisation (UNWTO) estimate that by 2030, there will be 1.8 million international tourist arrivals - which means an average of 5 million people crossing international borders (consuming tourism products and services) every single day [2, 3]. This indicates the resilience of the tourism sector, whilst challenging the leaders in the travel and tourism industry to be more effective and efficient. Being the industry with low barriers to entry, tourism sector provide job opportunities to the well qualified and low skilled people at a domestic and international level. A number of global trends and risks ranging from wider fiscal deficits, unorthodox monetary policies, and slow economic growth after COVID-19 lockdown, political risks, global supply chains, security risks, and inflation easily influence the tourism scene. Therefore, effective leadership is necessary globally for the tourism sector to

thrive due to global competitive environment and other unpredictable complexities challenging various organisations. It is paramount to achieve the continental aspiration set in the Agenda 2063.

We live in the world where travellers demand greater value for products and services, hence, Destination Marketing Organisations (DMO) work tirelessly to promote and market high quality tourism products and services. Leadership is crucial in achieving positive outcomes; therefore, the cultivation of leaders with exceptional character and skills is important to Africa's tourism landscape. This chapter presents the state of leadership in the African context, draws lessons for the tourism sector in Africa from early approaches of leadership and African concepts ranging from Ubuntu, Culturally embedded values, Communalism, Common good and Paternalism.

2. Why leadership in Africa?

There is enough coverage of development and application of leadership perspectives in western organisations; information is limited on tourism leadership in Africa. "Leadership in the African continent remains questionable and controversial; the nature of effective leadership has been the subject of great debate. Masango asserts, "African leaders who used traditional method of leadership were viewed by some westerners as barbaric" [4], [713]. Dieke [5–7] states that the problems in Africa's tourism are "closely related to structural imbalances in their overall development pattern, and there are no clear strategies for development in general due to tourism not being integrated with other economic sectors". Okupe, Ward and Ogechi concur that lack of political is an impediment to tourism development in Africa. Furthermore, "lack of implementable tourism master plans contributes to the under-development of the African tourism industry" [8–11].

A study conducted by Zhang, Khan, Kumar, Golpîra, and Sharif on tourism, logistical operations and environmental degradation warns that the carbon emissions and fossil fuel emissions associated with logistics development may pollute environmental sustainability in the end and create negative effects on inbound tourism [12], [165]. Hence, there is a need for responsible and effective leaders. Therefore, contributing to the academic gaze, the prominent African leadership concepts for the tourism sector in Africa is critical. Several studies have contributed to leadership and management in Africa [13–16]. Among them is a study by Nicolaides on management and leadership in the hotel industry in South Africa, where he indicate the adoption of paternalistic approach by managers due to their vital role as business leaders [16].

There is still limited information on travel and tourism management that consider African leadership concepts. Okupe identify leadership as one of the key gaps in the operation and management of tourism in Africa [10]. The online poll results on tourism leadership conducted by the Southern and East African Tourism Update revealed that 58% of the participants thought that South Africa's collective tourism leadership was severely lacking in May 2020 when it comes to recovery post-COVID-19 [17]. Whilst 28% indicated that during the time, there were plenty of discussion but no action and only 14% believed that leaders were doing their best in trying times [17]. With myriad of factors covered in the literature, the development and application of leadership concepts embracing cultural values among African organisations that incorporate "African Leadership" in their practice, still needs attention. The difference in the underlying principles of management in Africa and the West remain evident. According to Nkomo, African states are described as 'irremediably corrupt'; 'hopeless'; 'criminal'; 'ungovernable' or generally in 'chaos' [8]. Although the challenges facing the travel and tourism

industry in the continent are vast, this chapter embraces the Ubuntu, Culturally embedded values, Communalism, Common good and Paternalism to draw leadership lessons. Dieke [5] states that is it essential for the tourism sector to attract the quality staff to meet the increasingly globalised service standards. A background on the state of the tourism industry in the African continent is of importance.

3. The state of travel and tourism in the African continent

Africa remains a continent with authentic and diverse cultures. There are several top-quality natural and man-made attractions, high standards of accommodation and infrastructure and a good transportation network with the potential to attract millions tourists annually [5]. Although Africa has been one of the world's fastest growing tourism regions, tourism still lags behind when comparing it to the rest of the world. The World Travel and Tourism Council (WTTC) Competitiveness 2019 report by the World Economic Forum (WEF) indicates that the Sub-Saharan Africa's travel and tourism market is very small. In 2018, the travel and tourism industry's gross domestic product (GDP) of African countries totalled approximately $42.1 billion, with 37.4 million tourist arrivals in 2017, about 1.6% and 3.0% of the global total, respectively [18, 19].

Furthermore, the COVID-19 widespread disturbance brought universal travel to a sudden stop and altogether influenced the tourism industry. Worldwide and household tourism esteem chains were disturbed. COVID-19 widened the gap in the total number of tourist's receipts when comparing with the rest of the world. According to the United Nations Conference on Trade and Development [3], worldwide compression in tourism entries may have obliterating financial results as a few creating nations are profoundly subordinate on tourism. One may ask a question of whether COVID-19 responses by leaders from different tourism organisation could be a good start to determine the African leadership styles and behaviours. It is during challenging times where effective leadership could be explored in this dynamic and a competitive industry.

Prior COVID-19, there were 1407 million international tourist arrivals in 2018, a 6% increase on the previous 4 years; tourism receipts amounted to $1480 billion, an increase by 4.4% higher than global GDP growth as in the previous 8 years [20]. Opportunities for tourism development remain vast, yet limited due to various challenges facing the leaders in the continent; therefore, understanding the travel and tourism sector trends and issues in Africa is paramount to achieve the aspirations on the sector as indicated in the Agenda 2063, as well as to provide practical leadership solutions. This chapter is by no means proposing solutions to the myriad challenges facing the tourism sector in Africa, but merely intends to draw leadership lessons from African concepts.

Table 1 presents the summary of the selected challenges in the travel and tourism industry in Africa.

Globally, the tourism industry is dynamic, and it is viewed as a major force in the construction and development efforts of governments in developing countries. For example, the study conducted by [12] on tourism logistical operations and environmental degradation in Thailand pleads with "governmental authorities to enforce green practices in logistical and transport-related operations, and need to increase tourist safety and security, to attract foreign tourists respectively". The industry needs leaders and managers with a sense of current and future developments and the ability to work with various stakeholders. "A changing world demands a new leadership style emphasising societal impact and commitment to the common good" [36]. Furthermore, African leadership has become valuable in the 21st century. In today's

Challenges	Explanation	Source
Globalisation	Economic globalisation/trade openness in promoting environmental quality in the long run. Effectively sharing vital reliable travel information, for example, essential signage's that can guide travellers in the proper manner to translation of services offered. This may be linked to infrastructure development.	[21– 24]
Insecurity	Conflicts, terrorism, and general instability. These acts have changed the way business is done on a global basis, creating problems with global supply chains, delays in travel, and interruptions in communications. Geopolitical insecurity, visa regimes, cross-border travel and terrorism	[5, 25–29], [289]
Infrastructure	In many locations in Africa, infrastructure is outdated and underdeveloped. Institutional or structural fragmentation, weak relationships between the various institutions and players, duplication of effort, and gaps. From the supply side, air transport and transport infrastructure remain the biggest challenge for travel and tourism development in Africa.	[8, 9, 25, 29] [293]
Policy and regulatory environment	Creation and enforcement of uniform standards and protocols to connect with the travellers (domestic and international) and tourism stakeholders is limited. For example, tourism is one of the most taxed sectors from the taxes paid on airline tickets, hotel rooms, attractions, local transportation, souvenirs etc. Social and political structures evolve leading to inconsistencies in policy application. Lack of international openness requires policy attention at the regional level. Environmental degradation	[25, 30, 31] [293]
Financial security	Lack of access to finance and non-financial support. Limited coordination, unsustainable value chain linkages in rural and urban areas. New patterns of economic production and consumption	[32]
Continuous innovation	Effectively adopting ongoing revolutions in information technology and telecommunications could be a challenge	[5]
Population changes	Practical relationship (beneficial, trust) between tourism-related businesses to strategically position themselves in the web of relationships. Inequality, unemployment and poverty	[23, 30, 33, 34]
New forms of urbanisation	Inability to cater for today's travel aspirations due to limited access to the market. Inability for unique product development, quality standards and community experiences through arts, culture and crafts. Tourism is identified as an overlapping economic sector as a result, there are duplication of efforts and general gaps	[30, 35]

Table 1.
Top challenges confronting leaders in the travel and tourism industry in Africa.

world, effective leadership is significant for the travel and tourism sectors to thrive; the industry underpins much of the global economic activity. The United Travel predicts that 8 million new jobs will be created in Africa because there was jobs rise in the total number of travel and tourism from 22.8 million in 2017 to 30.8 million in 2028 [3, 5]. The previous statistics provide hope for the sector. A glimpse of the general leadership approaches is significant to better explore leadership theories.

4. Lessons from the early approaches of leadership concepts

There are many schools of thought and approaches to leadership; therefore, reviewing theories of leadership is essential. Early approaches to the study of leadership adopted universal or a generic perspective. Mullins produced the framework

for the study of managerial leadership as indicated in **Figure 1** [37], [314]. The primary composed approach to examining leadership dissects individual, mental, and physical characteristics of solid pioneers. For the last four thousand years, each generation has written about the art and science of leadership [38]. "Most leadership theories have been developed in capitalist western countries up to now and do not take into account the view and learnings from countries that have been in deep crises for many years" [13, 32]. Early approaches to leadership in the African tourism industry are captured by Gyr who revealed the early forms of travel and types of journey occurring in Africa. In his article, the "History of Tourism: Structures on the Path to Modernity" reveals that a well-travelled writer with an interest in both history and ethnology visited Egypt, North Africa, the Black Sea, Mesopotamia and Italy. This is one of documented early forms of travel and types of journeys occurring in Africa. Leading often means having the ability to effectively direct and guide a team to achieve, and sometimes exceed, objectives set, which contributes to the company's overall results.

There are common themes about the nature of leadership and leaders captured in every continent in the context of politics, the military, philosophy and businesses. Research literature on tourism reveals that leadership has not received the necessary attention in both tourist destinations and networked environments in general [39]. The work by [28] covers tourism and environmental degradation in China, while Zhang, Khan, Kumar, Golpîra, and Sharif covered logistical

QUALITIES OR TRAIT APPROACH
• Assumes leaders are not born and not made. Leadership consist of certain inherited charecteristics or personality traits. Focuses attention on the person in the job and not on the job itself.

THE FUNCTIONAL OR GROUP APPROACH
• Attention is focused on the functions and responsibilities of leadership, what the leader actually does and the nature of the group. Assumes leadership skills can be learned and developed.

STYLES OF LEADERSHIP
• The way in which the functions of leadership are carried out and the behaviour adopted by managers towards subordinate staff. Concerned with the effects of leadership on those being led.

SITUATIONAL APPROACH AND CONTINGENCY MODELS
• The importance of the situation. Interactions between the vaiables involved in leadership situation and patterns of behaviour. Belief that there is no single style of leadeship appropriete to all situations.

TRANSFORMATIONAL LEADERSHIP
• A process of engandering motivation and commitment, creating a vision for transforming the perfomance of the organisation, and appealing to the higher ideals and values of followers.

INSPIRATIONAL LEADERSHIP
• Based on the personal qualities or charisma of the leader and the manner in which the leadership influence is excercised.

SERVANT LEADERSHIP
• More a philosophy based on an ethical responsibility of leaders. A spiritual understanding of people; and empowering people through honesty, respect, nurturing and trust.

ALTERNATIVE VIEWS OF LEADERSHIP
• Broader approaches to the study of leadership, including shared and distributed leadership, and responsible leadership.

Figure 1.
Framework for study of managerial leadership. Source: Mullins (2018).

operations and environmental degradation from Thailand perspective [12]. Although tourism businesses in Africa are not isolated from developed and developing communities, there is interdependence of the different sectors, individuals and groups involved in tourism [4]. Hence, there is a school of thought on various contingency or situational leadership, where the behaviour of the leader is explored by looking at the situation at hand or the context. For example, the environment in which the tourism sector operates is increasingly complex and competitive, leaving organisations to structure themselves in order to get quick, flexible and innovative responses. There has been a rise within the number of tourism organisations experiencing changes due to increasing tough financial climates, competitive advertising conditions and continuous technological changes over the final few decades. This ever-changing global landscape has led to a number of challenges as well as opportunities that organisations, its leaders and employees can embrace. Numerous tourism organisations that have had to re-assess their working models. The tourism sector continues to develop whilst the tourists' preferences are changing as the tourism consumers are more mindful of the significance of their free time and are more specific in their choice. Pechlaner, Kozak, Volgger & Volgger [13, 39] refer to the contingency theory by Fiedler, the leader-member exchange (LMX) theory by Graen and Uhl-Bien and transactional/transformational theory by Bass, Avolio [40] and Spencer et al. as successful theories in describing and explaining effective leadership in firms and other organisations. Consequently, leading and managing in the tourism sector is of great importance, particularly in the 21st century. Therefore, creative thinking enables leaders to contribute novel insights that can open up new opportunities or design mutually beneficial effective work groups.

In the 16th century, the focus of organisations was on management and improving productivity (refer to **Figure 1**). According to Iszatt-White, *et al.*, in the 1880s and 1890s the core ideas of 'scientific management' were developed by Frederick Winslow Taylor and first published in 1903; they were later expanded to the principles of scientific management [41]. Among Tylor's co-workers was Henry Laurence Gantt who left legacies to production management by coming up with the 'task and bonus' system that is linked to the bonus paid to managers to how well they taught their employees to improve performance [41]. Among Gantt's contribution is a Gantt chart commonly used in project management (which is also used in the travel, tourism and hospitality sectors) [42]; it is one of the most popular and useful ways of showing activities (tasks or events) displayed against time. Research into travel, tourism and hospitality has an established tradition of investigating leadership issues (although not always appearing under the label of "leadership") [39]. In this chapter, Gantt's contribution is highlighted because of its use on tracking project schedules (an essential component in effective leadership in the tourism sector). Gantt chart shows additional information about the various tasks or phases of the project; for example, how the tasks relate to each other, how far each task has progressed, what resources are being used for each task and so on.

We live in the world where dynamism of the markets and the current business scenarios require companies to have effective leaders that will be able to manage several projects simultaneously. Projects in the tourism industry are not new, the projects in a corporate context take about 50% of the organisational budget; hence, the nature of leadership and the characteristics of great leaders are debated intensely.

In the 20th century, the trait theories were developed where attributes or characteristics of 'great men' were examined. These theories presumed that leaders are born and that successful leaders have similar traits. The trait theory is concerned with the characteristics or traits that a person brings to the field in which leadership is

worked out. Authors cite leadership traits to include, intelligence, assertiveness, good vocabulary, attractiveness, self-confidence and other attributes [22, 43]. Behavioural theories sought to measure the observable characteristics that leaders demonstrate, while theorists researched leadership as a set of behaviours. Pioneering studies are those from the University of Ohio State in the 1950's that identified two behavioural dimensions, consideration and initiating structure; and from the University of Michigan which found two categories of leadership behaviour (employee orientation and production orientation). Another Behavioural approach to leadership is the Managerial Grid from early leadership studies developed in the early 1960s by management theorists Robert Blake and Jane Mouton as the basis for developing a two-dimensional grid for appraising leadership styles. It used the two behavioural dimensions "concern for people" and "concern for production" and evaluated a leader's use of these behaviours, ranking them on a scale from 1 (low) to 9 (high).

The 21st century present new approaches or leadership paradigms that "share a number of common themes relating to the emotional or symbolic aspects of leadership" [41], [112, 113]. The 21st century refers to an era where characteristics of the new competitive landscape are driven by the continuing technological revolution and the increasing globalisation of business and economic activity [26]. In this era, leadership is often of a transactional nature in complex, competitive, tough financial climates and continuous technological changes. Andersen states that the managers and leaders have the responsibility to carry out risk analysis to reveal threats to ensure successful strategic execution [44]. The tourism industry is interlinked and prone to rapid developmental trends. Therefore, looking at the leadership approaches in **Figure 1**, one may argue that there are many skills required from the travel and tourism managers or leaders.

The characteristics of a leader range from personal management and the ability to motivate a team [45]. Leaders are famous for being proactive and positive, they communicate well and are good listeners, and they have integrity. They are approachable and are role models. They tend to focus on strengths and have respect and trust for the employees (which is part of servant leadership; it is an effective leadership approach that enhances work engagement). They observe the 'golden rule' and are sensitive to others. These characteristic are essential for a travel and tourism leader as they apply structured methods to allocate resources effectively. In other words, travel and tourism leaders are expected to be proactive (lead by an example in case there is a need for problem prevention), reactive (constant presents of there is a problem) and inactive at some point (trusting the group of stakeholders or a team will achieve common goal). Since there are numerous definitions of leadership, perhaps capturing few definitions is prudent.

5. Leadership definition

Leadership has been extensively studies for centuries. The concept is famous for being defined from individuals' perspectives and the aspects that interests them most. Emanating from a historical and impactful leadership definition by Stodgill, "leadership is the initiation and maintenance of structure in expectation and interaction" [14]. The study by Masango on leadership in the African context reveals that, "leadership is a group phenomenon', meaning that, there "are no leaders without followers" [14], [708]. In other words, a definition of leadership in the African context must consider the collective aspect. He further stated that "leaders use influence to guide groups of people through a certain course of actions or towards the achievement of certain goals", leadership is therefore, goal directed, and plays a significant part in the life of a group, tribe or community" [14].

With the changes in the societies, markets, customers, competition, and technology around the globe, organisations are forced to clarify their values, develop new strategies, and learn new ways of operating; hence, the definition of leadership has evolved to suite a certain context. Meyer and Boninelli concur that leadership has no sequential beginning or end, it is rather critical to understand perspectives on what leadership is about, and the implications for organisations in the modern economy [38]. One may then argue that leadership is a choice and being a good leader is a skill that anyone can learn. Some believe that leadership is inherent in certain individuals; hence, it is referred to as an essential in achieving the vision of the organisation. Others believe that leaders rise from the masses when the situation demands it. According to Amanchukwu, Stanley and Ololube, good leadership is developed through a never-ending self-study, education, training, and the accumulation of relevant experience [13].

Leadership should be visionary, motivating, and stimulating for the team members; hence, the transformational leadership style is advocated for tourism leaders [40]. Thomas distinguishes leadership from management by identifying five nuances not found in management such as giving direction, providing inspiration, building teams, setting an example and being accepted as a leader [46], [119]. Leadership is viewed as a process (focusing on what leaders actually do) and as a property (the set characteristics attributed to individuals perceived to be leaders) [47]. Therefore, looking at the travel and tourism organisations, cooperation as the base in the organisations and their environment is critical. This permeates through the consistent travel and tourism management practices, processes, procedures, tools and techniques (value chain). Leadership is an effective tool to be used by the travel and tourism managers to influence outcome, otherwise, lack of leadership skills could be directly associated with failure which my negatively affect the contribution of tourism in the country and the rest of the continent. Perhaps, distinguishing the differences between leadership and management in projects is paramount.

6. Difference between tourism leadership and tourism management

Linking the association between leadership characteristics and successful managers offers invaluable information. Henceforth, differentiating between the roles of a manager or a leader in context of tourism leadership and management is difficult. Welch differentiated between the manager (someone who works to carry out the aims of the organisation) and the leader (serves to create new aims, tweak old ones, or initiate new courses of action) [48]. Drawn from [49] work, the difference between tourism leadership and tourism management in this chapter is summarised as follows;

Tourism management "refers to the oversight of all activities (related to the travel, tourism and hospitality industries) of planning and organizing through decision-making process which enhance effectiveness and efficiency of the tourism industry".

Tourism Leadership is a "process of leading others for achievement of objectives; the concept encompasses motivating and guiding people to realize their potential and achieve tougher and challenging organizational goals in travel, tourism and hospitality industry".

Leaders and managers are there to serve the organisational need [9]. Normally they require a multi-functional inclusion. Understanding the internal and external perspective of management as a manager and as a leader has a significant effect to the success in the organisation. An internal perspective of management is within

the organisation is where by scarce resources are used more effectively while improving the existing procedures and methods to ensure efficient product or a service. An external perspective focuses on developing and improving quality of life. Therefore, tourism manager or a leader needs to have knowledge of both the internal and external perspective to deal with a number of global trends and risks (wider fiscal deficits, unorthodox monetary policies, slow economic growth after COVID-19 lockdown, political risks, global supply chains and security risks and inflation) among others. The performance of a tourism manager and the effectiveness of a leader are both measured in terms of the performance of the team. Therefore, managerial and emotional competencies (as factors of leadership) have important causative effects in determining the success of a tourism organisation; although it is important to note that success can be negatively affected if the wrong leadership style is chosen and/or if the tourism manager or a leader is inexperienced (Novo, Landis and Haley, 2017). Although management and organisational aspects have been explored, it is critical to highlight that the focus of this chapter remains with exploring effective leadership in the 21st century. The following section will focus on the dynamic tourists' preferences in the 21st century, with an intention to highlight the need for effective leadership.

7. Why effective leadership in the 21st century?

Effective leadership is one of the main and primary drivers for growth, development and innovation. Effective leadership is meaningful, impactful and profound. Effective leadership is one of the main and primary drivers for growth, development and innovation in the 21st century. According to [26], [443] effective strategic leaders have to operate under conditions of uncertainty; they must view a volatile environment as presenting opportunities and employ an entrepreneurial mindset that allows them to identify and exploit those opportunities in contexts with significant ambiguity.

Effective leaders are able to keep their teams engaged. Kumar concur that effective leaders influence the entire organisation and people outside the organisation [50]. Their influence extends beyond the boundaries of the organisation as they continually identifying and interrogating the ethical issues [38]. They adapt and modify their leadership styles in order to maintain employee engagement, even if there are four generations in the workplace. It is critical to engage stakeholders, whilst minimising risk to adopt and maximise benefits through a focus on the organisational, cultural and people aspects of business transformations. Effective leaders must also understand the modern tourist concept. Vail, Moreland and Wilson warns against the high-quality tourist services that require skilled and motivated employees and that quality service, in turn, is the key to both higher profitability and good jobs [33].

Why the focus on a 'modern tourist'? Modern tourists exhibit a growing concern about the impact of their acts; the manner in which they choose to consume the tourism products and services has significantly changed. Tourists make choices based on different factors, from personal factors such as personality or aspirations, together with household factors like lifestyle or decision-making style; these affect their decisions [51], [108]. A new type of consumer (in this case 'modern tourist') was born as a result of the technological evolutions of the late 20th century as well as a consequence of globalisation, hence today's tourists are increasingly connected [51], [118]. This is evident from the work of Vail, Moreland and Wilson who define the modern tourists as a growing market segments with many baby boomers with ample discretionary time and income; they are experiential tourists seeking

low-stress outdoor activities, supplemented by quality dining, lodging, shopping, and cultural amenities. They further state that "many younger adventurers seek destinations offering outstanding expedition hiking, cross country skiing, and mountain biking, but they also want cell phone and internet coverage, a great meal, lively night life, and a comfortable bed after their exertions" [51, 52]. This point is also emphasised by [52] that "millennials don't simply represent another generation of travellers; their preferences and lack of predictability make them different", as a result, tourists demand greater value, more experiences and higher levels of quality ([24]: 01), hence, the new ethos in the tourism industry allows the tourists to take responsibility when travelling.

Tourists prefer to engage in physically and intellectually active holidays, with a growing demand for not only recreational activities, sport and adventure, but for knowledge of the history, culture and environment of the places being visited [24]. These new types of tourism are more closely linked to culture, nature, health, religion, etc., are growing three times faster than forms that are more traditional. Therefore, it is essential for a 21st century leader to possess the characteristics that makes them see opportunities everywhere; they should strive for excellence and live with an entrepreneurial spirit. They must work with a generous purpose and embrace culture in order to cater for the 21st century tourists.

Leadership in the 21st Century should be based on three pillars: values based leadership, network leadership and systemic resilience. Good leadership in Africa always shares life to others [32]. More lessons can also be drawn from the concept of responsible leadership for a leader to be 1) able to make informed ethical judgements about existing norms and rules; 2) displaying moral courage and aspiring to positive change; 3) engage in long-term thinking and in perspective taking; 4) communicate effectively with stakeholders; and 5) participate in collective problem-solving. In the 21st century, the leader must have company's intention to do the right things and act in ways that are good for society. Ethical leadership has a major impact on the behaviour and attitudes of employees as it encourages the employees to perform a higher quality of work performance [7, 50, 53].

Effective leadership is gained through a combination of business knowledge and personal skills including determination, being open-minded, self-reflection, and excellent communication and team-building skills. Therefore, enhancing innovation is paramount in managing or leading in the services sector. Critical thinking is a primary tool for dealing with dilemmas and paradoxes, the support and encouragement of critical thinking is a key characteristic of effective leadership processes [54]. Stošić and Milutinović state that service excellence and innovation is a necessity in the tourism sector [48].

8. African leadership concepts: lessons for the tourism sector

There are factors influencing development and application of African leadership perspective. These factors vary from one country to country and from continent to continent. Drawing from the work by Nzelibe, there are certain trends that have influenced modern thought-system of management in Africa; these are guided by certain basic, traditional values, assumptions, and principles [55]. Hence, he refers to them as traditionalism, which has to do with adherence to accepted customs, beliefs, and practices that determine accepted behaviour, morality, and the desired characteristics of the individual in African society [21, 55]. Based on Nzelibes' proposition, one may argue that effective leaders can apply the principles and practices in their management systems in the tourism sector for common good.

For example, destinations are reinventing themselves using socio-cultural assets to attract tourists. This has been a common practice, particularly in leadership, where cultural expression involves issues and conflicts connected to the leaders and followers inside a variety of international, national, regional and organisational contexts [56]. **Figure 2** presents the African leadership concepts.

Another African concept is "communalism", which stems from the belief that the individual is not alone, but belongs to the community [55, 57]. Communalism focuses on the community above the individual [50]. It implies a way of decision-making which is based on consensus [57], [305]. African communalism is about communal feelings, world views, moral and cultural values based on closed-knit relationship among their kith and kin within a socio-cultural setting [57]. In other words, an effective tourism leader in the 21st century must see himself/ herself as part of the community, respect the values followed in that cultural specific setting and be in a position to live by the principles favouring the position held and the community. The tourism industry leadership cannot work effectively without community support and involvement [4]. Tourism is a community product, and it is therefore necessary to have community and local capabilities such as community leadership and formal and informal networks directly involved in tourism development and promotion efforts [30]. In Dieke's words "tourism must be profitable to the communities to compensate for any dislocation of everyday life; it should gain the acceptance of the communities in relation to the type, scale and location of tourism development and planners should consider the need for protection of certain communities and sites and to meet their acceptable cultural standards" [5, 50].

The third African concept covered in this chapter is "Ubuntu" which is an African value meaning 'humanness', sometimes referred to as humanity to others. It also means 'I am what I am because of who we all are', or 'a person is a person through people' [18, 21]. The concept of Ubuntu goes beyond a sense of loyalty to something that is more deep-seated; is provides a sense of belonging and purpose [58], [106]. As indicated earlier, that leadership is a group phenomenon that plays a significant part in the life of a group, tribe or community, hence, the trust relationship is of critical importance. The key values entrenched in African
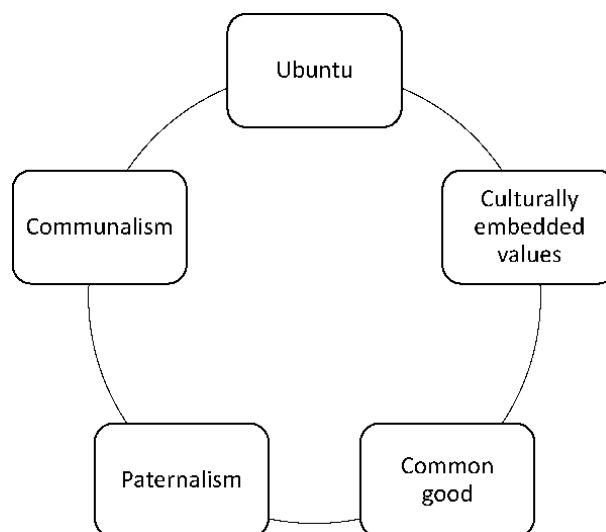
Figure 2.
Selected African leadership concepts.

leadership include, being respectful to others and treating them with dignity. These values are reflected in the tourism sector where service excellence is at the centre of customer care and stakeholder engagement. Service excellence, customer care and stakeholder engagement cannot be obtained without trust and common good. Ubuntu is a critical African concept to an effective leader in the tourism industry as it promotes responsible tourism.

The forth concept is Paternalism, which is an African concept based on interconnectedness and solidarity [4, 41] Paternalism is defined as the managers' personal interest in workers' off-the-job lives and personal problems, and managers' effort to support the employees to achieve personal goals and improve welfare [35], [561]. Paternalism is a policy or practice that is fundamental for leaders to make and base their decisions on, so that they can act accordingly for the common good; whilst, constructing proper organisational practices. This concept can be beneficial to the leaders in the tourism sector. For example, [59], [91] refer to paternalistic leadership behaviour and affective organisational commitment as a concept that will have direct and indirect effects on performance of small businesses and therefore the performance of tourism destination. Paternalism is conceptualised in two types: authoritaritative and benevolent. Authoritaritative paternalism values job and does not include a sincere generosity, whilst benevolent paternalism emphasises the commitment of the subordinate and an intimate care of the manager for the subordinate.

Africans sees themselves as bound by 'a mutual obligation to consider others'. A study conducted by Nelson on travel and tourism and the common good reveals that the integration of knowledge and talent from individuals in the private, not-for-profit, and government sectors to advance the common good is important to a 21st century leader [52]. This is reflected in the impact review of and beyond [62], [14] where the company presents valuable lessons from community projects, when working with people which are as follows:

- Learn from their culture and customs.

- Listen to what they have to say.

- Create a platform for dialogue and participation.

- Build on local wisdom and community assets.

- Build the community's capacity to find solutions to their own problems.

- Build sustainable solutions and encourage ownership of assets.

- Identify and prioritise the community's needs with the community.

- It is expensive in the short term, but cheap in the long term, which means the impact will be felt long after the fact.

- Work with legitimate and credible community leadership.

- Build-up process is slow, deep and strong.

- Serve the community's agenda and build the relationship.

- Donor money and time is well invested for future generations.

"Most African businesses experience dilemma when choosing leadership approaches" [38], [108]. African traditional leadership has been confined to communal areas and practiced African leadership that is "centred on culturally embedded values such as communalism, togetherness, rationalism, consensus and unity; these are encapsulated in the ethos of Ubuntu" [4, 41, 60]. Africa's tourism industry requires leaders that understand the industry, its complexity and their role within it [8]. Ubuntu as a "traditional African value that prompts the establishment of a two way trust relationships as the essence of successful leadership" [41]. Leaders such as Nelson Mandela, Kwame Nkrumah and Desmond Tutu are famous for their culturally embedded values/approaches. There is a great need for the African continent to consider service leadership and ethical leadership, which is characterised by integrity, competence, responsibility, accountability, fairness and transparency. Companies often face challenges building leadership potential and effectively managing the project. There is a need to train the employees to move into leadership positions, not only for succession purposes but also for empowerment and acknowledgement. According to [9, 16], cultural enlightenment and awareness of employee diversity are critical leadership trait that encourages cross-cultural teamwork. This trait is important in the travel, tourism and hospitality sector where there is a higher proportion of women. Women generate higher returns on equity, while running balance sheets that are more conservative when it comes to business performance. In fact, where women account for the majority role players in the tourism sector, inclusion is necessary. The UN report indicated that in January 2017, only 10 women were serving as Head of State and 9 were serving as Head of Government [3]. This is an indication of the limited opportunities as far as the inclusion of women is concerned in the world. However, women such as Ellen Johnson Sirleaf, the former President of Liberia, the first elected female head of state in Africa, Joyce Banda, who has made history becoming Malawi's first female president and only the second woman to lead a country in Africa are inspiring.

9. Conclusions

There is a lot that has been written on leadership from a business perspective to the philosophers' viewpoints; even politicians and historians among others have dissected the concept of leadership. Leaders as people, play an important role in an organisation and to the society. This chapter presented the concept of leadership in the 21st century in the tourism industry as one of the services sectors in global economic growth, and Africa in particular. Effective leadership examples in the tourism industry can be drawn from large destinations with strong performance like Kenya, Côte d'Ivoire, Mauritius and Zimbabwe in sub-Saharan Africa. Although South Africa, reported slower growth in arrivals in 2017, there was a strong increase in receipts, more lessons from the tourism leaders in the sub-region's top destination can be useful. Island destinations Seychelles, Cabo Verde and Reunion, all reported double-digit growth in arrivals.

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Conflict of interest

The authors declare no conflict of interest.

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Appendices and Nomenclature

CASE STUDY 1

AFRICA'S YOUNG LEADERS FACE A TESTING 2020

Politicians in their 30s and 40s face huge hurdles in sweeping away decades-old regimes. After several years during which younger leaders have come to power across Africa, 2020 could hold challenges that may force many of the newcomers to take a step back. Not all the young politicians are progressive, or even pro-democracy. Nevertheless, they are all representative of sweeping changes across the continent that have destabilised long-standing regimes and forced out some veteran leaders. The huge numbers of young people reaching adulthood across Africa have fuelled a powerful desire for change and has pushed forward a new wave of younger political figures who could dramatically influence the continent's future.

- Two "dinosaurs" who were forced out of politics in 2019 – Abdelaziz Bouteflika, the 82-year-old president of Algeria, who had ruled since 1999, and Omar al-Bashir, 75, in power in Sudan since 1989 – fell victim to mass movements spearheaded by young protesters, though in each case the once-powerful rulers were left vulnerable when armed forces withdrew their support.

- One of the most striking recent appointments was in Angola, where its president, João Lourenço, appointed Vera Daves de Sousa, a 34-year-old former researcher and analyst, to be the new finance minister. Elderly men, especially senior soldiers who fought in the decades-long civil war, have long dominated the political system in the former Portuguese colony. Vera Daves de Sousa, 34, is finance minister in Angola, where elderly men, many of them veterans of the long civil war, previously dominated politics.

- Alex Vines, director of the Africa programme at London's Chatham House, said Lourenço's appointment of a swath of younger people, including many women, to senior positions within the government was a gamble. "He has leapfrogged a generation to appoint more technocratic, able people, including many women, to key posts. He sees them as change agents ... Next year will be the litmus test for the reform process," Vines said.

- Perhaps the most high profile of the young leaders is Abiy Ahmed, the 43-year-old prime minister of Ethiopia and winner of 2019's Nobel peace prize. Since coming to power in 2018, Abiy has ended a nearly 20-year military stalemate with Eritrea, and pushed through reforms at home, dramatically changing the atmosphere in what was regarded as a repressive state. Nick Cheeseman, professor of democracy at the University of Birmingham and an expert in African politics, said Abiy was facing a hard choice between a shift towards authoritarianism, or the difficult task of generating confidence and belief in his reforms. "What happens in Ethiopia has massive implications for the countries around it," Cheeseman said.

- In Sudan, the protest movement that swept away Bashir has opened the way to younger political figures. Nevertheless, some may not be any more progressive

or less predatory than their former rulers. One is Mohamed Hamdan Dagalo, a 43-year-old warlord accused of systematic human rights abuses, who has emerged as perhaps the most powerful man in the country. He is now deputy chairman of the sovereign council that still holds supreme power.

- Elsewhere some young leaders who have challenged entrenched interests have stumbled. In South Africa, Mmusi Maimane, a 39-year-old once breathlessly hailed as the Obama of Soweto, resigned as leader of the opposition Democratic Alliance following disappointing election results.

- Julius Malema, the 38-year-old leader of the populist, radical leftwing Economic Freedom Fighters.

- In Uganda, Bobi Wine, an opposition MP and popular music star, has generated international attention but is yet to build the kind of political machine that would challenge the country's veteran leader.

- Yoweri Museveni, while in Zimbabwe, Nelson Chamisa, a 41-year-old former pastor who has led the Movement for Democratic Change since 2018, has struggled to mobilise sufficient numbers to destabilise the ruling Zanu-PF government under 78-year-old Emmerson Mnangagwa."They have inherited, or are opposing, deep-seated neo-patrimonial systems. You can destabilise them, you can even bring down a leader, but the transitional politics are very, very difficult and sometimes they just don't work out," said Vines.

The young rulers and challengers remain a minority. The average age of African leaders is more than 60, which means that the continent with the youngest citizens has the oldest rulers.

Source: https://www.theguardian.com/world/2019/dec/31/africas-young-leaders-face-a-testing-2020

Chapter review activity

1. How would you describe the leadership styles of the above-mentioned "Politicians in their 30s and 40s"?

2. Which leader/"politician" has principles of African leadership and why?

Due to the testing times in 2020, such as the COVID 19, advise the Africa's young leaders on the issues of change management and state the importance of project leadership.

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Model of Virtual Tourism as an Alternative of the Concept of Architecture Tourism Post Covid-19 in Bandung City, Indonesia

Asep Yudi Permana, Aathira Farah Salsabilla Permana and Karto Wijaya

Abstract

The tourism sector as one of the sectors that has been hit by the Covid-19 pandemic needs a new breakthrough to enter a new normal era. Amid the ongoing paradigm shift and a number of new protocols will be implemented to welcome the new normal conditions in the tourism industry. The tourism sector in Indonesia, which has been absorbing many jobs, has been hit hard by the Covid-19 pandemic. Coupled with the difficulty of predicting when the pandemic will end, it is necessary to take smart steps in maintaining the sustainability of the tourism industry in entering an era of new norms. The new normal era brings new roles, new roads and expectations in the tourism sector. Digitalization that is growing rapidly and rapidly requires adaptation to new conditions and rearranging business strategies and models so that they can survive in the new normal era by adjusting technological developments. The development method used in this research is the Multimedia Development Life Cycle (MDLC). MDCL as a method for designing multimedia tools by emphasizing the 6 stages of multimedia development. The tools used in this application are PT GUI, Eclipse, and Google Maps. The objects of historical and heritage buildings that become the Sate Building, Villa Isola, the Geological Building, the Asian Africa Museum, and the Merdeka Building are made using immersive photography techniques. By representing information in the form of panoramic images, the 360^0 makes it easy for users to visually display information from historical and heritage buildings in Bandung. The tourism model is virtually a possible form of tourism in the future.

Keywords: new normal, the tourism industry, multimedia development, virtual reality, technological development

1. Introduction

The tourism sector [1] and the creative economy play an important role [2] in development in Indonesia, this can be seen from the direct and indirect gross domestic product (GDP) and employment [2]. According to data from the Indonesian

Ministry of Tourism and Creative Economy (2012) the tourism sector [2] and creative economy contributed 11.8% to Indonesia's GDP, and 14.66% to total employment [3].

The strategic plan for the development of the tourism industry in collaboration with the ILO and the Australian government as partners of the Indonesian government builds a consensus to build a strong tourism industry. This collaboration involves stakeholders ranging from the government [2], social partners, communities, industry, and the general public [2]. Given the richness of natural and cultural resources that Indonesia has is major potential in the domestic and foreign tourist market [2, 4].

The city of Bandung as one of the tourist destinations in Indonesia relies on tourism potentials such as historical buildings, nature, culture, culinary, fashion, recreation, and entertainment [2]. This potential attraction makes natural resources [2] to come in the framework of (a) heritage tourism; (b) shopping and culinary tours; (c) educational tours; (d) recreational and cultural tourism; and (e) MICE (Meeting, Incentive, Convention, Exhibition) supported by adequate geographical, natural and urban planning, as well as good accessibility [2]. In maintaining the sustainability and existing potential, a programmed, structured, and controlled tourism development model is needed [2]. Tourism activities as the main sector of Bandung City have been started since 1920 [2]. Since the construction of the Cipularang toll road and the construction of a high-speed train linking Bandung City and Jakarta. This tourism sector provides a major contribution to increasing PAD/regional own revenue, almost 70% of Bandung's regional own revenue comes from the tourism sector. Where the tourism sector is a prima donna that continues to need to be improved.

The city of Bandung as one of the cities of past cultural heritage has superior values to be preserved, where the existence of the city of Bandung with its rich architectural styles/styles is its main attraction as a tourist destination and cannot be separated from the history of the development of Bandung City itself [2]. The long history of the city of Bandung has left many historical buildings that make Bandung one of the cities with art deco architectural heritage in the world and was once dubbed the most complete architectural laboratory with various old buildings that inherited the style of architectural beauty in Indonesia [2].

Meanwhile, tourism is a system that develops efforts by emphasizing the value of policies and strategies, as well as promotional patterns that are always synchronized with business development strategies in tourism planning [5, 6]. Mill and
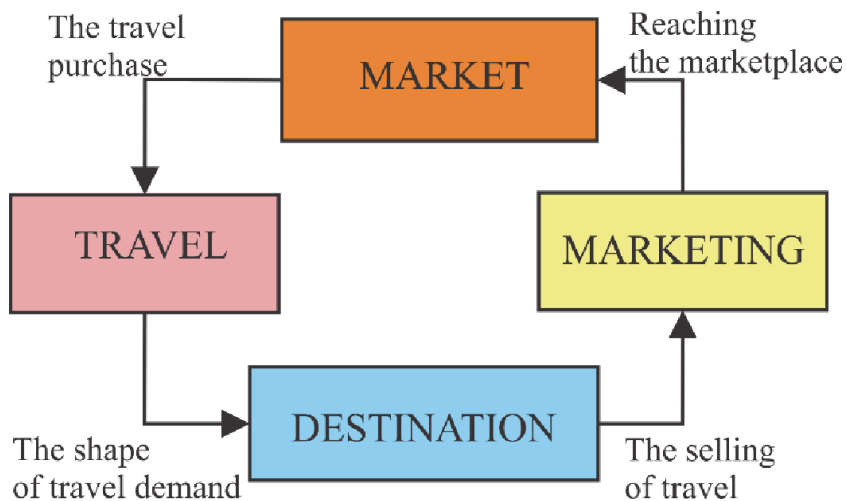

Figure 1.
Tourism elements. Source: Goeldner & Ritchie [6].

Morison describe tourism as a system into four elements, namely demand, travel, destination, and marketing (**Figure 1**) [5–7].

The four elements are related and influence one another, thus making the system run well. Based on this tourism model, from the demand aspect to the marketing aspect in the context of tourism, it will continue to grow in line with the role of business technology by utilizing increasingly strategic IT in all aspects of the business. Online technology trends such as e-commerce have changed new faces in all lines of human life, including the tourism sector. Especially amid the Covid-19 pandemic, in which all sectors collapsed. One of the economic sectors most affected by Covid-19 is the tourism industry sector. So far, the tourism sector which relies on the potential of tourism objects directly as a force in attracting domestic and foreign tourists is one of the worst-hit sectors, there are no more tourists, both domestic and foreign tourists [2].

The use of e-commerce in the tourism sector is known as e-Tourism terminology, where tourism is profiled and information is disseminated using the internet as a potential business trend. Initially, e-Tourism was intended to fulfill information needs through creative media and the development of innovative information systems [5, 8]. It is believed that e-Tousim's role as a medium for tourism promotion that is low budget and high impact, in which the adoption of appropriate information technology will bridge the high budget for infrastructure and facilitate user understanding.

2. Theoretical framework

2.1 Tourism and the tourism potential of the City of Bandung

According to Yoety tourism is a trip that is carried out temporarily from one place to another with the reason that it is not for business or earning a living at the place visited but solely for enjoying the trip for sightseeing and recreation or fulfill various desires [9]. Tourism is also several activities, especially those related to economic activities that are directly related to the entry of foreign culture [9].

The wealth of natural resources, cultural diversity, as well as the wealth of historical heritage that Indonesia possesses is a very large base for economic development and development, especially through the tourism sector [8].

According to Butowski tourism is the main sector in promoting economic and service growth [2, 10, 11]. So that in tourism planning and development [2, 10–12] it is necessary to consider several approaches [2], including: (a) Continuous Incremental, and flexible approach (in the sense that planning [2] is a process that is takes place continuously based on the needs and the results of existing feddback); (b) System Approach [2] (tourism as a system relationship needs to be planned through system analysis); (c) Comprehensive approach [2] (a tourism development approach that holistically considers institutional elements and the environment as well as socio-economic implications); (d) integrated approach (tourism development approach as an integrated system in plans and forms of development in the area); (e) Environmental and sustainable development approach [2] (a tourism approach starting from the planning process, development and management of natural and cultural resources is maintained/does not experience a decline in quality, and environmental analysis becomes the main point); (f) Community approach [2] (an approach to tourism development by maximizing community involvement starting from planning, making decisions that have an impact on socio-economics); (g) Implementable approach [2] (tourism development that formulates plans and recommendations into reality, as well as application of program techniques and strategies); and (h) Application of systematic planning approach [2] (an approach applied in tourism planning based on the logic of activities) [2, 10, 11].

The city of Bandung is the prima donna of park tourism in Indonesia apart from Bali and the city of Yogyakarta, where the city of Bandung has uniqueness, beauty, and extraordinary industrial creativity. It is recorded that almost every weekend, both domestic and foreign tourists are always visited. There are 14 (fourteen) potential tourism clusters in Bandung, including: (a) Shopping and health tourism clusters on the Sukajadi-Setrasari-Pasteur road; (b) Cluster tours for traditional arts and culture and handicraft industries along the Padasuka-Suci route; (c) Historical and Heritage tourism clusters on the Braga-Asia Africa-Cikapundung route; (d) The textile industry tourism cluster in Cigondewah; (e) Cluster of traditional cultural arts and MICE tours in East Bandung; (e) Cluster of spiritual tours and shopping tours on the Gegerkalong - Setiabudi route; (g) Clusters of entertainment tours, shopping tours, Geotourism on the Alun-alun - Sudirman - Otista - Gardujadi - Pasirkaliki routes; (h) Cluster of nature recreation tourism, cultural tourism, handicraft industry tourism on the North Dago - Punclut route; (i) Cluster Heritage tourism, education, natural and artificial recreation, convention tours, religion on the Gedung Sate - Gasibu - Sabuga route; (j) Cluster of culinary tours, Heritage tourism, Education, Entertainment and Recreation, Geotourism on the route of Ir. H. Juanda (Dago) - Merdeka - Riau; (k) Heritage tourism clusters, shopping and culinary tours, knitting Industry tours on the Gator Subroto - Binongjati route; (l) Cluster of shopping tourism and handicraft industry tourism in Cibaduyut; (m) Culinary tourism cluster in Burangrang; and (n) Cluster of shopping tourism in Cihampelas [2, 3].

The development of this cluster is a consequence of the development and changes of the city as well as market demand, as happened on Jalan Ir. H. Juanda, which was originally a non-commercial area, turned into a commercial area which made it a new destination, which is a very busy shopping tour.

2.2 Globalization and the environment: between economic growth, transport, and environmental degradation

Globalization training on an integrated market formation process for goods, services, capital, knowledge, and factors of production around the world. Where globalization catalyzes demand and supply scenarios in international markets by means of exchanges of merchandise and services. Globalization is also a growth in the economic growth achieved by developing countries, but if viewed from an ecological aspect it is not sustainable because globalization is not a policy tool. Globalization has a significant effect on the environment and climate change [13–15]. This is in line with the opinion of Jorgenson and Kick regarding the connection between the environment and global economic processes [16]. Globalization has increased the relationship between emissions and economic growth on changing ecological footprint [17, 18]; the influence of globalization on environmental degradation which causes environmental damage [13, 15, 19]. Khan and Ullah applied an autoregressive distribution lag (ARDL) model to examine the relationship between globalization and CO2 emissions in Pakistan [20]; research on two-way causality between globalization and CO2 emissions in Saudi Arabia from 1971 to 2016 [21]; the relationship between financial development, globalization, and CO2 emissions in Asia Pacific Economic Cooperation (APEC) countries from 1990 to 2016 [22, 23].

Several research results have been conducted on the impact of globalization, among others: the impact of globalization and; tourism against environmental degradation by Sharif et al. in China in the 1978Q1-2017Q4 period [23]. This is supported by the results of research by Yu et al. in Thailand which show that logistics and operations related to transportation are positively correlated with the

entry of tourists, where logistics and transportation provide access for tourists to a tourist spot [24]. Yu et al. mandate for the government to enforce environmentally friendly practices in logistics and transportation operations, as well as to improve the safety and security of tourists which can reduce the harmful effects on environmental sustainability, which inspire criminal activity, so as to attract foreign tourists [24]. The same research was conducted in Malaysia by Syarif et al. related to the role of tourism, transportation, and globalization that affect the environment using quantitative ARDL approaches [25].

Syarif's research results show how important logistics and eco-friendly benefits for economic growth in disadvantaged areas, can increase job opportunities, and as a solution for protection and development. The government must encourage the development of low-carbon ecotourism and achieve both tourism and economic development [25].

2.3 Sustainable tourism

The concept of sustainable tourism development [2] has been discussed since the 1980s. According to Butler [26], sustainable tourism is a constant answer to current tourism problems [2, 13]. Butler divides sustainable tourism into 2 (two) ways, namely: (a) seen from a semantic approach, sustainability as a guarantee of long-term survival following the market, and (b) seen from the concept of sustainable development [2], in the sense of creating sustainable tourism as regional development without violating the principles of sustainable development [2, 14, 15].

Ceballos-Lascurain [29] introduced the concept of ecotourism and since then began to develop [2] with various terms about alternative tourism [16, 17], including green tourism, soft tourism, nature tourism [18, 19], environmentally friendly/ environmentally sensible tourism, responsible tourism, discreet tourism, appropriate tourism, ecoethnotourism [2, 10, 11, 17–25]. With an evaluation approach that juxtaposes new forms of tourism with the old model (mass tourism in nature) [2].

According to Niezgoda sustainable tourism is the relationship between tourism [2], the environment, and development [30] (**Figure 2**).

Based on **Figure 3**, sustainable tourism [2] is aimed at realizing sustainable development and tourism development itself. According to Farrell & Twining-Ward [34] the sustainable tourism approach must be based on an interdisciplinary approach [2], this is because the level of complexity and uncertainty in the behavior of tourism systems and systems that affect it does not guarantee satisfactory results [20, 21]. Furthermore, Farrell & Twining-Ward [34] conveyed a new concept of

Figure 2.
Conceptions of sustainable tourism. Source: Permana et al. [2].

Figure 3.
Virtual reality. Source: Amazon.com dan VIVE developers.

sustainable tourism with the term "comprehensive tourism system and complex adaptive tourism systems (CATS)" [2, 21, 22]. Farrell and Twining-Ward [34] divides into 4 (four) areas that affect sustainable tourism, namely: ecosystem ecology, ecological economics, global change science, and complexity theory [2, 21].

2.4 Virtual reality (VR)

The development of Information and Communication Technology (ICT) is increasingly being felt by its benefits in various aspects, especially in the industrial sector including the tourism industry in it [23, 24]. Chen and Sheldon [38] state that the tourism sector is an industry that requires the provision of diverse information, therefore the information provided will be more effective through the development of multimedia, communication, and information systems [8, 23–37]. Based on data from Boston Consulting Group 2000, almost 80 percent of the tourism industry transactions (e-tourism) are made via the internet. This is very reasonable because consumers will enjoy tourism products or services located in different areas from service providers. Therefore the tourism industry is an interesting sector to be developed and researched [26, 27]. Where e-Tourism transactions include obtaining information, purchasing tourism products and services ranging from hotel room rentals, tour travel packages, purchasing transportation services (planes, trains, and travel) [8, 25].

Along with the development of sustainable tourism insights [28, 29] and new trends in the use of ICT have indirectly brought many changes in various sides of people's lives including those related to the phenomenon [43] of travel and tourism activities [28–31]. Media Virtual Reality (VR) as a technology [32, 33] that invites users to interact with the environment in the virtual world is simulated using a computer so that users feel they are in that environment [32–46].

VR technology is a technology that allows users to interact with an environment that is simulated by a computer (computer-simulated environment), which is an environment that is actually imitated from the original or that only exists in the imagination. Virtual reality environments generally present a visual experience, which is displayed on a computer screen or through a stereoscopic viewer, some simulations even include additional sensory information, such as sound through speakers or headphones, motion sensors, vibration and grip [47].

The need for visualization and interaction commonly carried out in various disciplines can be optimized by applying VR technology which is currently trending. Several VR applications are currently being used in the world of entertainment, broadcasting, design, simulation, and training as well as for the tourism

sector. However, in Indonesia, this technology has not been used for matters related to crucial fields such as medicine, industrial/automotive engineering, as well as those related to conservation such as architecture, cities, archeology, and history. Even though the VR application offers a variety of innovative solutions for efforts to accelerate high technology to maximize performance and products [47].

VR technology [48] is an interface technology between humans and machines that can simulate people as if they are in a natural environment including sight, hearing, movement, and other actions [49]. This condition can not only clearly describe the real environment, but VR also allows users to observe the virtual environment and feel like they are in that place [23, 32].

VR as one of the innovations that can be used in e-Tourism invites users to interact with an environment that is simulated by a computer. According to LaValle [52], VR displays a pseudo-reality environment [50] by presenting a visual experience displayed on a computer layer [39, 40] or through a stereoscopic [41, 42] viewer where some simulations include additional sensing information such as sound displayed through headphone speakers [5, 39–43].

VR as technology has made a big difference in the history of human thought and is currently becoming a trend to help improve performance and product quality. VR is a technology created so that users can interact with an environment that is simulated by a computer. A simulated environment can be similar to the real world, a representative virtual reality experience by including a simulation of a combination of sensory results (visual, audio, touch). Computers help simulate a real object by generating a three-dimensional (3D) atmosphere to make the user physically involved.

The main components of this system hardware are the VR engine or computer system, input devices, and output devices. In general, the input device is responsible for interaction, the output device for immersive sense, and the VR engine or computer and its software for accurate control and synchronization of the entire virtual environment [24, 44] (**Figure 4**).

Based on the image, the input device is a means for users to interact with the virtual world. This device sends signals to the system about the user's actions, thereby providing the appropriate reaction back to the user via the output device in real-time. These devices can be classified for example as tracking devices, point-input, bio-controllers, and sound devices. VR Engine or computer is a data processor and storage. Real-timing, graphic display, and image processing are some of the important factors and can take up time in the operation of the VR system so it must be selected according to the character of the application requirements.

The choice of VR Engine depends on the application field, the user itself, input and output devices, the level of immersive and graphic output required, because the VR Engine is responsible for calculating and producing graphic models, object rendering, lighting, mapping, texturing, simulation and so on. to be displayed in real-time. The computer as a VR Engine also handles interactions with users and functions as an interface with input and output devices. The output device is a device that receives feedback from the VR Engine and presents it to the user via a suitable output device to stimulate the senses. Several classifications of output devices based on the senses are graphic (visual), audio (hearing), haptic (touch or style), smell, and taste. The visual display is the most popular output in a VR system
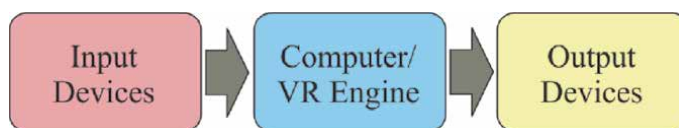
Figure 4.
VR system stove. Source: Bahar [48]; Mazuryk and Gervautz [53].

whereas other types of displays are complementary. Visual displays are devices dedicated to the user's eye presenting a 3D world.

There are six categories of visual displays, each of which provides a different level of immersion, namely desktop displays, head-mounted displays (HMD), arm-mounted displays, single-screen displays, surround-screen displays (CAVE, Panoramic screen) and volumetric displays [35, 45, 46].

3. Methods, objects and research locations

3.1 Research methods

The research method used is the system development method of the Multimedia Development Life Cycle model (MDLC model) (**Figure 5**).

The stages of this MDLC model [51] are:

1. Concept [48] is the stage for determining the purpose of the application (entertainment, learning) and who is the program user (audience identification), determining the type of application (presentation, interactive). This concept stage is the basis for designing both size and target applications. The output from this stage is usually in the form of a narrative document to reveal the project objectives to be achieved.

2. Design [48] is the stage of making technical specifications for the program architecture, appearance, and material requirements for the program. At this stage the specifications are made in great detail, making it easier for the material collecting and assembly stages. The use of storyboards is used to describe a description of each scene by including all multimedia objects and links to other scenes.

3. Material collection [48] is the stage of collecting materials following the needs that are done. These materials include clip art, photos, animation, video, or audio. This stage can be done in parallel with the assembly stage. However, it is also possible for the material collecting and assembly stages to be done linearly and not parallel.
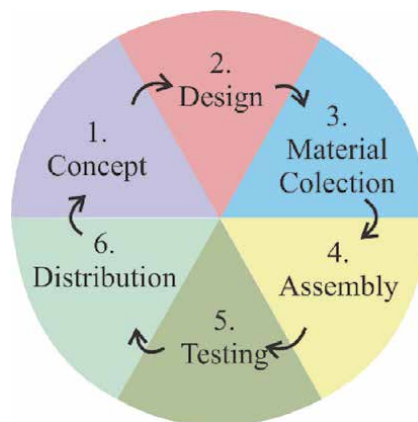
Figure 5.
MDLC model. Source: Hendrati and Hendrati [51].

4. Assembly [48] is the stage where all multimedia objects or materials are made. Making the application is based on the design stage.

5. Testing is the testing phase carried out after completing the assembly stage by running an application or program and seeing whether there is an error or not.

6. Distribution [48] is this stage, the application will be stored in a storage medium. If the storage media is not sufficient to accommodate the application, compression of the application will be performed. This stage can also be called the evaluation stage for developing finished products to make them better. The results of this evaluation can be used as input for the concept stage of the next product.

According to the MDLC drawing, it is divided into 2 (two) main stages, namely the data and architectural visualization phase (concept, design, material collecting) and modeling (assembly, testing, and distribution).

A. Concept

The concept presented the user title, object, input, and output of the MDLC model.

Title	Model of virtual tourism as an alternative of the concept of architecture tourism post Covid-19 in Bandung City, Indonesia
User	Tourist
Object	Multimedia contents, namely photos and videos of historical architectural buildings in the city of Bandung
Input	Photos, videos, and texts about the historical architectural buildings of Bandung
Output	360^0 photos and text

B. Design

The concept of the MDLC model is designed for users by carrying out 6 (six) activities starting from viewing the start page, viewing the map, selecting map coordinate information, selecting tourist attractions, viewing tourist spot information, and viewing the 360^0 display as shown in the picture (**Figure 6**).

From the design in the image, a design is made using the class diagram for virtual reality, where the class diagram consists of 4 classes, namely the Welcome Activity with the variable used is my button. For the MapView class, the variables used are mySpinner, place, URL, view, and descButton. The place variable connects the map view, description, and panorama classes, which determines the photos and description of tourist attractions that will be displayed in the description class and the panorama that will be displayed in the panorama class.

C. Material collection

The data of this study were conducted using several primary and secondary data collection methods, namely, the researcher took data from the management documents of several architectural tourist attractions from historical buildings in the city of Bandung, in the form of photos, videos, and information. Also, the researchers took direct documentation of each historical building object in the city of Bandung by taking direct photos, where the photo session began by selecting
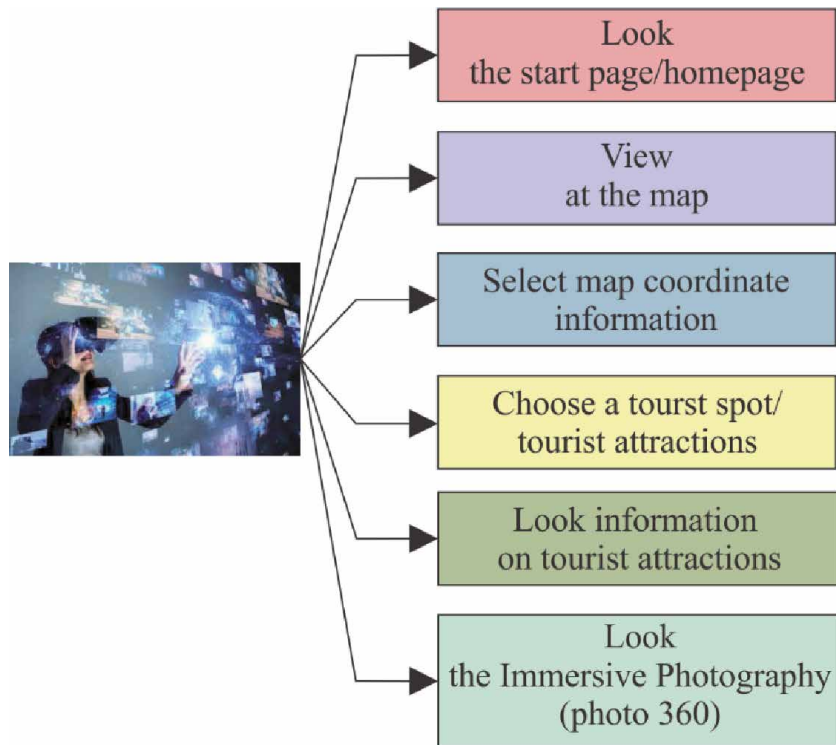
Figure 6.
Use case. Source: compiled from various sources, 2020.

which point would be the center of the 360^0 photos. Then a tripod and pano head was placed above that point. After that, a camera with an 8 mm lens was mounted on the pano head. After that, the photo is taken rotating to the right, top (zenith), and bottom (nadir). To complement and be more interactive, videos taken directly from each historical building object are used, so that the results with VR are expected to be more realistic and users can feel like in a real environment [50].

3.2 Location and object of research

The research location is in the city of Bandung which is spread over several areas (SWK), namely (1) SWK Bojonegara, (2) SWK Cibeunying, (3) SWK Bandung Kulon, and (4) SWK Maleer (**Figure 7**).

No	Building	Description
1.	Gedung Sate	This building is now the government building of West Java Province which has a skewer ornament on the roof. The meaning of the 6 ornaments symbolizes the cost of forgiving this building which reached 6 million guilders. The architectural style is a mixture of European-Indonesian building styles..
2	Gedung Geologi	The Geology Museum was founded on May 16, 1928. The establishment of the Geological Museum is synonymous with the existence of the Dutch during colonialism in Indonesia and also the influence of the world, where Central European geologists at that time were intensively conducting many geological and mining investigations in Indonesian territory. At that time Europe experienced an industrial revolution in the mid-18th century and very much needed many types of mining materials which were used as

No	Building	Description
		industrial base materials. In 1850, the Dienst van het Mijnwezen institute was formed. This institution later changed its name in 1922 to Dienst van Mijnbouw which was tasked with investigating geology and mineral resources throughout the Indonesian archipelago. The museum has been renovated with a grant from JICA. After undergoing renovations, the Geological Museum was reopened..
3.	Museum Konferensi Asia Afrika	This museum was originally used by an association of elite European citizens living in Bandung called Sociateit Concordia. The corner of the building facing Jl. Asia Afrika-Braga used to be in the form of a rigid corner. And then renovated to be circular like now.
4.	Gedung Merdeka	Gedung Merdeka with the Museum of the Asian-African Conference is a different building built by the Asian-African Conference designed by architect A.F Aalbers, while the Merdeka building by architect Wolff Schoemaker. The independent building was formerly known as the Schouwburg Concordia, which was the venue for the Societeit Concordia to perform and party.
5.	Gedung Bank Indonesia (De Javasche Bank)	Javasche Bank is one of the buildings built by the Dutch Hindi government under the leadership of Herman William Daendles as part of the development of the center of government in Bandung. Javasche Bank was built in mid-1909, designed by architects Edward Cuypers Fermont and Hulswitt. After independence, in 1953 it was taken over and inaugurated as Bank Indonesia.
6.	Villa Isola	The building is located at Jln. Dr. Setiabudhi 229 Bandung with this unique architectural design, is now used as the rectorate office of the Indonesian Education University. When viewed from afar, this building looks like a cruise ship. The previous owner was Dominique Willem Berrety who is of mixed Indo-Italian descent who is known as the king of the media.
7	Hotel Savoy Homann	The hotel was designed by architect A.F. Aalbers using a streamlined art deco style. This hotel is one of the historic hotels in Bandung because it was the place to stay for representatives of the 1955 Asian-African conference participants. In addition, the world famous comedian Charlie Chaplin has stayed at this hotel twice.
8.	Hotel Preanger (sekarang Prama Grand Preanger)	This hotel is the design result of Ir. Soekarno when he was an assistant architect for Wolff Schoemaker. Hotel Preanger is located at the junction of Jln. Asia Afrika and Jl. Big Lengkong. Before the hotel building was in the art deco architectural style it is today, it used to adopt the baroque style of the building.
9.	N. I Escompto M.I.J	This building was used by the first bank in Bandung, namely N. I Escompto M.I.J. Before occupying a location at the intersection of Jl. Asia Afrika and Jl. Banceuy, this bank is located on Jl. Independent. Until now, this building is still being used by the BRI bank with the addition of a tall and unique building on the clock tower with Roman numerals attached to that hour. The number four is not written with the symbol (IV) but with the symbol (IIII).
10.	Nedhandel NV	It is a building that was used by a bank from the Netherlands. This building is located on Jl. Asia Africa. The architectural style of this building adopts a neo-classical style by using materials imported from Europe. Now this building is used by a state-owned bank.
11.	Gedung DENIS	This building was formerly occupied by NV. De Eerste Nederlandsch-Indische Spaarkas (NV DENIS) which is a building as a sister building to Savoy Homann. The architectural style adopts both streamlined art deco and a tower. Now this building is used by BJB Bank
12.	Gedung Pensil	It is called the pencil building because the roof is pointed like the tip of a pencil. It is located in the Asia-Africa Simpang Lima area. This

No	Building	Description
		building was previously used as the office of the world's leading lubricating oil agent.
13.	Gereja Katedral Santo Petrus	This church is located at the intersection of Jl. Merdeka and Jl. Java is the design of the architect Wolf Schoemaker. When viewed from above the church building forms a symmetrical cross
14.	De Majestic	This building was previously called the Concordia Theater which is one of the legendary cinemas in Bandung. It was in this theater that the first film produced in Indonesia, namely "Loetoeng Kasaroen" was screened on Bumi Priangan. Currently, the building is located on Jl. This Braga has been revitalized and is returning to function as a cinema and performing arts.
15	Dakken	This Dutch colonial era house is now used as a cafe and restaurant. This building is located on Jl. Riau Bandung, which is now a shopping center, distro and factory outlet. This building attracts attention because of its classic design with a tapered tower on one side.
16	De Driekleur (Gedung Tiga Warna)	This art deco building is located on Jl. Dago. Now, this building is being functioned by a national bank. The meaning of De Driekleur itself in Indonesian is three colors. But that does not mean this building has three colors on the body of the building. The meaning of these three colors refers to the Dutch flag which has three colors. Now it functions as a BTPN bank.
17	Warenhuis De Vries	This building used to be the first department store in Bandung. This building is a place for plantation bosses in the Priangan area to buy their necessities. Before being used by a private bank today, Dr. Vries was also used as a Padang restaurant, clothing shop, and butcher shop in different periods.
18	Swarha	The building, which is located next to the Grand Mosque of Bandung, used to be a hotel. During the 1955 Asia Africa Conference this hotel was used by journalists. Swarha itself stands for Said Wiratmana Abdurrachman Hassan, who is one of the rich traders from the Middle East. This building is now known as Indra Busana

Source: Compiled from various sources, 2020.

Of the 18 (eighteen) historical building objects in the city of Bandung, 5 building objects were taken, namely Gedung Sate, Vila Isola, Geology Building, Asia Africa Museum, and Gedung Merdeka. Documentation consists of photos and videos as shown in the table (**Table 1**).

No	Name	Photo and video						Total
		Horizontal		Zenith		Nadir		
		Photo	Videos	Photo	Videos	Photo	Videos	
1	Gedung Sate	8	3	4	1	4	1	21
2	Villa Isola	9	4	4	1	4	1	23
3	Gedung Geologi	8	3	4	1	4	1	21
4	Museum Asia Afrika	8	3	4	1	4	1	21
5	Gedung Merdeka	8	4	4	1	4	1	21

Table 1.
Taking photos and videos of historical architectural buildings in Bandung.

Figure 7.
Map of Bandung City. Source: processed from digital and Google map, 2019.

4. Results and discussion

Amid the Covid-19 pandemic, everyone cannot travel for tourism, so the tourism sector is severely affected. Moreover, it is related to the domestic MICE (meeting, incentive, convention, and exhibition) industry. This condition needs to be more exploratory by holding virtual tourism or virtual events. The use of VR technology for various purposes has been very developed, including for the tourism sector. VR is used in the tourism sector only to disseminate information, but during the Covid-19 pandemic, it can be developed into a virtual tourism development model. This virtual tour invites tourists to surf virtually directly by visiting tourist objects following their tourist destinations.

Making content about historical building tourism objects containing information about these tourism objects. The content can be accessed for free with limited features. If virtual visitors want complete content, they must pay for tickets (online) as if entering a tourist attraction directly. Heritage buildings as a legacy of colonial architecture in Bandung during normal times were visited by many domestic and foreign tourists. Currently, it is very potential to build a virtual tourism model, where tourists are invited to surf to visit several historical architectural buildings. The virtual tour will allow visitors to surf and explore all tourist objects.

Based on the design that has been made, the next step is the assembly stage, where through development using panoramic photos (using PG GUI software, making maps (taken from Google maps), and creating program code (using eclipse software). The results of this assembly are based on application design. a virtual tour that has been adjusted to the results of the analysis carried out previously, namely the 5 objects of historical and heritage buildings in the city of Bandung

Figure 8.
Basic components of VR immersive application. Source: Mazuryk and Gervautz [53].

through immersive photography techniques so that the results can display interactive visual information.

The implementation of the virtual tourism model with the MDLC approach is divided into 2 (two) main stages, namely, the first part is the data and architectural visualization phase, and the second part is the modeling phase. In this modeling phase, wake up after the design and coding phase is complete, where at this stage it contains several models which are a combination of virtual modeling and the results of video or photo recording 360^0. After a new modeling system is made, it is run and observed to see the performance of the system. This process includes 2 views, namely the main menu display and the 360^0 photo display (**Figure 8**).

Implementation of the system on the main menu display is a step to put the system so that it is ready for operation. This process aims to confirm the design modules so that the user can provide input to the system developer. As for the photo display, 360^0 is used to view the results. This stage is used the Google cardboard application as a VR tool that uses a smartphone as a platform/layer.

The testing and distribution stages are used for testing and packaging the application. Testing is done using Alpha testing, namely by running the application and seeing whether there is an error or not. The test results went well, and the content and buttons from the navigation function as intended. The distribution stage is the final stage of application packaging. Where in this virtual tour application, the application file is packaged into an executable file (.apk) and then packaged into a self-extractor file of type.apk. This file can only be run on mobile phones with the Android operating system.

5. Conclusion

VR as one of the applications offers the opportunity to reconstruct and invite users to experience virtual space as real conditions. VR modeling is very useful, especially in the field of architecture which is aimed at reconstructing historical and heritage buildings, so that users are invited to virtually surf and tour the past. Through the application of VR, it can enhance the experience of real and pseudo-spatial collaboration as a contribution to education for the younger generation and public appreciation, namely through reconstruction and chronological sequence of events in history.

The development of a virtual tourism model for historical and heritage buildings in the city of Bandung can be concluded that:

a. To be able to display and run the virtual tourism model the most needed factor is a good and stable internet connection so that content display will be smooth and fast.

b. The use of panoramic images of 360^0 can represent and make it easier for users to accept and understand what is presented/conveyed.

c. The implementation of panoramic photos in the VR application for tourism of historical and heritage buildings in Bandung can be further developed by more professional developers.

d. It is necessary to develop the quality and size of the panoramic photo according to the type of photo image using the Panorama GL library.

e. Where in the future, the use of VR technology needs to be further developed to inspire public participation in supporting the socialization and preservation of historic and heritage buildings, especially those in Bandung, generally in cities in Indonesia, both for educational, socio-cultural and tourism purposes.

Acknowledgements

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Eco-Cultural Tourism: Sustainable Development and Promotion of Natural and Cultural Heritage

Violante Martínez Quintana

Abstract

Ecotourism has the eradication of poverty and environmental protection at its core. Both of these goals were established by the United Nations in 2012 though their development began in the 1980s. The purpose of this chapter is to analyse, using a comparative methodology, global and local eco-cultural tourism (natural, rural and urban areas) in tourist destinations of countries with emerging economies (Asia: China, Malaysia, Thailand), developed countries (Europe: Spain), and developing nations (South America: Peru, Argentina, Bolivia). The working hypothesis states that local, sustainable planning, endorsed by all the tourist agents is required, and should be led by the load capacity and the economic and environmental balance (green economies and ideologies), in order to answer to poverty and climate change problems by means of Tourist Projects directed by governmental policies and administrations. The outcomes suggest a need for a logistical change of policies, to prevent economies from generating pollution and carrying out abrasive activities associated with tourism. This change will create sustainable tourist destinations, the inclusion of populations, and the protection and conservation of natural and cultural heritage.

Keywords: sustainable development, nature, culture, tourism planning, government policies

1. Introduction

Eco-cultural tourism stems from ecotourism, which has been supported by the United Nations since 2012 [1] in order to eradicate poverty, protect the environment and incorporate sustainable development. It recognises the importance of preserving and protecting biodiversity and natural areas, and of using them in a sustainable manner. It fosters entrepreneurship and development among local communities, and encourages tourists to preserve and respect natural and cultural heritage.

This development has been possible after numerous recommendations from the World Tourism Organisation (UNWTO). Member States were urged to adopt incentive ecotourism policies, emphasising the positive effects of the creation of revenue, employment and education. Since the start of the nineties, ecotourism has been worked on at regional conferences and global summits, and 2002 was named the International Year of Ecotourism.

The majority of ecotourism-related terms emerged from English-speaking media [2]: natural tourism, rural tourism, wilderness tourism, alternative tourism,

environmental tourism, anthropological tourism, low impact tourism, travel with Mother Nature, adventure travel, jungle tourism, cultural tourism, ecotravel, green tourism, science tourism, soft adventure tourism, bio tourism, ethnic tourism, appropriate tourism, sustainable tourism, ecotripping, socially responsible tourism, ecoventures, nature vacations, wilderness tourism, and ethical travel. As a whole, they are related to responsible, respectful and honest tourism. It's educational because it offers information before, during and after the trip. It's interactive because it entails life experiences involving real contact and participation. It's democratic because the benefits it creates are equally distributed; it encourages the participation of rural communities and supports resource conservation.

The growth of ecotourism began in the eighties, notably because of the economic benefits of natural tourism. What is characteristic of ecotourism is that it is a tool for sustainable development [3] and it's categorised as an activity that mixes the excitement of travelling with caring for the environment. Its main goals are sustainability, preservation and participation of the local community.

With the modern tourist's demands and new trends, ecotourism is moving on to its next stage and is asserting itself as eco-cultural tourism. It binds searching for contact with nature with valuing cultural authenticity, environmental sustainability, new experiences and a higher number of trips with a shorter stay in each place. That is to say, it's created a symbiosis between natural tourism and cultural tourism, supported by sustainability and limitations on use, by small-scale activities and a high-quality tourism experience.

Eco-cultural tourism is a new form of tourism where the main goal is not to generate wealth, expropriate land and exploit resources of inhabitants and countries in order to benefit big companies. It's established itself within a new concept of tourism, both in socioeconomic terms and as a practical activity, that combines the conservation of natural and cultural sites with economic and recreational benefits through sustainable development, and improves the conditions of the recipient communities. The main motivation is observation, appreciation and contemplation as an experience within the natural and cultural environment.

Table 1 shows the characteristics of eco-cultural tourism from its inception, together with the synergy of the United Nations resolution that emphasises poverty eradication and environmental protection through ecotourism. It's a small-scale and fundamentally emotional form of tourism that promotes sociocultural and traditional values and environmental awareness, and offers benefits both to rural and urban areas. It requires a platform and type of tourism planning that encourages local sustainable development, involving all tourism sectors. It's currently

Birth of ecotourism: It's born together with the synergy of the United Nations resolution (2012) that emphasises poverty eradication and environmental protection through ecotourism [1]. It's small-scale tourism, with small businesses, with a specific and limited quality production and it's fundamentally based on experiences
It encourages: Sociocultural and traditional values; environmental awareness; respect for the biosphere, local cultures and traditions; brings benefits to rural and urban communities; economic potential for public and private companies, as well as a high-quality tourism experience
It requires: A platform and local sustainable development involving all tourism sectors (touristic planning, carrying capacity); socioeconomic and environmental balance.
It currently responds to: problems related to climate change and imbalances in economic globalisation through Tourism Development Projects supported by government policies
Source: own compilation.

Table 1.
Characteristics of eco-cultural tourism.

unique due to how it responds to problems related to climate change and imbalances in economic globalisation that have led to dead end conventional and/or traditional tourism. Tourism Development Projects offer a new path for tourism.

Once eco-cultural tourism has been contextualised and treated together with its goals, a Planning Model with alternative tourism and the development of Tourism Projects is incorporated. In addition to this, a comparative methodology will be used to analyse global and local tourism in countries from Asia, Europe and South America. This will be guided by the following hypothesis: eco-cultural tourism requires local sustainable planning, endorsed by all tourism agents, and led by the load capacity and economic and environmental balance (green economies and ideologies). In this way, eco-cultural tourism will respond to the problems of poverty and climate change through Tourism Projects, directed by government policies and administrations.

2. Planning alternative tourism and tourism development projects

Planning for alternative tourism and creating Tourism Development Projects in eco-cultural tourism is carried out in unique spaces that, generally, have received little impact from conventional and/or traditional tourism. They are concrete, different or special spaces that are distinguishable from others. They are easier to design, manage and carry out [4]. The tourism development projects are based on planning models that involve the participation of all agents: representatives, politicians, businessmen and women, neighbourhood associations, indigenous communities, environmental groups, etc. The entire population of the natural and cultural area is involved in economic and social sustainable development and can obtain income, employment, and material and cultural wellbeing. Therefore, all agents organise their own tourism model based on the available resources, the existing heritage and the characteristics of the inhabiting communities.

Table 2 shows a Planning and Sustainable Development Model for Eco-cultural Tourism comprising three phases, that can be applied to natural, cultural and urban areas, and that includes the following types of tourism: interior tourism, ecotourism, cultural tourism, rural tourism, natural tourism, domestic tourism, national tourism, experiential tourism, adventure tourism, agrotourism and green tourism. The first phase known as the PRELIMINARY STUDY of the whole area, is derived

Natural, cultural and urban areas	Planning, sustainable development and the promotion of nature and cultural heritage
Original natural, cultural and urban area	1st Phase: preliminary study Data (indicators, surveys, interviews), analysis and report according to the World Tourism Organisation (UNWTO) FAS model.
Natural, cultural and urban area to be planned	2nd phase: planning and carrying out the tourism project Specifying and planning goals according to the model: Strengths, weaknesses, opportunities, threats (SWOT) Developing the Tourism Project based on sustainable development and the load capacity
Natural, cultural and urban area consolidated	3rd phase: implementing and evaluating the tourism project Implementing and managing the Tourism Project (Tourism and Entertainment Policies)

Source: own compilation.

Table 2.
Planning and sustainable development model for eco-cultural tourism.

from a comprehensive study that seeks to obtain specific data (indicators, surveys, interviews) and carry out an analysis and report in accordance with the Factors or Resources, Attractors and Support Systems model (FAS) [5]. This tool allows you to order and classify the main elements that make up a tourism destination. It's divided into factors or resources, attractors (tourism products) and support systems.

The *factors or resources* are the baseline conditions of the original area and are made up of natural and cultural heritage, and of human capital resources. They are the natural resources (water, land, climate); human resources (human capital, cultural traditions, myths and legends, working conditions within the workplace) capital resources (existing financial capital, existing physical capital (airports, ports, roads, railway, etc.) and potential foreign capital investments.

The *tourism products* (attractors) are elements that belong to the natural and cultural heritage of the original area and that have earned value through the application of human factors and capital, and that are now available on the market. Natural tourism products (natural spaces, beaches and adventures in nature) are part of the natural area, just as cultural products (historical heritage, events and a population's lifestyle) belong to the cultural area. Last but not least, artificial products are those such as leisure and entertainment, conventions, exhibitions, shopping centres and shops.

Support systems are there to satisfy the needs of tourists, and facilitate their trip and stay in the natural and cultural area of origin. They include catering (hotels, accommodation—tourist apartments, rural homes, guesthouses, etc.—catering establishments). It also includes air, land and sea transport, complementary services (tourist information services, tourist information offices, tourist guides, destination planning).

This data and their indicators and analyses carried out by specialised technicians and specialists, are complemented by researching tourist populations that visit these destinations, their characteristics and preferences, their economic status, their destination images and attitudes towards the environment and biodiversity. A social investigation is carried out on these populations, and the planning and sustainable development model proceeds with the analysis of the following [6]:

1. Tourist populations that visit the local place of origin.

2. Preferences regarding cultural, social and religious traits.

3. Economic and consumption situation.

4. Perceptions regarding artistic and cultural heritage in the destination images of tourist populations.

5. Attitudes towards the environmental surroundings and biodiversity.

To be more specific, the aspects studied within the investigation [7] through national surveys can be useful for the PRELIMINARY STUDY of the natural and cultural area of origin. For example: tourist movement, tourists' profile, why people feel encouraged to choose a specific tourist destination, information habits, purchase and consumption of the real or potential demand, image offer, competitors, tourist expense and the effect of tourism on the area's economy. The reality obtained gives us a general map through which we can find out which resources are available in the area, and the general characteristics of its population and tourists.

The second phase is PLANNING AND CREATING THE TOURISM PROJECT. This involves the detailed analysis of the general map of results from the PRELIMINARY STUDY in order to organise the planning and creation of the

Tourism Project's goals through the following model: Strengths, Weaknesses, Opportunities, Threats (SWOT) [8]. Some relevant *Weaknesses* one can find in the planning of the natural and cultural area are the threats to employment, competing with other destinations, the lack of a sustainable tourism model, the lack of education and training, and the lack of coordination between public and private administrations in matters related to tourism. As for *Strengths*, some examples are natural and cultural historical heritage, biodiversity preservation, lakes, water reservoirs, natural parks, historical roads, the protection of endangered species, handicraft markets and shops, etc. *Threats* include COVID-19, closure of borders of entire cities and countries, emergencies in certain regions of the world, the lack of national rural plans, employee retention and economic slowdown. Finally, *Opportunities* refer to the creation of employment, entrepreneurship support, valuing natural and cultural heritage, and the development of digital competencies, among others.

The development of the Tourism Project must be based on sustainable development and the load capacity. By doing so, the project will help to maximise the strengths of the area to the fullest, improve the identified weaknesses as far as possible, keep the potential threats under control, and reap rewards from the opportunities the cultural and environmental settings offers. Both public and private administrations of the town must agree on a local plan for the project. Such a plan is intended to develop specific programmes and find sources of funding, as well as to facilitate coordination with other programmes and activities from other departments in order to achieve ongoing, day to day management. This is what a tourist destination that is included in a local plan [4] (p. 61) needs in order to succeed:

1. Attractive natural and cultural resources.

2. Environmental protection in the places to be visited, around the tourist centres and the access routes.

3. Good weather conditions.

4. Easy access from outside and within the destination areas.

5. Tourist safety and protection: legal assistance, health care, complaints.

6. Value for money, especially when compared with other rival destinations that are in the same region or offer similar products.

7. Information and promotion of the tourist destination. Population awareness regarding the benefits arising from tourism. Kindness and hospitality.

8. Range of leisure activities: cultural tours to eco-museums, walks along historical roads, sports and birdwatching.

9. Authenticity of the tourist experience: how many distinguishing features the place has.

10. Clear and distinguishable positioning contrasted with other competitive destinations.

11. Possible complementary relationship with other destinations nearby that are already well-known in the marketplace: exploit synergies.

Last phase: IMPLEMENTATION AND ASSESSMENT OF THE TOURISM PROJECT. At this point, the principles and pillars of sustainability are applied, as well as the purposes of the tourism project, which must be done over temporary phases so that it is possible to make improvements, to turn down alternatives that have not worked out, and to formulate different strategies that help strengthen the project. In this context, the state, policies on tourism and leisure, and the sustainable development of eco-cultural tourism in the cultural and natural area are important. The Marrakech Process [9] recommends sustainable policy management. It also states that the policies should be led by local authorities, indigenous and local communities, any international organisation linked to the plan, the private sector, non-governmental organisations (NGOs) and consumers.

3. Sustainable development of eco-cultural tourism with green policies and economies in natural, rural and urban areas

The concept of tourism as a factor of sustainable development has been addressed by the UNWTO [10] in Article 3 of its Global Code of Ethics. It expressed the duty for all tourism development practitioners to safeguard the environment and natural resources, taking into consideration continuous and sustainable economic growth, so that all needs and aims of the present and future generations can be fairly met.

The model of sustainable tourism curbed, to some extent, the almost unstoppable devastation created by a model of extensive growth that had deeply exhausted natural resources. Undoubtedly, the essence of eco-cultural tourism takes root in the principles of environmental planning, which is the preservation of any natural area and historic, cultural and archaeological sites. **Table 3** shows the case report of eco-cultural tourism in Asia, Europe and South America with the global and local dimension.

Asian countries including China, Malaysia and Thailand are a modern example of countries with emerging economies, which have experienced significant economic growth and rapid urbanisation. Scientific studies have addressed, from a global dimension, the impacts of tourism and its destinations on logistics and economic dynamics, especially the effect the tourism industry has had on transport,

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ASIA: China, Malaysia, Thailand [11–15]

1. Global dimension, natural, urban and rural areas: countries with emerging economies with high economic growth and rapid urbanisation.
2. Developed/consolidated and developing tourist destinations: impacted by environmental pollution. Tourism policies with Ecotourism, green energy and economies.

EUROPE: Spain [16–21]

1. Local dimension, natural rural and urban areas: A country with a developed European economy and outstanding natural and cultural heritage.
2. Developed/consolidated tourism destinations: Tourism policies developed and promoted for recovery and not extinction.

SOUTH AMERICA: Peru, Argentina and Bolivia [22–24]

1. Local dimension, natural, rural and urban areas: Countries whose developing economies have natural and cultural attractions and activities that focus on sustainable tourism.
2. Unspoiled/developing tourism destinations: Tourism projects with proposals for sustainability, quality, continuity, balance and community intervention.

Source: own compilation.

Table 3.
Case report of eco-cultural tourism in Asia, Europe and South America.

especially by air in terms of travel and access to places of recreation. The latest research by Rehman Khan, Zhang, Kumar, Zayadskas, Streimikiene on measuring the impact of renewable energy, public health expenditure, logistics, and environmental performance on sustainable economic growth [11], is part of the Association of Southeast Asian Nations (ASEAN). They study secondary data from the World Bank's website with structural equation models, concluding that the use of renewable energy will improve environmental sustainability and the creation of a better national image. The promotion of sustainable economic growth should be based on adequate planning that formulates policies in line with sustainability.

Indeed, environmental policies and sustainable development have been the priority axes in literature reviews and existing theoretical models relating green logistics and the economy to environmental sustainability and general social factors. This has been pointed out by Rehman Khan, Zhang, Kumar, Zayadskas, Streimikiene in their research. Measuring the impact of renewable energy, public health expenditure, logistics, and environmental performance on sustainable economic growth [12]. In this case, future research trends will have to be redirected to the micro-level, which means local and precise levels.

Within the same context, the relationship between tourism and globalisation in environmental degradation is investigated in China [13], where a quantum distributed delay model is used. They show that economic growth stimulates environmental degradation and suggest a comprehensive policy framework that could achieve Sustainable Development Goal No. 7 (Affordable and clean energy), No. 8 (Decent work and economic growth) and No. 13 (Climate Action). Reorientation of policies to ensure sustainable development appears to be diffuse in the existing literature, if not entirely absent. The transportation and accommodation associated with tourism has an impact on carbon emissions and is an issue that must be addressed by reducing environmental degradation, promoting renewable energy, boosting tourism, and creating employment opportunities in both the public and private sectors. Technologies should not replace all manual labour. From this point, a new perspective towards ecotourism, with all its variants, is opened, and serves as a general platform for the proper running of these policies.

Alongside this, the quantum auto-regressive distributed delay model (QARDL) [14] is being studied in Malaysia, in order to analyse the impact of economic growth, tourism, transport and globalisation on carbon dioxide (CO_2) emissions. The results of this study suggest that ecotourism is beneficial for economic growth in underdeveloped areas, in favour of protection and development. The long-term vision is that governments should encourage the development of low-carbon ecotourism and achieve green development of both tourism and the economy. All in all, the aim is to promote green consumption through policies and the ethical consideration between the local communities, the relevant agencies and the tourists. Such a mechanism will ensure responsibility in the behaviours towards the natural environment of the tourist destinations of the country.

Finally, the last Asian country listed in **Table 3**, Thailand [15], analyses all the elements mentioned in the previous research, adding the negative influence of high crime levels on tourism. It concludes the only solution to protect the tourism industry involves clean energy promotion by the government, and the application of biofuel use in the transport sectors to improve environmental sustainability.

Spain represents one of the developed economies in Europe with the most remarkable natural and cultural heritage. Destinations are consolidated and there are tourist policies in most established destinations, together with promotion for recovery and not extinction. One of the most significant activities corresponds to wilderness tourism, which usually begins to thrive after all stages of general tourism development, in an effort to satisfy a desire for outdoor recreation and appreciation

of nature in large areas. It is related to development and sustainable tourism, so it refers to natural habitats and its biodiversity. In this context, natural parks, conservation areas, ecotourism, agricultural tourism, the rural environment and the involvement of the communities in the area of implementation are incredibly important [25]. This is why three consolidated projects have been chosen, projects of three national parks in Spain out of fifteen that are today included in the list [26].

Figure 1 presents a panoramic view of Ordesa National Park (Huesca, Spain) [16]. In the visitor's guide, there is a map showing the location of the park in the north of the peninsula, located in the heart of the Pyrenees in the autonomous community of Aragon. A media guide (with pictures of the landscapes) can also be found. In the fact sheet of the informative brochure, there are useful addresses and recommendations for visiting and appreciating this park. The sheet also highlights that the place has been designated as a World Heritage Site, Global Geopark and Biosphere Reserve by UNESCO, and that it has also been awarded the European Diploma by the Council of Europe. There is accurate information about cultural aspects (customs and traditions), flora, fauna, and information about relevant visitor centres and information points. At Ordesa National Park, there is a plan for the recovery of bearded vultures and for the tracking of the chamois. It's working towards improving the quality of visits, reducing the impact created of vehicles and permitting access to the park at any time during the fixed opening times. This has been known as the Visitor Access Plan in the Ordesa Valley since 1998.

Figure 2 presents the Tablas de Daimiel National Park [17], a wetland that is considered virtually unique in Europe, and that is the only example of floodplains in an ecosystem, which was once characteristic of the inland plains of the peninsula. This ecosystem originates from the flooding that occurs in a plain when the Guadiana and Cigüela rivers jointly overflow at a point where they both discharge groundwater coming from a large aquifer. The preservation of this ecosystem has ensured the survival of the bird fauna, and has created a specific area for aquatic birds. The park is internationally acknowledged for being a Biosphere Reserve since 1981 and a Wetland of International Importance by the Ramsar Convention since
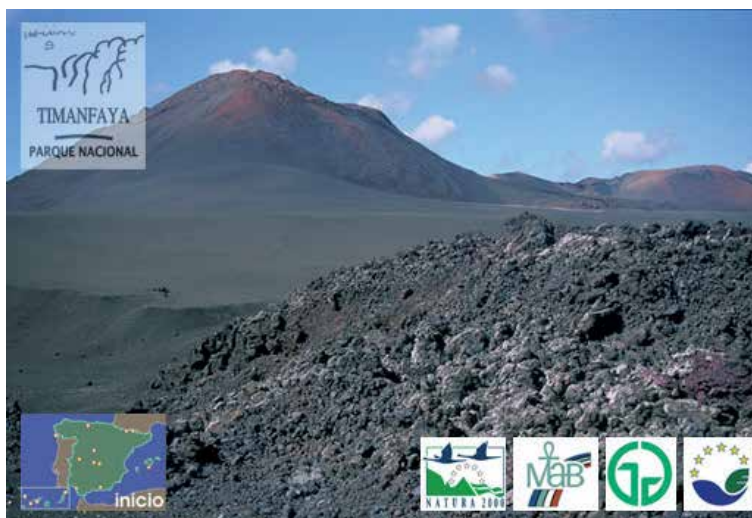

Figure 1.
*Ordesa y Monte Perdido National Park (Huesca, Spain). Source: https://www.miteco.gob.es/es/es/
red-parques-nacionales/nuestros-parques/ordesa/.*

Figure 2.
*Tablas de Daimiel National Park (Ciudad Real, Spain). Source: https//www.miteco.gob.es/es/es/
red-parques-nacionales/nuestros-parques/daimiel/.*

1982. It has a wide range of aquatic birds and, among the flora, the aquatic plants
that comprise the substrate of the Tablas de Daimiel are of special importance.
For the promotion of the park, a visitor's guide, park guide and media guide (with
pictures of the landscapes) are available.

   Figure 3 shows the Timanfaya National Park, located in the western central
area of Lanzarote, one of the Canary Islands (Spain) [18]. It was designated a
Biosphere Reserve in 1993. It has undergone continuous volcanic processes, specifi-
cally in 1730, 1736 and 1824; with eruptions that completely changed the previous
island's morphology. Some natural values are volcanology (especially the preser-
vation and beauty of the Montañas del Fuego or the Macizo de Timanfaya), the

Figure 3.
*Timanfaya National Park (Lanzarote, Spain). Source: https//www.miteco.gob.es/es/es/red-parques-nacionales/
nuestros-parques/timanfaya/.*

geomorphological forms, the scarce vegetation and the unique weather conditions. Visitors can get acquainted with these natural values while doing tours in small groups led by qualified guides.

The park management team also organises activities for students, with the purpose of teaching them about nature and culture and to introduce them to the park's flora and fauna, cultural and historical values, agricultural activities, restoration of native crops, fishery, scientific activities and environmental volunteering. In the media guide, wonderful pictures of natural landscapes are shown, with unique volcanoes that make this a valuable and a high-quality tourist visit.

Projects with proposals are another kind of case report, classified as intermediate level, so that in the future the eco-tourism destinations can become consolidated projects. **The continental salt pans in Andalusia**, Spain [19] have tourist and educational potential as they are a specific type of wetland, inland salt pans. They are an industrial heritage site in danger of extinction, and could be reused as a tourist, cultural and educational destination. They could also help revive the economy of this area located in the heart of Andalusia, which has a promising range of architectural heritage, landscapes and nature, although it's now practically abandoned. The proposal formulated in this research will contribute to the preservation of this land heritage and help spread knowledge through the protection of the cultural, educational and tourist product. There is still a need for institutional support, for professionals that can implement the plan and for the opinion of people living in the area. Some matters need to be discussed, such as, what the tourist-educational tours will consist of, a survey on the economic, environmental and social impact during the development of the plan, if there is territorial and inter-administrative cooperation, and what limitations need to put in place so as to avoid causing irreversible damage to the area.

Finally, the **Research to propose projects for a tourism product** is the last case in Europe (Spain), and deals with **cultural landscapes (target images) as a tourism product. Spain** [20, 21]. The opportunities that the landscapes offer, especially the cultural landscapes, are likely to become a tourism product by means of sustainable planning and management. It applies to visitors and tourists that are mainly interested in historical towns and want to extend their stay in these destinations. The landscape is an integrated whole which presents the geographical facts on the earth's surface and includes physical features and elements created by humans, where the natural and cultural dimension can jointly be observed [27].

The panoramic and urban settings together make up the cultural landscapes. This specifically refers to historical towns, where the cultural tourists come and combine the feeling of the trip during their stay with the contemplative experience of the historic heritage. The protection of landscapes and heritage values led to the introduction of landscape conservation in urbanism and spatial planning during the 80s and 90s, and encouraged the valuing of landscapes as an enriching element by means of tourism [28]. Cultural landscapes are, in short, the result of people's interaction with the natural environment over time, the result of which is a territory perceived and valued for its cultural qualities, which express a process and the support of a community's identity. It represents a dynamic, complex reality which is difficult to manage [29].

Research on the perception and assessment of the **cultural landscape as a tourism product** [20] examines the perception of cultural landscapes and target images in a representative sample (500) of tourists from all of the autonomous communities in Spain. Its goal is to learn, among other aspects, the cultural tourist's interests, and their activities during their visits to historical towns. The context in which this research takes place is marked by a rediscovery of historical towns as tourist destinations, based on the experience of the visit and the short duration of the stay. The

ten most visited monumental cities or historical places by tourists surveyed were the following: Toledo, Madrid, Barcelona, Granada, Sevilla, Córdoba, Santiago de Compostela, Salamanca, Segovia and Valencia.

With regards to the interests of the cultural tourist during the visit (**Table 4**), visiting panoramic viewpoints of the town is highlighted in first place (4.29), second, visiting monuments and seeing museums (4.20) and, in third place, taking guided tours around the different viewpoints of the town, from outside and inside (4.01). In the end, the activities that generate most satisfaction for the cultural tourist during the visit can be classified into the five activities set out below: the views of the whole town and its interiors (4.45), visiting monuments (4.38), interacting with people from the town (4.21), viewing natural landscapes (4.04), and the atmosphere of the streets and public squares (4.01).

Our last block in **Table 3** relates to South American countries with developing economies, natural and cultural attractions, and activities determined by sustainable tourism. In most cases, their destinations are unspoiled/developing, with tourism projects based on sustainability, three of which have been selected: **The Amazon eco-cultural circuit, Peru** [22]**, the eco-cultural tourism project with proposals is based in Catamarca, Argentina** [23] and finally, **the Chalalán Project, Bolivia** [24].

The Amazon eco-cultural circuit, Peru [22] is a programme intended to improve competitiveness of the tourism sector on the eco-cultural route comprising Chachapoyas, Levanto, San Isidro del Maino and Magdalena (Universidad Nacional Toribio Rodríguez de Mendoza en Amazonas). This circuit offers 9 attractions and 7 activities, including trekking, horse riding, rural community-based tourism, ecotourism, archaeology, camping and cycling. All of this complies with sustainable fair and conservational tourism, which offers nature, culture, adventure and experiences. Tourists want to get involved, enjoy new experiences, feel connected and be a part of the conservation process of the places they visit. This experience forms part of their personal growth. This region, where the Incas once lived, has a vast biological and cultural diversity, magnificent waterfalls and valleys, private conservation areas, native species that are unique in the world and mysterious pre-Inca archaeological ruins. Among the tourist resources this area has, there are picturesque places such as natural viewpoints, Lopsol Forest, Purur river, Pumaurco

Interests of the cultural tourist during the visit to the historical towns	$\bar{X}$	Mode
-Visit panoramic viewpoint of the town.	4.29	5
-Visit monuments and see museums.	4.20	5
-Take guided tours of the different viewpoint of the town, from outside and inside.	4.01	5
Activities of the cultural tourist during their stay in the cultural towns		Mode
-Views of the whole city and its interiors.	4.45	5
-Visiting monuments.	4.38	5
-Interacting with people from the town.	4.21	5
-Viewing natural landscapes.	4.04	5
-Atmosphere of streets and public squares.	4.01	5

Source: own elaboration [20.]

Table 4.
Interests of the cultural tourist and activities during the visit to historical towns.

viewpoint, Convento cave, Tusa bridge, Camino Prehispánico [pre-Columbian road] and endless abandoned archaeological sites that are under no conservation programme. The circuit would require planning that fosters social, economic and cultural integration, and that enhances integrating, progressive, unifying and sustainable tourism. For this plan to be implemented joint work is necessary. It is recommended that local and regional governments opt for innovative tourism projects, placing value on the archaeological resources they have.

The **eco-cultural tourism project** with proposals is based in **Catamarca, Argentina** [23], It is also included in the strategy for sustainable development, in which many environmental, sociocultural and economic criteria converge with quality, continuity and balance. Here, eco-cultural tourism is trying to establish itself, together with the opportunities offered by local economies, for example, adventure travel, agricultural tourism, observation of flora and fauna, birdwatching, scientific tourism, potholing and cultural tourism. It should be noted that the negative and destructive effects resulting from the massive and uncontrolled use of cultural goods and the surrounding landscapes cannot be ignored or minimised. Long-term political decisions making is key. Ultimately, the tourism project evaluates the archaeological historic heritage and its rehabilitation, local craftsmen, market studies, technical-economic evaluation, financial studies and the environmental impact evaluation.

The Chalalán Project, Bolivia [24] falls under responsible tourism in a natural area, and belongs to a poor area within the tourist market, where the indigenous community interferes to avoid, among other things, the disappearance of their community. It is located in the valley of the Tuichi river along the banks of the Chalalán lagoon, and consists of the creation of a series of rustic huts around it. The indigenous community of San José de Uchupiamonas is in a complicated situation, specifically because of its involvement in safeguarding its identity and its culture. In order to avoid its disappearance, they use an alternative economy to enable economic viability and attract visitor flows so as to reactivate the tourist destination at different levels and improve living conditions. They make use of solar energy through panels, and the use of batteries for flashlights and fossil fuels is kept to a minimum. They offer programmes to learn to experience the tropical forest, bird watching, canoe rides, swimming, bathing in the lagoon, observation of the flora and fauna, vegetarian cooking, conference rooms, etc. It's experience tourism that is based on authenticity, community development and economic activity, all performed in harmony with a tourist activity directed towards the local community, whose main purpose is survival.

4. Conclusions

Eco-cultural tourism is aimed at meeting the needs and problems that traditional and/or conventional tourism has set aside during its development phase and economic success. It is a central core piece around which alternative forms of tourism will develop, and acts as a counterweight in the resolution of the imbalances and inequalities created. It's returning to the original form of tourism, a beginning *ex novo* but with the acquired experience and knowledge and the tracks left in the natural and urban cultural areas. In reality, it is the antithesis of mass tourism in the globalisation era and the digitalised world, which aims to preserve, protect and restore damaged or even irreversible areas, as well as to maintain the few spaces still untouched by humans and experience the impulses that have always motivated people on their journeys throughout history.

The first steps of eco-cultural tourism are found in the ecotourism which was born out of the United Nations in 2012 to eradicate poverty—with the participation

of the locals—, protect the environment and incorporate sustainable development. The 80s showed remarkable economic benefits in areas such as natural tourism, and comes together at different points with sustainable tourism and community tourism. Dangi and Jamal [30] carefully examined the chronology of sustainable community tourism, which resulted in the existence of integration approaches at a local-global level with community development. They also determined that good governance, guided by clearly defined ethical principles and justice, closed the local-global gap and guided the development and management of tourism.

These new improvements, along with the demands of the modern tourist, have led to ecotourism consolidating itself as eco-cultural tourism, which promotes socio-cultural and traditional values, environmental awareness, and benefits to rural and urban communities. Additionally, it opens up possibilities to develop economies at various levels for public and private enterprises, and offers the enjoyment of a unique high-quality experience. The responses given to climate change issues and the imbalances from economic globalisation are made possible through the planning of local sustainable development, comprising all tourism sectors involved in the creation of a Tourism Project, an Application Phase and the Evaluation of the structured project.

The methodology used in the study of eco-cultural tourism, uses the global and local levels of tourist destinations located in countries with emerging economies (Asia: China, Malaysia, Thailand), developed countries (Europe: Spain) and developing nations (South America: Peru, Argentina, Bolivia). This highlights the need for a local level planning, which is endorsed by all tourism agents and has an accessible economic and environmental load capacity and balance. Promoting planned tourist areas will be possible with the support of government policies, aimed at progressively implementing clean energies, promoting the growth of undeveloped areas and including citizens in the evolution of tourism economies. Our initial hypothesis is confirmed and the path towards the logistic change of sustainable development is aimed at the protection and conservation of natural and cultural heritage.

Other declarations

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Chapter 14

Gen Y: Emotions and Functions of Smartphone Use for Tourist Purposes

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Abstract

Smartphones have revolutionized the tourism industry due to their ability to create and improve the tourist experience, mostly among young users, especially those belonging to the Generation Y (Gen Y). Millennials, as the Generation Y is often referred to, stand out for their ability to travel more frequently and for longer periods, as well as for their often-addictive use of smartphones. Despite nomophobia is not a recent phenomenon, there are few research works on information and communication technologies and tourism that address the effects of smartphone use on the tourist experience. The objective of this exploratory study is to describe the feelings Gen Y experiences as a result of use smartphones during their travels, their tourism functionality, and the relationship between the two. The study is based on the application of an online survey to a representative sample. The results confirm the problems associated with smartphone use, especially among young people (16–19) and the existence of a correlation between smartphone use for tourist purposes and a positive travel experience. It has confirmed that they experience negative feelings and emotions. The study presents crucial information that destination marketing organizations can use to successfully integrate smartphones into their digital marketing and communication strategies.

Keywords: generation Y, smartphone, nomophobia, tourism, tourist experience

1. Introduction

The Generation Y (Gen Y) is a segment of great interest to the business sector in general [1–3] and to the tourism sector, in particular, due to its leading role in the last decade as consumers, prosumers and adprosumers [2–5] and its importance to achieve the goals of destinations [5, 6]. As Richards [7] points out, Gen Y (as this generation is often referred to) is a market segment of great value to tourist destinations due to the economic potential and availability of its members to travel more frequently and for longer periods. The professional and academic fields have shown great interest in this generation, which is reflected in the recent publication of a remarkable number of research works, both general in scope [2, 3, 8–13] and specific to the tourism sector [5, 14–18] The latter sector is particularly interested in this generation's use of information and communication technologies (ICTs) for tourism purposes [19–24].

Within the diversity of ICTs, the boom and massive adoption of smartphones among Gen Y [20, 25–28] as well as the proven relevance of these mobile devices for the tourism sector highlight the need for more studies on this regard to contribute to the development of a still incipient and scarce line of research [18, 29–31]. Just like with any other ICTs, the integration of smartphones into the digital marketing and communication strategies of the tourism business should take into account the particularities of the different stakeholders of the destinations [5, 17, 18, 32–36] to ensure their use actually generates positive emotions and sensations [31, 37–39] that contribute to a different, original, and satisfying tourist experience [40–42].

2. Smartphones at the service of the tourist experience

Current trends have shown the need for tourist destinations to evolve into smart tourism destinations [43–46]. In this sense, the cost associated with the development of smart infrastructures (powerful transport networks, free Wi-Fi, etc.) should not be an obstacle for destinations with fewer resources [47, 48] because, as Huertas et al. [43] point out, there are other more affordable actions that serve the same purpose, such as proper integration and management of social networks and mobile apps.

Effectively, within the wide range of ICTs, smartphones have revolutionized the way tourists interact with the physical and digital worlds, and have become essential and highly valued tools [36, 49, 50] thanks to their capacity to shape and enhance the tourist experience [36, 42, 51, 52], which in turn can favor the promotion and dissemination of the destination by tourists themselves through word of mouth (WOM) and electronic word of mouth (eWOM) [53–59].

The use of smartphones for tourist purposes is nothing more than a reflection of the day-to-day of citizens, who use smartphones for everything (relationships, entertainment, etc.) [28]. As it happens with the use of other ICTs in the field of tourism, this technological dependence has psychological impacts that translate into negative and positive feelings [38, 60–63] that in turn shape the perception of the tourist experience [52, 64–67].

Based on the previous arguments, destination marketing organizations (DMOs) should consider the negative effects of smartphone use, particularly in relation to young users [68–71], who are often victims of related addictions and disorders such as nomophobia, i.e., the irrational fear of not being able to use the smartphone [72–74]. In this regard, it is worth noting the impact that the type of activities performed with smartphones and the context on which it is performed have on the greater or lesser degree of anxiety or stress caused by not being able to use the smartphone [71]. In this sense, in times of loneliness and boredom, for example, not being able to interact with other people, mainly through social networks, or to search for information or use entertainment apps, can trigger an acute case of nomophobia [68, 70, 71, 74]. These effects underline the importance that people, particularly the youngest sector of the population, attach to the main values of the web 2.0 model that have given smartphones their protagonist role: multidirectional communication and universal access to information [1, 10, 24, 25, 40].

Hence the need is to identify the main uses given to smartphones for tourist purposes according to different generations and the consequent ICTs use habits [36], which is one of the objectives of this study. This information is necessary to successfully integrate smartphones into the digital marketing and communication strategies of tourist destinations. Given the numerous advantages of the communication and experiential potential of these devices [44, 45, 75–79], DMOs cannot ignore the fact that their use can also generate negative emotions and feelings,

primarily among their younger stakeholders, including Gen Y [38, 60–63], and that these feelings will in turn affect their perception of the destination and the opinions they share about it. Just like positive feelings and emotions resulting from smartphone use shape the perceptions and experiences tourists share through WOM and eWOM, which favor the promotion and dissemination of the tourist destination [53–59] the negative ones can have the opposite effect.

Therefore, and given the relevance of Gen Y for tourism [80–82] and the impact of smartphone use on the tourist experience [31, 36, 44, 45, 51, 52, 75–79], this study aims to describe the feelings and emotions that the use of the smartphone and its tourism-related functionalities generates during travel on members of this generation and the correlation between these variables.

3. Research methodology

Since this study focuses on a subject matter on which there is little research, it will adopt an exploratory design [83], based on the conduction of an online survey questionnaire applied to a sample of Gen Y respondents, who in turn shared the questionnaire with their contacts. It is therefore a representative sample of the Gen Y, selected through the snowball sampling technique.

3.1 Sample

The sample consists of individuals who meet the following criteria: belong to the Gen Y, own a smartphone, and used it on their last tourist trip. The first section of the survey questionnaire consists of items that verify these criteria to be able to exclude non-suitable respondents and select the final sample.

The questionnaire design, in addition to relying on previous studies and research [31, 84, 85], was validated by two well-known academic and researchers in the tourism sector and by a prestigious company specialized in digital marketing. This ensured the academic and professional validation of the instrument. Following this first review and subsequent correction, the questionnaire was pilot tested on a convenience sample of 50 people who met the same requirements set for the final sample. Based on these results, further adjustments were made to the instrument. The final version of the survey questionnaire was distributed online during May and June 2020. A total of 201 questionnaires were answered and returned, but 10 of them were discarded because the respondents did not meet the sample selection criteria. A total of 191 valid questionnaires were analyzed to achieve the research objectives.

3.2 Measurements constructs

The survey is structured in three sections. The first one, as mentioned, aims to confirm whether respondents meet the sample selection criteria. It consists of three questions about respondents' age, smartphone ownership and smartphone use in latest trip. In addition, four more questions relating to gender, education level and country of residence were included for a better sociodemographic description of the final sample.

The next two sets consist of two and three closed-ended questions, respectively, that aim to gather quantitative data.

The first of these sets explores emotions and feelings based on the Positive and Negative Affect Schedule (PANAS) scale items [85] Respondents were asked to use a 3-point Likert scale to assess the positive or negative feelings they associated to their

smartphone use during the latest trip. Following the scale developed by Watson et al. [85], the list of positive feelings and emotions included in the questionnaire are: interested, distressed, excited, upset, strong, guilty, scared, hostile, enthusiastic and proud. On the other hand, the set of negative feelings and emotions included: irritable, alert, ashamed, inspired, nervous, determined, attentive, jittery, active and afraid. In the scale, which served to indicate to what extent the respondent had felt those feelings and emotions, 1 means "almost never"; 2, "sometimes"; and 3, "almost always". In this set, options 1 and 3 are nuanced because it is possible that specific circumstances unrelated to the tourist experience (receiving good news, losing internet connection, etc.) may translate into feelings and emotions that do not describe faithfully the respondent's state of mind regarding smartphone use during their trip.

Respondents' smartphone use for tourism purposes is examined in the last section using the scale developed by Tussyadiah and Zach [84], which focuses on a series of activities that are valued using a scale that ranges from "never" to "always." The questionnaire includes the following three activities: navigation, information search and learn about destination, similarly to Lalicic and Weismayer [31] but using a 3-point Likert scale.

4. Use of smartphones for tourist purposes: Feelings and emotions and functionalities

The age of the group of respondents (n = 191) ranges from 16 to 38, which fits the age range of Gen Y according to Strauss and Howe [86]. In terms of sex, 37% are male and 63% are female. All of them live in Spain, except for two respondents, from the USA and China, respectively. Regarding their education level, most of them are in high school (*55.5%*), a quarter are undergraduates (*26.18%*), and an important share are at middle school (*10.99%*). The rest are distributed between primary education (*0.52%*), middle vocational education (*2.09%*), higher vocational education (*4.19%*) and postgraduate education (*0.52%*). This group of respondents were considered valid because they confirmed they owned a smartphone and had used it in their latest tourist trip.

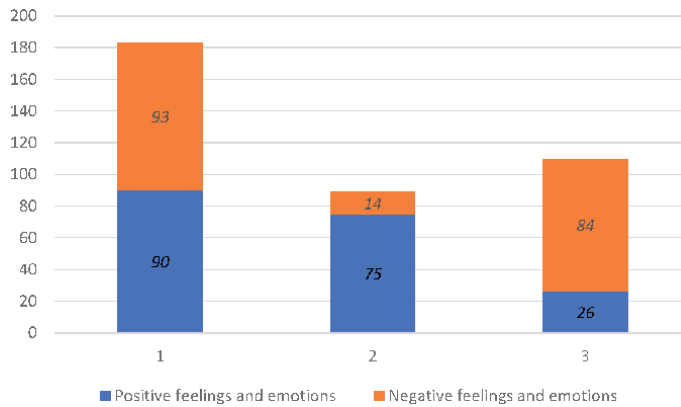### 4.1 Feelings and emotions associated with smartphone use during travel

Figure 1 presents the results regarding the feelings and emotions experienced by respondents when using their smartphone during travel.

As shown in **Figure 1**, surveyed Gen Y members (*m*) experience with greater frequency negative emotions and feelings (*84 m*). Only 26 people in the sample claimed that smartphone use during travel almost always caused positive emotions and feelings. Also striking is the high number of participants who stated they almost never experience neither positive nor negative emotions (*90 m* and *93 m*, respectively). Likewise, regarding the intermediate position (score 2), the bulk is placed in positive feelings and emotions (*75 m*).

Given the age amplitude of Gen Y, it is relevant to delve into the results on the feelings and emotions associated with smartphone use during travel, by focusing on the following three age segments: 16–19, 20–29 and 30–38 (**Figure 2**).

Negative emotions and feelings predominate in the 16–19 age group, since 93.83% of respondents in it selected the highest score for this type of feelings and emotions. Positive feelings and emotions are concentrated in the 20–29 age group. The intermediate score, "sometimes" (2), has been selected mostly for positive feelings by the youngest and oldest segments (*66.67%* and *50%*, respectively) of

Figure 1.
Feelings and emotions associated with smartphone use during travel (total).
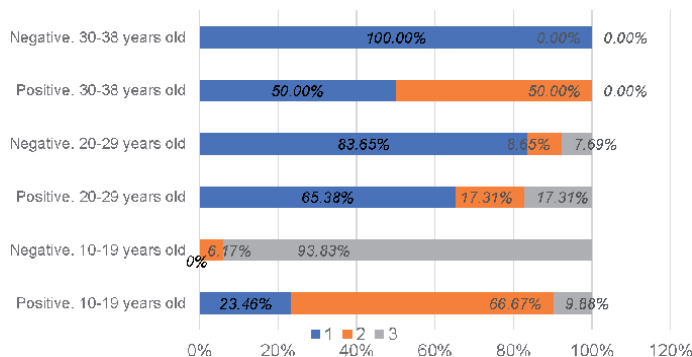
Figure 2.
*Feelings and emotions associated with smartphone use during travel (age groups).*

the sample. Meanwhile, the lowest score, "almost never" (1), predominates in the two oldest age segments (20–29 and 30–38), for both positive and negative feelings, but to a greater extent for the latter. *83.65%* of respondents aged 20 to 29 claim they almost ever feel negative emotions derived from smartphone use. This percentage increases to 100% for the 30–38 age group.

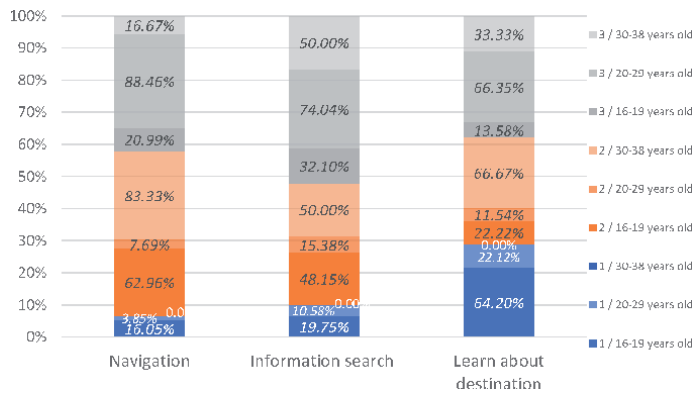### 4.2 Tourism-related functionalities of smartphones

Having identified the feelings and emotions associated with smartphone use during travel, the next step was to describe the frequency or intensity with which this use is oriented to tourism-related activities: navigation, information search and learn about destination. The overall results are presented in **Figure 3**.

Most respondents claim to use the three aforementioned functionalities with the highest frequency (**Figure 3**). In all cases, the highest score (*3*) leads the ranking. However, in the case of "learn about destination," the number of respondents who ranked it with 1 (*75 m*) is very close to that of those who ranked it 3 (*82 m*). This is the least commonly used functionality, followed by information search and navigation, which is the most-commonly used one. A more detailed analysis of these results according to the three age groups is presented in **Figure 4**.

The lowest score and, consequently, the least commonly used of all three functionalities predominates in the youngest age segment (16–19 years old). None of the respondents in 30–38 age group claimed to have never used any of the
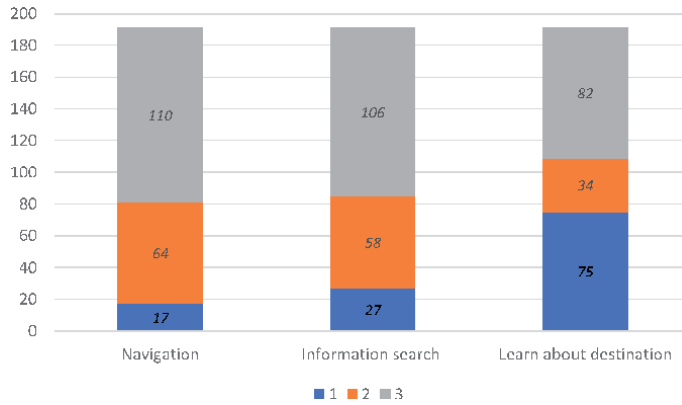
Figure 3.
Use of tourism-related smartphone functionalities.

Figure 4.
Use of tourism-related smartphone functionalities by age group.

three functionalities. At the next frequency level ("sometimes"), the number of respondents aged 16 to 19 increases considerably, although this category is led by respondents in the 30–38 age group, compared to the three functionalities analyzed. Finally, respondents in the intermediate age group, 20 to 29, use these functionalities more than the younger segments.

Figure 5 show the results on the emotions and feelings associated with each of the three tourism functionalities of smartphones.

First, **Figure 5** shows the frequency of use of the navigation function and the feelings respondents associate to it. Negative feelings stand out among those who use it the least (Navigation 1), since *76.47%* of them selected the highest score (almost always) for this type of feelings. Accordingly, *52.94%* of them selected the lowest score (almost never) for positive feelings. This is also the highest percentage among positive feelings. Those who use this functionality "sometimes" (score 2) also claim to experience negative feelings: *76.69%* experience this type of feelings almost always. Importantly, in the negative category, the "almost never" option (*1*) predominates over "sometimes" (*2*). Finally, those who use this functionality the most lead the ranking of positive feelings and emotions (*17.27%*), although a similar percentage (*18.18%*) exhibits the opposite trend. It is important to note that most respondents claim they do not associate either positive or negative feelings (*55.45%* and *72.73%*, respectively) with the use of the navigation functionality of the smartphone during travel.

Results regarding the use of the "information search" functionality, which refers to finding information about services, transport, for instance, are shown in **Figure 6**.

As in the case of the navigation functionality, negative feelings standout among those who use the Information search functionality the least (*1*), with 51,85%. Accordingly, and in line with the reported trend, 51,85% of respondents who claimed to almost never use this functionality gave positive feelings the lowest score 1 (almost never). In this section, this is the highest percentage regarding the usage levels of this functionality. Within the group of respondents who claim to use this functionality "sometimes" (Information 2), once again there is a predominance of negative feelings (*72.41%*), while in the field of positives feelings the predominant scores are 2 (*50%*) y 1 (*39.66%*). Finally, confirming a great similarity to the navigation functionality, the majority of those respondents who use the information search functionality the most (*3*) claim they do not associate positive nor negative feelings (*50%* and *64.15%*, respectively) with the use of this function during travel (**Figure 6**).

The status of the "learn about destination" (Learn dest.) functionality shows similarities to the previous ones, although in this case the most prominent categories are those related to not having experienced feelings or emotions. Within the
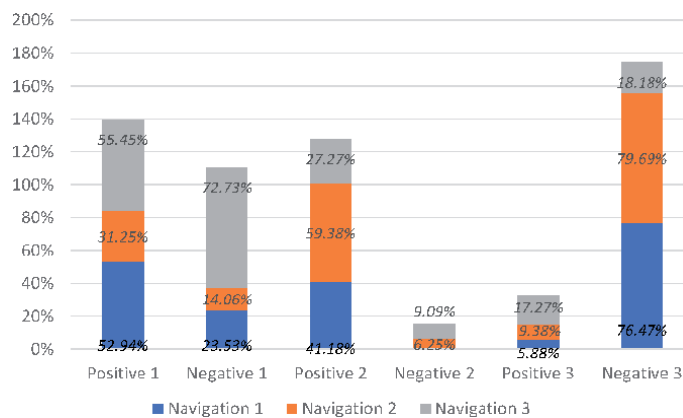
Figure 5.
Tourism-related smartphone functionalities: Feelings and emotions associated with navigation.
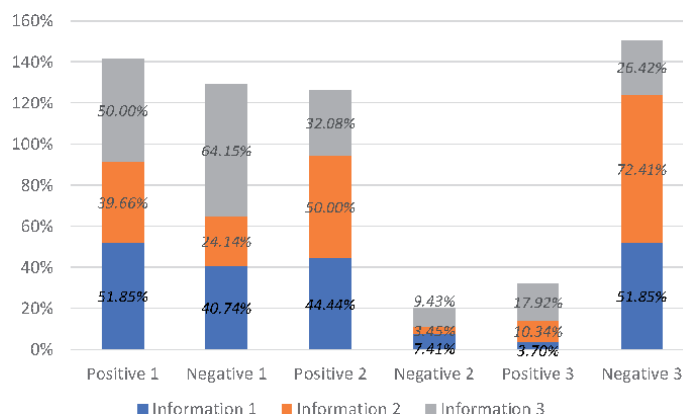
Figure 6.
Tourism-related smartphone functionalities: Feelings and emotions associated with Information Search.

group of respondents who claim to use this functionality the least, negative feelings (*72%*) predominate again. At the second level of use (Learn dest. 2) negative feelings are placed at almost the same level in positions 3 ("almost always", *50%*) and 2 ("sometimes", *55.88%*). Finally, the few respondents who claim to always using this functionality are characterized by an emotional state of indifference, which is greater, if possible, than negative feelings and emotions (*75, 61%*).

5. Discussion and conclusions

Generally speaking, it can be argued that younger generations, and in particular the Gen Y, arouse great interest in the business sectors, including tourism, due to their short, medium and long-term potential [1–7]. Likewise, ICTs and, especially smartphones, are also considered key elements for the development of this sector and necessary for the evolution of destinations into smart tourism destinations [43–46]. Under the web 2.0 model, within the variety of ICTs, smartphones stand out for the numerous advantages and potential to create or improve the tourist experience [36, 42, 51, 52], contributing to the transformation of the consumer tourist into the "adprosumer" tourist [1–4]. The high credibility of the comments and options of adprosumers makes them a key element for the dissemination and marketing activities that DMOs must procure and guarantee [53–59]. To this end, it is essential that smartphone tools are correctly integrated into the digital marketing and communication strategies of DMOs, for which it is essential to obtain detailed information about stakeholders' expectations and ICTs usage habits.

This has been precisely the main objective of this study, focused on smartphone use by the Gen Y during travel and on the emotions and feelings associated with these uses, motivated by the effects of nomophobia on the young population. This is crucial information due to the impact of smartphone use on the perception of the tourist experience and, therefore, on the positive or negative nature of the eWOM Gen Y can generate motivated by factors unrelated to the tourist experience itself.

The main conclusion behind the results presented here is customization and individualization. As mentioned, Gen Y exhibits essential differences that need to be considered in strategic approaches.

Gen Y respondents have confirmed they experience, to a greater extent, negative feelings and emotions, which is one of the characteristic features of nomophobia [68, 70, 71, 74]. This situation occurs mainly among the youngest age segment (16–19), while the older age groups claim to experience greater indifference. It can be concluded that as their years of coexistence with the web 2.0 model decrease, their emotional involvement with the use of smartphones during travel also decreases. Having concluded that Gen Y experience negative emotions that can influence their perception of the tourist experience, the following step was to analyze the extent to which they use the tourism-related functionalities of these devices.

Regarding the tourist functionalities under analysis [84], most users claimed to use them frequently, being "Learn about destination" the least used. There are also intragroup differences in this regard, because the youngest age group (16–19) uses these functions the least, suggesting an area of opportunity for DMOs, which can enhance the use of these functionalities to influence the feelings and emotions Gen Y associate with smartphone use during travel. In fact, the results allude to a behavior among the youngest segment of the Gen Y that suggests that their smartphone use for non-tourism purposes during travel sometimes generates negative emotions and feelings. This behavior is confirmed by the analysis of the results about the emotions and feelings respondents associate with each of the three tourism-related functionalities. In all cases where respondents claim they almost never use any of

the functionalities, negative feelings stand out. However, those who do use these functionalities claim they do not associate neither positive nor negative feelings with smartphone use during travel. This trend grows almost in parallel to participants' age and is amplified in the case of the "learn about destination" functionality.

It is therefore concluded that smartphone use during travel affects the youngest tourists and is not a key element for the rest age groups. There is a clear need to enhance the tourism use of the smartphones among the youngest group (16–19), to promote the creation of positive feelings and emotions. The intermediate age group (20–29) uses the tourist functionalities frequently and is characterized by a more neutral emotional behavior. Finally, the oldest age segment (30–38) requires strategies that combine the virtual and real worlds because, for them, smartphones by themselves do not generate any kind of feeling, which is the main trigger of eWOM.

The conclusions indicate the future limitations and lines of this study on Gen Y′ smartphone uses during travel and their emotional effects. First, it is necessary to delve into the relationship between feelings and emotions, the perception of the tourist experience and the generation of eWOM. It is also relevant to compare the effects derived from the tourist activities performed virtually (via smartphones) and physically (consultation of printed guides, visits to tourist offices, interaction with destinations' residents, etc.). In any case, the main conclusion, as mentioned above, lies in the complexity that characterizes stakeholders, which discourages the indiscriminate use of categorizations and taxonomies to approach digital marketing and communication strategies in the tourism sector. Generational classifications are undoubtedly of great interest and usefulness as a starting point, but they require further and deeper analyses of people's desires and expectations according to their generation. In particular, the rapid and constant change that characterizes ICTs is shortening the periods of study necessary to extract valid general guidelines and premises. In this sense, a generation spanning 22 years, from 1982 to 2004, turns out to be too broad for a general description of smartphone use during travel and its associated emotions and feelings.

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Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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Tourism Routes for the Diversification of Rural Livelihoods: A Methodological Approach

Emmanuel Mérida Velazquez, Tirzo Castañeda Martínez and Gandhi González-Guerrero

Abstract

Tourism routes are the configuration of resources and services into an experience. They are structured based on the characteristics of the local setting but also considering the tourists' expectations motivations and interests. The objective of this manuscript is to present a methodological approach for the configuration and evaluation of tourism routes, using the municipality of Tenancingo, Mexico as a case study. The methodology followed consisted of three phases: 1) the identification and classification of resources; 2) the qualitative evaluation of the resources; and 3) the use of a route evaluation index to determine the suitability. The study concluded that the methodology allowed for the evaluation of different configurations, and the identification of the tourism route with the most potential, according to its characteristics.

Keywords: tourism routes, diversification, methodology, evaluation, Mexico

1. Introduction

Tourism has been considered a means to revitalise rural areas. It is a strategic choice because rather than a complete transformation of the rural setting and its livelihoods, it requires smaller changes to the already existing activities. Tourism can thus become a complementary activity, both in terms of resource allocation and additional income. At the same time, rural tourism initiatives require innovation and stakeholder collaboration. In the measure that these conditions are attained an impact on the quality of local people can be achieved [1–5]. Tourism routes in rural areas are examples of the tourism activity that can meet such conditions.

Tourism routes are a way to diversify the offer of a place that includes movement and an itinerary. Through the configuration and structuring of resources and services, they can constitute an experience that takes into account the motivations interests expectations and perceptions of visitors. For the local population, routes can mean the diversification of their livelihoods, particularly when they are structured in a way that seeks to maximise the potential benefits for the local community [5–10].

This manuscript offers a methodological approach that, by means of three phases, seeks to identify the configuration of a route with the best potential for success. The three phases are presented as follows: 1) the identification and

classification of resources; 2) the qualitative evaluation of the resources; and 3) the use of a route evaluation index to determine their suitability. The result of each phase is the starting point of the next one. Finally, the possible configurations of a route are evaluated based on the characteristics of the resources, their location, and the structure of the route. It is proposed that this methodology can be especially useful for those areas with incipient tourism activity but natural and cultural resources that attract interest and can be improved on their weaknesses.

2. Tourism routes for the diversification of rural livelihoods

2.1 Rural tourism and diversification

The rural space is a setting for a range of recreational and tourist activities. This requires rigorous planning and management, participation of the local population, respect for the environment, and the generation of economic, social and cultural benefits for the population. The tourist activities that take place in this setting should be in line with the activities of the local community. Contact with the local population and involvement in their daily activities are desirable elements [1–3, 5–6].

Rural tourism is a diversification strategy for many rural communities because of its perceived benefits. Some benefits are additional income, employment opportunities, and promotion of rural and cultural heritage. It also highlights the role that women and young ones play in the business, usually a family business in which women play a leading role. The commercialisation of cultural heritage is considered a benefit of rural tourism. Through it significance is given to the communal culture, including its history, traditions, and gastronomy. Ultimately, because of its natural setting, rural tourism encourages the promotion of environmental heritage [7, 8].

Tourism routes are experiences that can be particularly relevant for rural tourism. Direct contact with the producer adds value to the local products and give a personal touch. Through routes the tourism offer is expanded with new products, activities, and destinations [9].

2.2 Characterisation of tourism routes

Ward-Perkins, et al. [10] define tourism routes as "an itinerary known and determined...that bring together resources into a single experience". Tourism routes expand the offer of a destination. Creation of activities and services necessary for visitor satisfaction are essential for attracting new markets. Tourism routes are a way of taking advantage of local resources without causing drastic changes to the surroundings. The design of a tourism route generates income and local development through the implementation of new services and activities [11].

Briedenhann and Wickens [12] state that tourism routes must meet some specific characteristics in order to be viable. They require at least one established theme, a central location for lodging, food and beverages, complementary activities, and access routes that allow the visit. These elements must meet the needs of both tourists and residents. Barrera [13] adds to these elements transportation, marketing, and, if possible, the denomination of origin of a product. For Sosa Sosa [14] routes designed around food can add value to traditional cuisine. Most importantly, routes should be structured with consideration for the motivations, priorities and interests of visitors [10].

In rural tourism, the tourism route presents the basic product but offered in an organised and elaborate way. It includes attractions, activities, facilities and tourist

services. At the same time, it is susceptible to commercialisation, either in full or in part [15, 16]. Elements to consider when designing a route are location, area, access roads, internal traffic flow, description of resources, weather, and complementary activities, like natural and cultural attractions.

3. Methodology

The methodology used in this study considers the identification of resources and attractions of the municipality of Tenancingo, State of Mexico [17, 18]. It consists of three phases: 1) the identification and classification of resources [19, 20]; 2) the qualitative evaluation of the resources [20, 21]; and 3) the use of a route evaluation index to determine the suitability of their location and structure [22].

3.1 Identification and classification of resources

In this phase, data were collected in an evaluation form. The following criteria were considered: name of the resource; availability (public or private), accessibility (from "good" to "cannot be accessed"), type of resource and recognition (local to international), description (how it is made, materials), interest of the visit (its importance for the community and visitor), activities, temporality (if it is available all year round), and travel time from the downtown area. Upon completion of the identification, the potential for tourism activities was determined.

The categorisation of resources was carried out through the use of category tables, types, sub-types and information for each resource [20]. Data was obtained through visits to the resource for their identification and/or verification in situ. This allowed the evaluation of accessibility and tourist facilities. The obtained information was of sufficient quality for further qualitative evaluation.

3.2 Qualitative evaluation of resources

The qualitative evaluation consisted of ranking each of the resources according to established criteria. The criteria were particularity, publications, state of conservation, flow of tourists and potential demand [20]. Following this methodology, each criterion was assigned a value based on the characteristics. The summed values gave an overall value for the resource. The ranking allows a greater understanding of the site and its characteristics to attract visitors.

Next, the methodology proposed by Zamorano Casal [21] was followed, which used three matrices. These matrices are functionality, aesthetic interpretation, and integration. These were used to plan, categorise, and rank resources.

The functionality matrix takes different aspects into consideration: mobility, travel time, the width of the path, type of surface, signage, comfort, and safety. This matrix is focused on accessibility and travel safety to the destination or site. It highlights the alternative opportunities to visit the resource and how enjoyable the trip is for the visitor.

The aesthetic interpretation matrix focuses on factors and elements regarding the provided service. It helps to identify interpretative opportunities per resource, considering the scenery and the overall environment.

The integration matrix unites all the isolated elements of the categories of tourism, the recreational activities of each resource, which results in a comprehensive experience. Complementary ideas can be presented for the resources, aimed at improving the overall experience of the route.

3.3 Design and evaluation of the route

During this phase several different configurations of the route were designed. Their evaluation was conducted taking into account the physical and abstract resources, to which values were assigned. For monuments a value of 30 points was assigned, a value of 20 to gastronomic resources and a value of 10 to agricultural products. Based on the evaluation of the different route designs the most preferable configuration was determined. The evaluation was done following the formula by González Ávila [22]:

$$IERAC = \frac{1}{TR}\sum_{X=1}^{TR}\left[(Rx)*Wx\right] \tag{1}$$

Where:
IERAC = Agri-Cultural Route Evaluation Index
Rx = Hierarchy (x = 1, 2, 3, 4, 5, 6.....n)
Wx = Importance of the resource (x = 1, 2, 3, 4,..n)
TR = Total of evaluated resources (Rx = 1,2, 3...n).

The use of this methodology allowed for the evaluation of different configurations, and the identification of the tourism route with the most potential according to its characteristics. Additionally, an important byproduct of the combination of these methodologies is the ability of being able to draw up a tourism route for improvement purposes to potentialise a destination or place, and generate strategies to attract a market.

4. Results

4.1 Identification of resources

Inventories and monographs were consulted, and interviews conducted to identify the resources in the municipality of Tenancingo. Once listed, each resource was visited to see first hand the characteristics and resource conditions. For this, an evaluation form with the aforementioned criteria was used.

Greater weight was given to the resource availability, accessibility, interest, temporality and travel time. Because not everyone has the same interests and physical condition, the distance can discourage potential tourists from visiting. Resources that are on private properties and require special permission have limited access. Poor accessibility inhibits the visit of some resources. Additionally, to avoid long transfers, the distance between resources was taken into account.

Based on the results from the evaluation forms, the resources with the lowest scores were discarded. From the 54 identified resources, the 20 most viable were selected, based on their state of conservation and their representation of municipality (see **Table 1**).

Mincetur's methodology [20] was followed to determine resource potential by identifying their category and hierarchy within the group of resources. The hierarchy was determined following pre-established criteria. An inventory form was used to compile information on the resources. Data included were the name of the resource, location, state of conservation, locality, means of transport, observations, services and activities.

Cristo Rey Monument (C)	San Francisco de Asis Parish (C)
San Clemente Cathedral (C)	Burnt milk sweets (F)
Woven chair (F)	Pan de Tecomatlán (traditional bread baked in stone or brick oven) (F)
Wickerwork (F)	San Simonito waterfall (N)
Obispo (pork sausage typical of the region) (F)	Tecomatlán chapel (C)
Pepeto (typical dish prepared with pork and seasonal vegetables from the cornfield) (F)	Los delfines water park (C)
Wooden furniture (F)	Santo Desierto del Carmen Convent/Park (C/N)
Rebozo (typical handwoven garment, similar to a shawl) (F)	Pulque (fermented alcoholic beverage) (F)
Fruits and herbs liqueurs (F)	Balconies (natural resources with panoramic views) (N)
Flower market (C)	Gorditas (thick corn tortilla stuffed with different ingredients) (F)

Source: Authors.

Table 1.
Identified and selected resources by category.

In the municipality of Tenancingo, most of the resources are related to folklore, i.e. art and gastronomy. Important gastronomic expressions are 'gorditas', which are made of corn dough and stuffed with broad beans, pork crackling, beans or mixed. They are typically cooked on a hotplate heated over a wood fire, which gives them a unique flavour. These are normally enjoyed with a green or red sauce, accompanied with a fermented agave drink called 'pulque'.

Within the categorisation, cultural manifestations mainly refer to buildings and monuments of great relevance. In the area, the building of the highest relevance is the San Clemente Cathedral, which is visited mainly during its annual festival. On the other hand, the natural sites category showed little participation in the proposed resources, mainly due to distance, pollution and safety. The Santo Desierto del Carmen convent, although a cultural resource, it is also a National Park with state decree (see **Table 1**, F for Folklore; C for Cultural; and N for Natural resource).

4.2 Identified potential

Once the resources were categorised, they were ranked. The ranking allowed the identification of the relative importance of the resources within the southern region of the state, as well as their potential to attract visitors. This was done with the use of the aforementioned forms. The obtained value on the form was multiplied by the weight according to the type of resource, resulting in a subtotal value. When obtaining the subtotal of each of the criteria, the sum was made and a total was obtained that corresponded to pre-established values of the equivalence Table T. Based on the results, the resources are ranked in four categories, with 4 having the highest potential.

Following this ranking procedure resulted in one resource in category 4, eighteen resources in category 3, and one resource in category 2. The resource in category 4 is of interest at an international level. The resources in category three have potential, while the resource in category two is seasonal. Most resources require improvement before they can be optimally used.

The matrices by Zamorano Casal [21] allowed for the identification of areas of improvement of the resources. The functionality matrix focuses on the functional part of the service: transfers, distance, signage, comfort and safety. The aesthetic interpretation matrix examined the interpretative opportunities and landscape aspects, as well as the secondary recreational opportunities of each resource. Finally, the integration matrix integrated all the separate elements in modalities or types of tourism: ecotourism, ethno-tourism or adventure tourism, in addition to the recreational opportunities of each resource, resulting in a comprehensive experience.

The distance depends on the type of route, whether it is a day or night excursion, interpretative, and means of transportation (bicycle, horseback). The slope, the vegetation, and the width of the path were also considered to determine how many people could pass without difficulties, signs and comfort. For the transfer time, the centre of the town is taken as the starting point, this being normally the Kiosk of each town. In the case of Santo Desierto, the local taxi base is taken as the starting point. Each of the aspects was evaluated according to the established criteria.

The functionality matrix served to identify the weaknesses of each resource in its current state, and its accessibility. Signs to the site, basic services near the site (bathrooms, food, transportation, etc.), and safety were identified as primary needs. As a partial solution, the implementation of neighbourhood or police patrols near the resource is suggested. Some specific proposals for improvement, based on the matrix are:

Cristo Rey, which can be visited on foot or by vehicle, is located 40 minutes from the centre of the municipality. Reaching the resource involves a heavy climb if visited on foot. It is possible to walk undisturbed with a group of ten or more people. Panoramic views can be appreciated while climbing. However it lacks warning signs. Security may be an issue at certain visiting hours. So caution is necessary.

Santo Desierto can be reached on foot or by car. Travel is usually done on foot during pilgrimages. The travel time is approximately two hours. Along the way steep slopes are encountered, but panoramic views in certain places are also part of the hike. Parts of the road are paved, but some are not. It has some basic services, such as first aid, telephone, food, and transportation. However the signs are not adequate. They are missing, faded, or poorly located.

The Salto de San Simonito presents a spiral path. The resource is accessed on foot from the town. The dirt path is narrow but gives some panoramic views. There are no services at the resource. Security is lacking due to its isolated location.

Besides the identification of key improvements, the participation of local and municipal bodies is necessary to carry them out. For example, with suitable organisation, the signage to reach the resource can be placed in strategic places, as well as improvement of the access roads.

The aesthetic interpretation examines the landscape of the resource, such as flora, fauna, architecture, history, etc. besides the scenic attractions on the way to the different resources, the matrix identifies secondary recreational opportunities of each resource: meditation, landscaping, swimming, camping, hiking, horseback riding, and handcraft or other workshops.

From this matrix, the differentiation of the experience can be designed. The purpose is to provide greater satisfaction to the visitor and give a unique touch. The perceived opportunities would depend on aspects such as the space available around the resource, interpretive opportunities, whether formal (focusing on historical data of the place, legends, tradition, processes, workshop, etc.) or informal (interesting facts, visible details, social changes, among others). Scenic resources are directly related to interpretive opportunities, taking into account the elevation (and what can be seen), space (the aesthetics of the surroundings), availability of space (determining the space to move), design details (safety, comfort and transfer).

The opportunities offered by some of the resources to complement the visit, according to the matrix:

For the Cathedral Basilica of San Clemente, the architecture, history of the cathedral, and its patron feast are interpretive opportunities. The Cathedral is located in a slightly elevated place with a panoramic view on the centre of the municipality. It has opened (the garden) and closed (interior of the cathedral) spaces. It has stairs, restrooms, a place to park and security. In this resource it is possible to carry out activities such as meditation, prayer, and weddings, without disturbing the ongoing activities.

In the case of chair weaving, visits to craftsmen could include the narration and observation of the fabrication process, the people that are involved, the types of chairs that are made, and the time they take. The gastronomy of the municipality can be a complementary resource. Legends about the culture of the municipality provide interpretative activities that can be carried out indoors or outdoors.

"The balconies" are a natural resource that provides panoramic views of neighbouring communities and the Santo Desierto del Carmen. There, legends of each balcony can be told, as well as the process of making pulque from the maguey agave. Possible activities for this area are hiking, walking, meditation, camping and interpretation of the flora.

Part of the purpose of the aesthetic interpretation matrix is the identification of new activities that enhance the visit to the resource. This will generate a greater influx from the adequate development of the proposed activities (craft workshops, walks, hiking, view of landscapes, interpretation of legends, historical accounts, camping, food tasting and appreciation of architecture, to name a few). Some of the interpretation opportunities will help the guide, such as resource leaflets, information sheets, guide speech and itinerary; adding to the knowledge of the site by the guide. The way in which knowledge is transmitted will depend on the group.

The integration matrix consolidates all the isolated elements of ecotourism, ethno-tourism, adventure and animation, in addition to the recreational opportunities of each resource, resulting in a comprehensive experience. This matrix allows taking the results of the two previous matrices and organising them according to the type of activity or tourism. For example, hiking belongs to ecotourism, gastronomy belongs to ethno-tourism, and so on. Activities are assigned according to one of the four aforementioned types (ecotourism, ethno-tourism, adventure, animation), thus allowing an overall vision of its potential.

According to Zamorano Casal [21], a panorama is the complete vision that one has of a set of elements, units or some type of object, and all the parts that comprise it. This allows the elaboration of the matrix and visualisation of its potential. By combining the matrices, the options for improving the resource are presented in terms of access (security, signage, the width of the road, transport, services, basic, etc.) and complementary activities (workshops, legends, tasting, historical explanation of the resource, camping, food tasting and appreciation of architecture, among others). On the other hand, it is necessary to integrate the above into a single product or experience.

4.3 Design and evaluation of routes

The configuration of the routes was based on the grouping of resources following the categorisation by Mincetur; and considerations of location and diversity of resources [20]. The resources were identified according to their potential use. Six routes were proposed accordingly: Natural prayer, Disperse in the centre, the edge of Tenancingo, Artisans Route, Gastronomy Route, and Monuments Route. Using the ranking and hierarchy of the resources, the formula is applied to each of the proposed routes. The results allowed the identification of the routes with the best potential.

Dispersed in the centre	Wx	Rx	T	
Obispo	0.5	10	5	
Rebozo	1	30	30	
Flower market	0.5	10	5	
Fruits and herbs liqueurs	0.5	10	5	45
Services and infrastructure				33
Value of the route				78

Source: Authors.

Table 2.
Highest evaluated route.

The evaluation of the routes was conducted following the methodology by González Ávila [22]. A value of 30 points was assigned to folklore since it is the largest group of resources that the municipality offers. Cultural manifestations were assigned 20 points because of the importance they have within the municipality and the various temporary activities that take place in connection with these resources. The 10 points assigned to natural sites are based on the number of resources in the municipality and their accessibility. Additionally, some of these resources are not well recognised within the municipality. The other 40 points were distributed between infrastructure and education for tourism, equipment (hospitals, parks and general services), general infrastructure (electricity and water) and tourism services (restaurants and transportation), having a maximum value of 10 points each.

The results of the evaluation of the routes ranged from 56.75 to 78. The routes with the highest potential according to their evaluation were Dispersed in the Centre and Artisans Routes. These routes allow the best use of resources and positively impact the communities that are located along the route. The possibility of implementation of the two routes is medium. On a scale of 0 to 100 the feasibility of implementation gave a total of 78 points for the first route, and 68 for the second (see **Table 2**). This means that its realisation will require a joint effort on the part of all those involved. Likewise, its implementation would serve as a starting point to publicise the other resources that the municipality has, giving impulse to the other routes that have a lower possibility of attracting tourism at this moment. The commercial activities of Tenancingo, which attracts people from neighbouring municipalities on market days (Thursdays and Sundays), can also be used to advantage. All of this will allow the promotion of these routes to a larger market.

The successful implementation of routes in the municipality of Tenancingo is most feasible by beginning work with the route that obtained the highest score (78 points Dispersed in the centre). Starting with another route is not likely to result in benefits on the medium or long term. Additionally, it is necessary to consider that the resources should be addressed with reference to the identified weaknesses, which will allow them to be improved in terms of their aesthetics, security and service in general.

5. Conclusions

The methodology proposed allowed the evaluation of tourism routes, based on the available resources and their conditions. Through different configurations and their subsequent evaluation, it was possible to identify the route with the highest potential for success. Further, through the use of this methodology, it was possible

to identify weaknesses of resources as well as opportunities. This methodology can be especially useful for those areas with incipient tourism activity but natural and cultural resources that attract interest and can be improved.

As discussed at the outset, routes can be a source of improvement and income for the areas where they are developed. That is why they are presented as an opportunity for the development of the Tenancingo municipality as part of the tourism sector. However, the municipality presents several factors that prevent the development of the routes effectively, such as site maintenance, contamination, and security. These factors are under the control of the municipal government. By taking care of these aspects, with the cooperation of the inhabitants, it is possible to develop the route for better use of the resources. An adequate organisation is required on the part of those involved, in order to generate greater benefits.

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Developing a Rural Tourism Destination Brand Framework from the Perspective of a Relationship-Based Approach

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Abstract

The aim of this paper is to develop a destination brand framework for rural tourism destination. Bario a rural community in Sarawak (Borneo) in Malaysia was chosen as a study context. The choice of Bario over other pre-selected rural destinations is because of its unique remote destination. The primary data collection method for this paper was the in-depth interview with 48 participants; this was supplemented by participant observation and documentary evidence. From the perspective of relationship-based approach adopted in this paper, the findings outline three components for a theoretical construction of rural tourism destination brand framework that comprise tourism destination appeals, branding strategies, and stakeholders' roles. Findings also indicate that the development of rural tourism destination brand should be from the bottom-up, where community-driven strategies can be most effectively delegated to the local leadership system and community's association. Implications for practice and host community well-being are discussed in detail.

Keywords: destination brand, rural tourism, relationship-based approach, Bario

1. Introduction

Common assets of rural destinations such as heritage, culture, food and landscape; inadvertently means there is a lack of distinct differentiation among rural tourism destinations [1], making it a challenge to identify or develop a sense of destination image, identity and awareness for rural destinations [1]. In addition, rural tourism destinations are limited in their drawing power and "individual rural destinations are often too small to form a critical mass required of a primary destination" ([2], p. 838). As a consequence, smaller destinations specifically those that are rural lack resources and capability to promote and market their destinations competitively. To overcome these limitations, the concept of relationship-based approach is indispensable to source for the much needed resources to embark on a destination branding process. In this circumstance, one of the ways rural destinations can address these limitations is to brand and initiate marketing efforts. More recent studies have recognised the important role of destination branding in rural tourism destinations [1]; and sustainable improvement of competitiveness in rural

tourism destinations [3]. Likewise, more emphasis has been focused on how branding can be used to promote rural destinations [4].

Despite the importance of branding, the literature on destination branding points to a lack of theory for developing a rural tourism destination brand, one that considers rural settings and community stakeholders. The role of stakeholders in rural destination brand development is an essential component of destination brand development [5, 6]. This is important because very few tourism studies have analysed the roles of stakeholders in destination brand development [7], and further research has been suggested [8]. It is important to focus on the elements of tourism destination appeal [or attractions or 'must sees' or must dos'] [9], p. 7, destination attributes [10]; core resources and attractors (Ritchie & Crouch [11]); and destination image [2, 12, 13]. It is important to identify the relevant theories for rural tourism destination brand development that support the achievement of the purpose of this paper. Therefore, this study is underpinned by two of the relationship-based theories [stakeholder theory] ([14] p. 46; [15]), and relationship management theory [16, 17]. Notably, the main aim of this study is to develop a destination brand framework for rural tourism using the relationship-based approach – by asking the questions, "How should a rural destination brand best be developed?", and "What are the existing frameworks for supporting this development?" To address these questions, the next section on existing literature works is focused on destination branding framework, approaches in destination branding and underpinning theories.

2. Literature review

2.1 Existing destination branding framework

Extant literature on place and destination branding found that there are different frameworks developed over the years for place and destination brand development. These frameworks as presented in **Table 1** were developed by scholars, but also place/destination branding management experts, consultants, and United Nations World Tourism Organisation (UNWTO).

3. Approaches in destination branding

There are different approaches that researchers and practitioners on nation, place and tourism destination branding have adopted in previous studies. These approaches, strengths and weaknesses are presented in **Table 2**.

Based on the analysis of destination brand approaches in **Table 2**, it should be noted that most of the existing approaches and studies were conducted in cities, countries and regions with the exception of Cai [2], and Wheeler et al. [44]'s studies which were carried out in rural destinations.

4. Relationship-based approach (RBA) and stakeholder theory

The concept of relationship management, otherwise known as relationship marketing, is an approach that is used in the marketing field [50–54]. The purpose of employing relationship marketing is to develop customers' loyalty to the organisation's products and services. The relationship-based approach is rooted in both

Framework (Citations)	Strengths	Weaknesses
Diamond model [18]	Destination competitive advantage	Economic model for nations
Brand equity, Aaker [19]	Useful in nation branding and products	Not suitable for rural destination
CAGE model, Ghemawat [20]	Destination brand image formation	Focus on nation branding building of a country
Destination branding, Cai [2]	Cooperative rural destination branding (multiple rural destinations)	Complex model and the focus is not on a single rural destination
Destination branding, Laws [21]	Offers step-by-step process of destination branding planning	Provides relatively generic steps
Destination branding model, Kaplanidou &Vogt [22]	Destination brand value from the tourist's point of view	It focuses on brand identity tourists. These two components are not adequate to develop branding framework in rural destination
Destination competitiveness, Ritchie & Crouch [11]	Tourism destination branding components are recognised: awareness, identity, image and the roles of stakeholders	It fails to describe the different appeals that are peculiar to each tourism destination. The model is too broad.
Nation brand hexagon, Anholt [23]	Promotion of tourism and components of destination branding	The model is targeted at nation branding
Relational network brand, Hankinson [24]	The model is focused on managing stakeholders relationship in order to build a favourable destination image	Not specific on destination brand building process for any given destination (e.g. city, nation or rural tourism destination)
City image communication, Kavaratzis [25]	Perceptions and image through communication strategy	Focus on city image and not rural branding destination framework
de Chernatony's The Brand, Caldwell & Freire [26]	Relevant in destination brand identity, awareness and image	Model developed for physical products and not tourism place
Destination branding model, Risitano [27]	Identified two types of brand equity - brand identity and brand knowledge	Too generic and narrow to develop a rural tourism destination branding Framework
7As Destination branding model, Baker [28]	Extension of Law's (2002) model. It highlighted adoption and attitudes as branding process	The focus is only on the stages involved in building destination brand in general terms
City brand model, Gaggiotti et al. [29]	It explains component of place branding such as infrastructure and superstructure	The framework was developed and applied to Kazakhstan cities
The conceptual model of destination branding [30]	Brand knowledge, brand trust and loyalty	Tourist-centred in destination brand model
Destination branding model [31]	Featured destination brand development and destination brand maintenance	These two stages are inadequate to develop a branding framework for rural destination
A model of destination branding [32]	Brand image and tourist future behaviours	Focus is on visitor's behaviours destination image
Strategic place branding model [33]	Key components: stakeholder engagement, brand identity, WOM, brand experience	Developed for place branding practitioners

Framework (Citations)	Strengths	Weaknesses
A framework of place branding [34]	Divided into three dimensions: destination management and marketing, destination brand identity, and destination brand equity.	Developed for place branding – country or nation branding, small city branding
Stakeholder collaboration McComb et al. [35].	Success factors and critical evaluation	Stakeholder collaboration within the Mournes, Northern Ireland
Sustainable competitiveness Campón-Cerro et al. [3]	Sustainable improvement of competitiveness in rural destinations	The focus is on the quest for tourist loyalty in Spain

Source: Developed for this study.

Table 1.
Summary of strengths and weaknesses of existing framework (model).

relationship-based theories [55] and relationship management theory [16, 17]. Relationship-based approach is concerned with trust and commitment in terms of mutual benefits to be derived by participating parties (stakeholders and non-stakeholders) involved in relationship building in a tourism destination [45]. Aitken and Campelo [56] suggest that relationship forms one of the major components of place branding, and they suggest that relationship building has been a challenge for branding a destination. The use of relationship-based approach to study how a destination brand framework for rural tourism is developed is crucial because the process involved in developing a destination brand is very complex [57, 58]. There is a dearth of theoretical and empirical studies featuring the relationship building process in the literature in connection with developing a destination brand framework [45, 53, 59], and specifically in rural tourism. Notably, tourist expectations and tastes have been a challenge to several destinations because of various opportunities that present itself to the visitor in terms of preference over other destinations or switching capacity of the tourist in terms of where to spend their holiday. This leads to stakeholder theory as one of the relationship-based theories supporting this study.

Stakeholder theory is regarded as one of the relationship-based theories [55]. A stakeholder is defined as "any group or individual who can affect or is affected by the achievement of an organisation's objectives" ([14] p. 46; [15]); and those groups who are vital to the survival of the organisation [60]. The stakeholder theory is important in rural tourism destination brand in order to identify the individuals or groups that are likely to affect or be affected by tourism related activities. The few studies that have applied the stakeholder theory in understanding the destination branding process have narrowed down the application of the stakeholder theory to specific aspects of destination branding. For example, Marzano [5], and; Marzano and Scott [6] have used the stakeholder theory to explore the power of stakeholders in destination branding. Quinlan [39] also adopted the stakeholder theory to study the branding of urban destinations. Other studies are complexity of tourism destination branding [61]; identity and salience [62].

In a rural destination context, recent studies indicate that the destination brand building process is a joint effort of different stakeholder groups which involved city authorities, residents, entrepreneurs, artists, craftsmen and community associations. For example, in Leineperi village Finland, a joint community association was

Approach (Citations)	Strengths	Weaknesses
Image building [2]	Destination identity and destination image	Image building not sufficient overlooked stakeholders' roles
Nation image [36]	Nation/Country image	The focus is on governance
Stakeholder power [37]	Positional, reputational decision-making approaches	It suggests destination branding success depends on the power of stakeholders
Stakeholder power [5]	Effect of stakeholder power on destination branding (DB)	It considers mainly the use of power in DB process
Customer-based [38]	Customer-based brand equity (CBBE)	Focused on visitors' benefits
Stakeholder approach [39]	Destination stakeholder	Unity among stakeholders, overlooked destination branding strategies
Customer equity-based approach [40]	Brand strategy and customer relations management	Focus only on visitors and overlooked CSFs
Innovation and network [41]	The role of innovation and network approach	Target market is women between (20-40) years old in the Sapporo city in Japan
Public relations [42]	Nation branding	Tends to replace image with public relations
Identity-centred [43]	Evaluation of destination image	Destination image from the viewpoints of selected industry leaders – Iowa State in USA
Identity-based Saraniemi, (2011)	Destination identity	Focused only on NTO in Finland
Values-based [44]	Destination brand identity and values	Lacks consideration for destination branding strategies
Tourist behavioural centred experience [45]	Destination loyalty and communication	Emphasised satisfaction, experience and loyalty
Destination image and destination personality [46]	Factors contributing to destination image	Destination image – functional destination (tangible) and psychological features (intangible)
Integrated approach [47]	Five dimensions of destination brand equity	The city of Rome was the case study. It focused on cultural assets only.
Destination Competitiveness Law and Lo [48]	National park and tourist perspective	Focused on national park and not rural destination.
Destinations' loyalty Alves et al. [49].	Enhancing relationship quality	Emphasised tourist loyalty through improving relationship building but not Enough to develop destination brand

Source: Developed for this study.

Table 2.
Existing destination brand approaches – Strengths and weaknesses.

set up to manage and promote the development of the rural destination brand of Leineperi and the 13 surrounding villages in southern Finland [63]. The responsibility of running the joint association was given to a hired employee who coordinates, collaborates and handles the information distribution. In addition, voluntary donations are made by the villages [63]. The involvement of different stakeholders could be traced to the expected mutual benefits that destination branding would bring to Leineperi and other villages. In addition, the existence of stakeholder collaboration has been suggested as a means of rural tourism

destination success within the Mournes, Northern Ireland [35]. Based on the different explanations from literature sources presented in this section, the methodology section reveals research approach, data collection methods and analytic techniques adopted in this study.

5. Methodology

This study is the first to empirically test the relationship-based approach of rural destination brand development, and the consideration for the inclusion of multiple stakeholders' voices in terms of how they see themselves in connection to the development of the tourism destination brand. Therefore, the research paradigm is structured around interpretivism [64]; the method is qualitative in nature [65]; and reflective account of 'the researchers in the tourism research' ([66], p. 260).

5.1 The context

Bario a rural tourism destination in Sarawak (Borneo) in Malaysia has been pre-selected from an extensive panel of researchers at the national level following a long-term research grant scheme (LRGS) of RM9 million (or US$3 million as of 2011) from the Ministry of Education Malaysia. Bario is one of the 10 rural destinations in the list ([67], p.8). The choice of Bario over other pre-selected rural destinations is because of its unique remote destination. Bario is not easily accessible; the means of transportation is limited to tourists compared to other rural tourism destinations in Malaysia with similar offerings such as Taman Negara, Royal Belum Park and Kota Kinabalu Park which are easily accessible to tourists by roads [68].

5.2 The pilot study

The primary data collection method for this study was the in-depth interview method; this was supplemented by participant observation and documentary evidence. A pilot study was first conducted in July 2013 by the first author with ten participants. This is consistent with Ghauri and Gronhaug [69], and Yin [70] that a pilot study or pretesting is a good approach of preparing the actual data collection, before refining the interview questions.

5.3 Participants

The participants were chosen based on the relationship-based approach to comprise of all levels and categories of stakeholders. For the study criteria as participants, the following procedures were followed. A total number of 55 participants were approached for this study and 48 were included for analysis. These participants included the tourists who were in Bario, specifically the selection criteria of having spent a considerable amount of time engaging with Bario community. All participants were informed with a request letter for participation in advance before the actual interviews were conducted. A semi-structured interview protocol was developed that focuses on the main question: 'How can a destination brand framework for rural tourism be developed using the relationship-based approach? To provide answers to the main research question, this study provides the following specific research questions: (a) What are the tourism destinations' appeals in developing a destination brand for rural tourism? (b) What are the destinations' branding strategies involved in destination brand building for rural tourism? And

(c) what are the roles of tourism destination stakeholders in developing a destination brand for rural tourism?

The in-depth interviews were conducted in five different locations namely, Bario, Miri, Kuching, Shah Alam and Putra Jaya: Prime Minister's Department - Performance Management and Delivery Unit (PEMANDU) in Malaysia from April to September 2014. The in-depth interview sessions lasted an average of 60 minutes and were digitally recorded [71]. Transcription was undertaken immediately after the conclusion of the interview [72], so that the data collected from the participants would still be fresh in the researcher's mind [73]. In addition to the in-depth interviews, participant observation was carried out in Bario for a total of 30 days. As a result, 50 pages of field notes were generated as a narrative account to record all the events, places visited and activities in Bario. In order to enhance the validity and reliability of participant observation, this study adopted the seven steps suggested for participant observation by Cresswell [74], pp.134-135. This study also followed the recommendation of Tilstone [75] that the participant observation should address the context (i.e. date, time, length of observation, and activities or events) and content (i.e. stakeholders' involvement in local events) of the phenomenon being studied. In addition, documentary evidence such as brochures and printed materials in relation to Bario were also used to complement the data obtained from both in-depth interviews and participant observation. Scott [76]'s four criteria for assessing the quality of documentary evidence (authenticity, credibility, representativeness and meaning) were used as a guide to assure validity and reliability of the collected materials.

5.4 Data analysis

Thematic analysis was adopted to analyse the data collected from the in-depth interviews. Thematic analysis was deemed fit because it is a qualitative analytic method that involves identifying themes by systematically reading the data very carefully and then re-reading the data several times [77]. The themes emerged from the study's findings. This study also used the six stages of thematic analysis as recommended by Braun and Clarke [78] which sees the researcher: (1) familiarising with the data; (2) developing the initial codes (or open codes); (3) searching for the relevant themes; (4) reviewing themes that have emerged; (5) defining, labelling or naming the codes; and (6) producing a report of the findings. This analytic method specifically identified codes and themes that provide answers to the main questions. Finally, content analysis was used to analyse the field notes from the participant observation and documentary evidence as supplementary data to the in-depth interviews. Content analysis is widely used in tourism research [79].

6. Findings and discussion

This section presents the findings based on the triangulation of data sources (in-depth interviews, participant observation and documentary evidence) used in this study. The case study presents an in-depth investigation into Bario as a unique study context of a rural tourist destination in Malaysia. The main aim of this study is to develop a destination brand framework for rural tourism destinations using the relationship-based approach. The number of participants is presented in **Table 3** and the main findings from the research questions are presented in three sections. For the purpose of anonymity, participant code number (PCN) representing identification of each of the participant were used.

Participants	No. of participants
Local residents, Kelabits in diaspora and tourism entrepreneurs in Bario	17
Local tourist	1
International tourists	14
Government agencies – STB, PEMANDU, DoI, MOT, & MTTF	6
Non-government organisations (NGOs) and volunteers	5
Branding and marketing experts	2
Academic researcher	1
Airline Company (sole rural air services provider to Bario)	1
Mechanised rice farming investor in Bario	1
Total number of participants	48

Source: Developed for this study.
Legend: STB, Sarawak Tourism Board; DoI – Department of Immigration; MOT – Ministry of Tourism. MTTF, Miri Tourism Task Force; PEMANDU- Performance Management and Delivery Unit.

Table 3.
Participants' profile.

The 48 participants interviewed came from eight different countries or five continents of (Europe, North America, Asia, Oceania (Australia and New Zealand), and Africa) as shown in **Table 3** and they are in the age range of 20 to 68. The number of days spent by these tourists was important because their experiences would have been enriched to provide relevant responses to the in-depth interview questions. This view is consistent with Prayag and Ryan [73] that this was important in order to capture the essence of the place and "where visitors' experiences were complete". The following section presents findings on research question one.

7. Tourism destination appeals

Thus far, this section has reported findings that seek to answer the first research question that reads: 'What are the destination appeals in developing a destination brand for rural tourism?' The objective was to identify tourism destination attractions. Findings indicate there are eight rural tourism destination appeals as presented in **Table 4**. These constructs contribute to the existing literature on the tourism destination appeals which are conceptualised in developing a destination brand framework for rural tourism using the relationship-based approach.

The following are the extracts from the participants' opinions on the tourism destination appeals. When asked if Bario is a rural tourism destination, comments from respondents illustrating this point include a statement from a key informant from the Ministry of Tourism in Sarawak:

> Basically, if you look at the image of Bario, the geographic location itself is already rural. …in Bario most people will agree that it is still rural because you have difficulty in getting there, you stay in old Kelabit longhouses, there is no road and you don't have 24 hours of electricity supply and water supply; so the characteristics of Bario itself is already rural. (PCN34).

Moreover, a director from PEMANDU in the Prime Minister's Department in Malaysia echoed:

Main themes	Findings
Characteristics of rural tourism destinations	Communal relationship with people
Destination image	a. Traditional longhouses as tourist product b. Educated community
Destination awareness and identity	a. Food festival and cultural events b. World challenge organisation c. "Bario Revival" book
Destination accessibility	Accessibility by smaller aircraft and logging road on 4WD viewed as adventure tourism and unique
Hard factors	Historical and archaeological sites – megaliths and stone monuments
Soft factors	a. Relationship building experience b. Sense of belonging
Community-based tourism and Cultural events (CBTCEs)	a. Name changing ceremony (IRAU in Kelabit) b. Traditional wedding ceremony
Local meetings, incentives, conventions and exhibitions (L-MICE)	a. eBario knowledge fair or developmental conference b. Annual Bario revival anniversary and conference

Source: Authors.

Table 4.
Tourism destination appeals.

> *... If you have been to Bario it is remote; the jungle is also unique - that would be another area where people would also be interested to go and visit ... the food ... for example, is Bario rice is a form of highland specie you don't see ... anywhere else in the country.(PCN38).*

The image of Bario seems to be of a unique destination due to its location, nature, traditional farming and food attractions. The positive perception of a rural tourism destination is important in order to draw the attention of would-be visitors. This view is shared by Anholt [80] that destination image is very crucial for the travel and tourism industry, and this accounts for the rationale why great importance has been attached to destination branding. The participants' views on destination image are consistent with the literature on the attributes that determine the perceived destination image such as trekking, scenery, weather condition, hotel and self-catering accommodation, relaxation and gastronomy [12]. In Bario, there is no hotel facility but alternatively, there are traditional Bario (Kelabit) longhouses where visitors could stay with multiple family members. These longhouses are unique to rural destinations; more specifically, these longhouses are found in very few rural tourism destinations and Bario prides itself with significant numbers of longhouses. This traditional system of accommodation is a niche product in Bario's tourism and hospitality services. By living in the longhouses, it provides the visitors an opportunity to learn quickly about the culture and lifestyle of the host. This is followed by findings from research question two.

8. Rural destination branding strategies

This section addresses research question two. The aim was to identify the destination branding strategies in developing a destination brand for rural tourism.

Findings show that there are eleven destination branding strategies for rural tourism destinations uncovered with the potential contributions in developing a destination branding framework as shown in **Table 5**.

Extracts from the participants' opinions on the destination branding strategies include that of a tourist from the United States of America:

> *It has to start with the relationship building among the … Bario people … they should work with the local authority and the state to promote … and ensure that the destination image of Bario and its attractions are well communicated … (PCN24).*

The destination branding strategies of tourism destinations are diverse and come from different segments of the tourism destination. Findings show that relationship building, local community involvement and communication of the brand are key success factors mentioned by the participants. Other strategies include the

Main themes	Findings
Understanding branding and description of rural tourism destination brand	a. Value added activities and experience b. Destination authenticity (real, untouched)
Rationales for rural tourism destination brand	a. Building high-end tourism destination b. Geographic location and unique destination accessibility experience
Roles of tourism attractions in rural destination brand development	a. Promoting jungle and pristine experience b. Premium destination – less is more, no mass tourism
Strategic stages of destination brand building	a. Strong local leadership b. Provision of infrastructures and superstructures c. Destination brand management and sustainability
Challenges of developing a destination brand	a. Lack of destination branding experts and manpower b. Lack of local leadership to drive the brand vision c. Geographic location and accessibility
Managing the challenges of destination brand building	a. Strong leadership and relationship building with stakeholders and non-stakeholders b. Partnering with marketing and destination branding experts
Critical success factors (CSFs)	a. Heart of Borneo project BIMP-EAGA b. Food, farming and forest (FFF) strategy c. Develop a community protocol d. Stakeholders' relationship building e. Leadership of Rurum Kelabits Sarawak (RKS)
Implementation and monitoring of CSFs	a. Promoting premium or mass tourism destination
Destination brand influence and tourist destination of choice	a. Tourist willingness to pay (WTP) more b. Extending tourist length of days and nights
Destination brand benefits	a. Promotion of sustainable tourism b. Preservation of traditional farming occupation c. Human capital and capacity development d. Agriculture and non-tourism investment
Destination management and monitoring	a. Management of risks and crisis to protect brand values.

Source: Authors.

Table 5.
Rural destination branding strategies.

development of a destination logo and tagline because they remind the visitors about the destination. These findings are in line with the existing literature on destination branding strategies and critical success factors (CSFs) of developing a destination brand [34, 80]. Furthermore, a tourist from Austria commented:

> *I think it would also be good to have brochures about Bario to take along and show people all over the place is a beautiful place to visit, the attractions, the culture, megaliths, the paddy rice fields, the hospitable people in Bario, homestay, the longhouses, everything must be featured in the brochure something they can hold that is tangible to take along. (PCN32).*

Brochures have been used in many destinations to promote tourism [81]. In the case of Bario brochures have not been used to really promote tourism and develop its destination brand. It is also being suggested that the heart of Borneo and East Asia Growth area (EAGA) strategy should be used. This is because EAGA is an international collaboration of four countries namely Brunei, Indonesia, Malaysia and Philippines (BIMP). Findings also indicate that Bario should be developed gradually and not overdeveloped in order to maintain its basic characteristics and preserve the tourist attractions. The establishment of a tourist and visitors information centre (TVIC) is suggested so that it would be a one stop centre where the visitors would have information on different tourism activities available and where to visit. Importantly, findings from research question three is presented in the following section.

9. Tourism destination stakeholders' roles

This section addresses research question three. This study has uncovered eight constructs and potential contributions to tourism destination stakeholders' roles. These contributions to the existing literature on the destination stakeholders' roles are conceptualised in developing a destination brand framework for rural tourism using the relationship-based approach as presented in **Table 6**.

Findings in this study also support extant literature on the issue of leadership in tourism destination which has always been an interesting subject and viewed by researchers and practitioners alike across different disciplines as very complex. The participants' statements in relation to the sources of community leadership initiative in relationship building are presented in the following sections. According to a local resident, retiree and farmer in Bario said:

> *I think in Bario there are one or two community associations so they could appoint representatives or leaders among them who will be saddled with the responsibility of meeting with other stakeholders in Bario. (PCN4).*

Comments from other participants on who should spearhead the responsibility and become a bridge builder [82] among the stakeholders include that of a tourist from Germany:

> *I think the local community should initiate it [leadership] if they want Bario to be branded through the local leaders in collaboration with other stakeholders…
> (PCN20).*

Findings show that the leadership initiative to promote relationship building should be initiated from the local community because the local people know more about their community and how they want tourism to be promoted in Bario. In the

Main themes	Findings
Identification of rural tourism stakeholders	a. Tertiary stakeholder – logging companies b. Secondary or Non-tourism stakeholder - general public outside Bario, individuals and private organisations involved in the provision of infrastructures projects and developmental events. c. Primary stakeholder – tourist, researchers, NGOs and volunteers, local residents, government, DMMOs, travel, tour operators, transporters and airlines, local business and homestay operators.
Tourism destination stakeholders' roles	Tertiary stakeholder - logging companies or loggers investment in trees planting due to harvest of matured trees, specifically in Bario, linked logging road from Ba'kelalan to Bario
Roles of destination management and marketing organisations (DMMOs)	a. Promoting Bario food and cultural festival b. Assurance on safety and security of the tourists c. Sustainability of tourism destination attractions
Strategies and benefits of relationship building (stakeholders and non-stakeholders)	**Strategies** a. Build and maintain good relationship among stakeholders b. Integrity and quality of service c. Communication, honesty and transparency d. Alliance and consultation with destination branding experts e. Innovation and creativity f. Networking with non-stakeholders g. Progressive relationship, sense of ownership and trust **Benefits** a. Networking with branding experts and resource opportunities b. Provision of financial requirements c. Unique trust destination d. Inflow of business investment e. Infrastructure development and CSR projects f. Successful brand development and implementation g. Sustainable destination brand development
Leadership initiative in relationship building	a. Rurum Kelabit Sarawak (RKS) community association b. Bottom-up approach: Stakeholder power through the rural community association and local leadership (e.g. RKS)
Descriptions of tourism destination sustainability	Tourist spend reasonable number of days
Stakeholders involvement in tourism destination sustainability	a. Building sustainable destination brand b. Develop training programmes on sustainability
Future of tourism development and management in Bario	a. Educate and involve younger generation b. Gradual and balanced development avoid major transformation of Bario c. Improve eBario website and directory d. Promote archaeological sites as tourism attractions

Source: Developed for this study.

Table 6.
Destination stakeholders' roles.

case of Bario, findings also suggest that there is a need to educate and involve the younger generation in destination branding activities so that they can revive and preserve the culture which is one of the main tourism attractions in Bario. The empowerment for the younger generation is necessary because of the ageing

population of most of the local residents in Bario. Besides that, there should be gradual and balanced development, but that avoids major transformation of Bario. Based on events in some tourism destinations such as Pankor Island, Langkawi Island, Cameroon Highland and Tioman Island where "it seems that tourists, as a force of change, have introduced ultramodern culture to the villagers" ([83], p.170), these destinations are in Malaysia where major economic transformations through tourism have dislocated the ecosystem. Additionally, documentary evidence was used to supplement findings from this study as presented in the following section.

10. Findings from documentary evidence

The documentary evidence was grouped into three categories that include brochures, books and press releases, and archaeological research reports. **Table 7** presents a comparison of findings uncovered from the three categories of documentary evidence in order to identify the extent to which these findings from documentary evidence corroborate findings from in-depth interviews.

These findings include: (1) industry innovators award; (2) slow food praesidium award for Bario rice; and (3) intelligent community's award. These three findings were not uncovered in the in-depth interviews which basically could be regarded as part of destination image, destination awareness and identity of Bario. On top of this, participant observation was adopted to supplement findings from both in-depth interviews and documentary evidence as follows.

Documentary evidence	Categories	Findings uncovered from in-depth interviews	Findings uncovered from documentary evidence
Brochures	Brochures on food and cultural festival	Tourism destination event	Promote local food culture and tourism through Bario food and cultural festival
	Bario knowledge fair downloaded from e-Bario website	Tourism destination event	Local MICE events or developmental conferencing
Books and press releases	The Bario Revival	a. Tourism destination event b. Destination image	a. Bario revival anniversary conference b Industry innovators award
	Education Excellence Awards	Destination image	Educated community
	Slow Food Italy	a. Destination image b. Destination awareness and identity	Slow food praesidium award for Bario rice
	World Teleport Association – press release	a. Destination image b. Destination awareness and identity	Intelligent community award
Archaeological research reports	Cultured Rainforest Project (CRP)	Hard factors	Megaliths and stone monuments sites

Source: Developed for this study.

Table 7.
Comparison of findings from In-depth interviews with documentary evidence.

11. Findings from participant observation

Table 8 presents a comparison of these findings from in-depth interviews and participant observation. Based on the analysis of findings in this section and comparison with the in-depth interviews, it was discovered that most of the findings

| Component of destination branding strategies	Findings uncovered from in-depth interviews	Findings uncovered from participant observation
Tourism Destination Appeals – Research Question 1		
Tourism events	a. Food and cultural festival b. Local MICE	a. Food and cultural festival b. Local MICE – WWF/ Kalimantan Indonesia and Kelabit highlands Malaysia Meetings
Destination Branding Strategies – Research Question 2		
Critical success factors of tourism Destination branding	a. Brand communication benefits b. Brand promise	a. Effective brand communication benefits to the stakeholders b. Brand promise
Destination Stakeholders' Roles - Research Question 3		
Analysis of stakeholders' involvement in activities and events	Findings uncovered from in-depth interviews	Findings uncovered from participant observation
Identification of destination stakeholders	a. Local residents b. Volunteers/NGOs c. Researchers d. Tourists e. Government agencies f. Local airline company g. Agro-business investor h Logging companies	a. Local residents b. Volunteers/NGOs c. Researchers d. Tourists e. Government agencies f. Local airline company g. Agro-business investor
Community involvement and commitment in activities and events	a. Food and cultural festivals b. Host vs. guest relationship c. Local salt production d. Rice production e. Participation in exhibition	a. Food and cultural festivals b. Host vs. guest relationship c. Local salt production d. Rice production e. Participation in exhibition f. Trees planting g. Guest vs. guest relationship
Tourist participation in events and relationship building	a. Food and cultural festivals b. Taking photographs c. Relationship building d. Visit archaeological sites	a. Food and cultural festivals b. Taking photographs c. Relationship building d. Visit archaeological sites e. Trees planting f. Participation in exhibition
Involvement of other stakeholders in activities and events	a. Tree planting b. Painting of long houses c. Taking photographs d. Relationship building e. Participation in exhibition f. Food and cultural festivals g. Visit archaeological sites	a. Trees planting b. Painting of long houses c. Taking photographs d. Relationship building e. Participation in exhibition f. Food and cultural festivals g. Visit archaeological sites

Source: Developed for this study.

Table 8.
Comparison of findings from in-depth interviews and participant observation.

from participant observation support findings uncovered in the in-depth interviews.

11.1 Rural tourism destination appeals

This section summarises **Table 4** and its relevant to **Figure 1**. Based on the analyses of the data, eight main themes of destination appeals or attractions have been identified that would help brand a rural destination namely: characteristics of rural tourism destinations; destination image; destination awareness and identity. Others include destination accessibility; hard factors attractions; soft factors attractions; community-based tourism and cultural events (CBTCEs); and (h) local meetings, incentives, conventions and exhibitions (L-MICE). These findings are important because within this study, relationship building experience, staging of food and cultural festivals which include the name changing ceremony and the traditional wedding are unique tourism attractions. Similarly, the locally organised MICE that has featured the eBario Knowledge fair and the annual anniversary of Bario revival are destination appeals that would enhance the destination brand
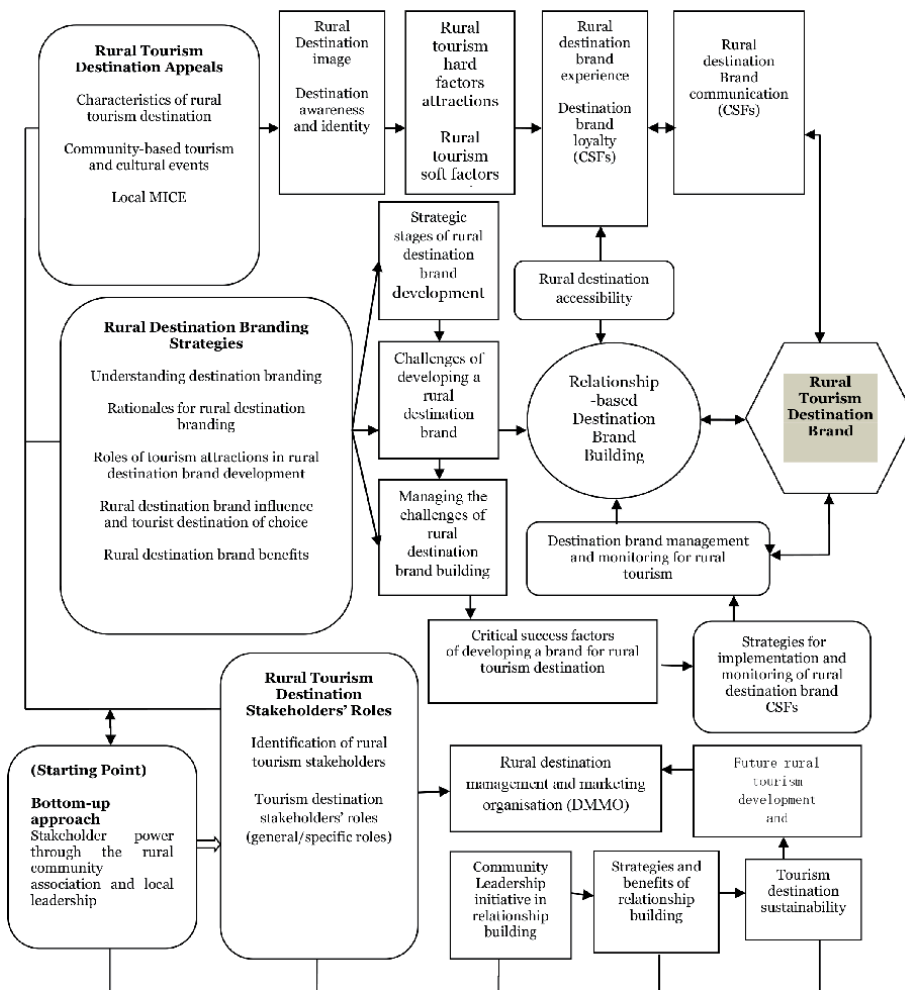
Figure 1.
Destination brand framework for rural tourism: A relationship-based approach.

development of Bario. These constructs were conceptualised into the destination brand framework developed in this study as presented in **Figure 1**.

11.2 Rural destination branding strategies

The focus of this section is derived from **Table 5** as part of the components to develop a rural tourism destination brand framework as depicted in **Figure 1**. Analyses of data on destination branding strategies in **Table 5** produced eleven strategic themes: understanding branding and description of rural tourism destination brand; rationales for rural tourism destination brand; roles of tourism attractions in rural destination brand development; strategic stages of destination brand building; challenges of developing a destination brand; and managing the challenges of destination brand building. Other branding strategies are critical success factors (CSFs); strategies for the implementation and monitoring of CSFs; destination brand influence and tourist destination of choice; destination brand benefits; and destination management and monitoring.

11.3 Rural tourism destination stakeholders' roles

The third main component of the destination brand framework in **Figure 1** is the destination stakeholders' roles. Analyses of data in **Table 6** produced eight main themes relevant to the construct of destination brand framework as follows: identification of rural tourism stakeholders – primary, secondary and tertiary stakeholders were identified; tourism destination stakeholders' roles; roles of destination management and marketing organisations (DMMOs). Similarly, leadership initiative in relationship building – bottom-up approach through committed community leaders and associations; strategies and benefits of relationship building; destination sustainability; and future of tourism development and management in Bario. The main significant finding in this study is that the starting point in developing a destination brand for rural tourism is the bottom-up approach, community-driven which would allow relationship building between the host community and other destination stakeholders. In other words, it should not be a top-down approach from the government ministries, agencies and department.

12. Implications to theory, practice and policy makers and host community

12.1 Theoretical implications

This study has contributed to the scholarship of destination branding. From the theoretical view point, it has contributed to the existing theory on destination branding by developing a 'destination brand framework for rural tourism using the relationship-based approach' as presented in **Figure 1** which is the main aim of this study. Findings from this study also indicate that the destination brand framework for rural tourism emphasises the significance of understanding relationship building among the local community, rural destination stakeholders and non-stakeholders (friends of the host community) to develop a destination brand for rural tourism. Other theoretical contributions are the rural tourism destination appeals, destination branding strategies and stakeholder power - through the rural community association and local leadership. The starting point is to adopt a bottom-up approach and engage committed community's association leaders to drive the brand vision, planning and development are important elements.

12.2 Practice and policy implications

This study has practical implications for policy makers and practitioners. Firstly, the destination brand framework can be used in practice for the destination brand building of Bario and transfer to other rural tourism destination using the relationship-based approach (RBA). This is because RBA encourages stakeholders to be involved in activities that will promote and develop the tourism destination brand. This suggestion is corroborated by Szondi [42] that relationship-based management in building a destination brand can lead to mutual understanding, collaboration efforts and shared values among the stakeholders and non-stakeholders. The second managerial contribution is the formation of community protocol and engagement behaviour of stakeholders and non-stakeholders to encourage sustainable and responsible rural tourism practices. Tourism practitioners should understand tourists' behaviour in terms of their expectations by maintaining the remote image and identity of a rural destination and avoiding massive infrastructure development which may result in the number of tourist attractions being lost and reducing the number of tourist arrivals and receipts.

12.3 Implications to the community

The study implication to the host community is that the development of a rural tourism destination brand has the potential to provide employment opportunities for the host community. This is because an increase in the number of tourist arrivals will require more local residents to be gainfully employed. Notably, increase in the tourist arrivals could draw the attention of the government and investors alike. A good example is the study context where we have private investments in rice production which has increased the number of rice output, employing more people from the community and provision of seven dams for rice irrigation planting system. In addition, is the preservation of core values of the rural tourism destination such as local culture, heritage and historical sites attractions, farming community status would be preserved. Besides that, tourist desire for authentic experience would be enhanced and this suggests that the rural destination appeals can be sustained in a longer term.

12.4 Transferability of destination brand framework to similar tourism destinations

Transferability is important in qualitative research findings [84]. Transferability connotes external validity [70]. The following elements of the destination brand framework can be transferred or implemented in other tourism destinations brand building. These include: (a) the application of relationship-based approach suggests the involvement of the local community other rural destination stakeholders and non-stakeholders in the process involved of developing a destination brand for rural tourism; (b) the bottom-up approach and community-driven strategy through the stakeholder power delegated to the local community's association leadership initiative; (c) local community association and leadership initiative in understanding the strategies and benefits of relationship building in destination brand development; (d) stakeholders' involvement in rural tourism destination sustainability in building a destination brand; (e) identifying specific rural tourism destination appeals (hard and soft factors) that can be used in developing destination brand for rural destinations; and (f) communicating destination brand benefits specific to rural tourism destination.

13. Limitations, recommendations for future research and conclusion

13.1 Limitations of the study and recommendations

This study has been conceptualised from the rural tourism destination context which may not be applicable to other large tourism destinations such as cities, states, regions and nations branding. Notably, a qualitative single case approach was used. It is suggested that future studies should adopt the multiple case studies approach in rural tourism destinations that are not uniquely positioned like Bario for comparison among the different study destinations. This is important to ascertain if similar results would be obtained. A longitudinal study is recommended because it would provide additional findings on the process involved in developing a destination brand for rural tourism over time.

14. Conclusion

To sum up, the application of the relationship-based approach in this study is strengthened by the existing study in destination branding which highlighted there is limited or no empirical studies in the relationship building approach in developing a destination brand [45].

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Traveler's Infections: Overview of Hepatitis B Virus Infection

Victor B. Oti

Abstract

Hepatitis B virus (HBV) is a double-stranded circular DNA virus that infects the hepatocytes. HBV infection is considered as an important public health concern globally especially with one-third of the world's population been infected. Local and international migrants are one of those population at high risk of the infection. Many factors interplay in the acquisition of HBV such as purpose of travel, destination endemicity rate of the virus, time of stay of the traveler, inadequate prevention and control measures, among others, understanding the genotypes of HBV is critical in correlating the evolution of the virus and migration of humans and also treatment responses of infected population. The symptom of the virus ranges from fever to jaundice and to a liver cirrhosis and hepatocellular carcinoma (HCC). Transmission of HBV is commonly via horizontal route in developing regions and in the developed regions; transmission occur more often among adults that use injectable drugs and high-risk sexual behaviors. Therefore, the Centers for Disease Control and Prevention (CDC) and World Health Organization (WHO) have recommended HBV screening and vaccination to all travelers without an HBV immunization history before traveling to endemic regions. This chapter gives an overview on HBV as a potential traveler's infection.

Keywords: hepatitis B virus, travelers, vaccination, genotypes, travel medicine

1. Introduction

Hepatitis B virus (HBV) is a partially double-stranded viral agent with a circular deoxyribose nucleic acid (DNA) that replicates by reverse transcription. HBV infection is a hepatocyte infection that is globally considered as a public health concern [1–3]. There are more than 2 billion persons infected with HBV living today worldwide with 260 million estimated to be chronically infected with the infection and having a carrier rate varying from 9 to 20% in Sub-Saharan Africa (SSA) [4–6]. Annually, there are close to 900,000 HBV-related deaths, mainly due to cirrhosis or hepatocellular carcinoma (HCC). The viral infection is the fourth most common vaccine preventable infection among travelers returning home ill after enteric fever, acute hepatitis A, and influenza [7, 8]. This viral agent can cause both acute and chronic infections. Many infected persons show no symptoms during the initial stage of the infection. Typically, the viral agent has an incubation period of 90 days (range, 60–150 days). The acute HBV infection that is acquired newly only shows symptoms rarely. Signs and symptoms of the viral infection differs with age; most children aged under 5 years old and newly infected immunosuppressed adults often show no symptoms, while about 30–50% of people that are more than 5 years of

age are usually symptomatic [7]. When present, the typical signs and symptoms of acute infection include malaise, fatigue, poor appetite, nausea, vomiting, abdominal pain, fever, dark urine, light color (clay-colored) stool, joint pain, and jaundice [8]. The overall case fatality ratio of acute infection due to HBV is approximately 1% [9]. People infected with HBV are susceptible to infection with hepatitis D virus; coinfection increases the risk of fulminant hepatitis and rapidly progressive liver disease [10]. Transmission of HBV is mainly through percutaneous or mucosal exposure to HBV-infected blood or bodily fluids including saliva or semen [2]. There are reports of transmission via sexual contact and contaminated medical equipment and through sharing of infected needles and injecting apparatus [11].

The prevalence of chronic HBV infection is ≥2%, such as in the western Pacific and African regions; expatriates, missionaries, and long-term development workers may be at increased risk for HBV infection in such countries [7, 8]. Serologic markers specific for the viral agent are necessary to diagnose HBV infection and for appropriate clinical management [12]. These markers can differentiate between acute, resolving, and chronic infections. Polymerase chain reaction (PCR) method can further be use to qualitatively or quantitatively detect the amount of HBV DNA in patients' specimen after checking the markers of the virus [13]. All travelers should be screened for HBV infection markers, so that they would not be at risk of acquiring the virus during their stay [7].

2. Aspects of HBV morphology

Hepatitis B virus belongs to the family of *Hepadnaviridae* in the genus *Orthohepadnavirus*, and it is known to have a very high transmissibility [14, 15]. It is a hepatotropic DNA virus which also includes duck hepatitis B virus (DHBV) and woodchuck hepatitis B virus (WHBV) [16]. HBV is partially double-stranded with a circular DNA that is composed of an outer envelope containing hepatitis B surface antigen (HBsAg) and an inner nucleocapsid consisting of hepatitis B envelope antigen (HBeAg) and hepatitis B core antigen (HBcAg) of approximately 3.2 kb, generated from an intermediate RNA through reverse transcription that encodes
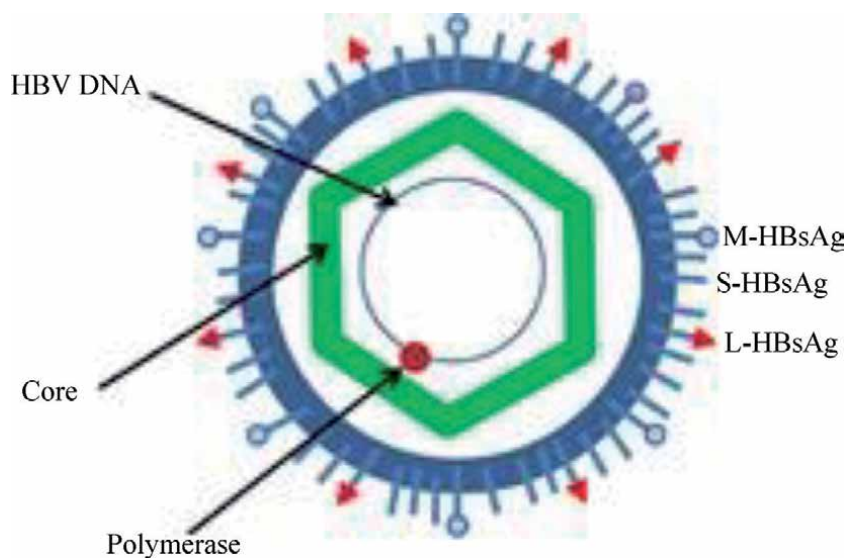
Figure 1.
Morphology of hepatitis B virus [16, 18].

four partially overlapping open reading frames (ORF): surface (S), encoding the viral surface protein; core (C) encoding core; polymerase protein; and pDNA and X genera as seen in **Figure 1** [17, 18]. The virus infects the liver of Hominoidae including humans and causes an inflammation called hepatitis. The disease was formally known as "serum hepatitis" [19].

3. How HBV replicates

The cardinal feature of HBV replication cycle is the replication of the DNA genome by reverse transcription, when virions bind susceptible cell-surface receptors and IgA receptors on liver cells following of RNA intermediate [18, 20]. The viral genome is transported into the nucleus, and it is then converted into a covalently closed circular double-stranded HBV DNA (cccDNA) molecule which acts as the transcriptional template for the host RNA polymerase II machinery that synthesizes polyadenylated and four capped mRNAs which encode the envelope structural proteins, viral core and the precore; polymerase; and X non-structural viral proteins [20]. A 3.5-kb genome length RNA is one of the major HBV transcripts which is translated to synthesize the viral core and polymerase proteins and also plays role as a pregenomic RNA that is encapsidated with the polymerase by the core protein in the cytoplasm of the liver cells. The replication of the viral agent usually happens entirely within these capsids by reverse transcription of the pregenomic RNA to synthesize a single-strand DNA copy that serves as the template for the second strand DNA produced, synthesizing a circular double-stranded DNA [21]. The viral capsids that contain the double-stranded DNA traffic either to the nucleus where amplification occurs or the viral cccDNA genome to stabilize intranuclear pool of transcriptional templates or to the endoplasmic reticulum, where they acquire the viral envelope proteins, bud into the lumen, and exit the cell as virions that can infect other cells [22, 23].

4. Pathogenesis and clinical features of HBV infection

Hepatitis B virus gets entry into the bloodstream and targets the liver cells [24]. The hepatocytes which are infected are distended, and the cytoplasm assumes a ground appearance that is glassy. The virus is not cytopathic, and injury of the liver in HBV chronic infection is due to immunological responses [8, 25]. Although, the virus has a long incubation period of 45–180 days, replication starts few days after infection. The infection can be acute, an unexpected sickness with a mild-to-severe course followed by comprehensive resolve [26]. On the other hand, if the cell-mediated immune reaction is feeble, the infection does not resolve, and chronic hepatitis arises with an extended course of active disease or silent asymptomatic infection [27].

About 30–80% adults of acute HBV infection shows symptoms (1% fulminant hepatitis), whereas less than 1 year old children shows no symptoms [28]. Symptoms of HBV infection include malaise, dark urine, fever, nausea, jaundice, pale stools, right upper quadrant pain, and anorexia. The risk of chronic infection of HBV is hinged on the duration of acquisition [26]. About 90% of infected neonates, 30–50% of children aged 1–4 years, and 1–10% of acutely infected adults result to persistent infection. There are approximately 15–40% with persistent infection that leads to advanced liver disease, cirrhosis, and/or HCC [8, 29].

5. How HBV infection is transmitted

Transmission of HBV in travelers is through percutaneous or mucosal exposure to HBV-infected blood or bodily fluids including saliva or semen [30, 31]. There are reports of transmission via sexual contact, contaminated blood and its products, and contaminated medical equipment and through sharing of infected needles and injecting apparatus [31, 32].

In SSA, the viral infection, is often disseminated through perinatal and horizontal route, while in the developed regions, most infections occur in adults of younger ages through injecting drug use or high-risk sexual behavior (e.g., bisexuals and homosexuals) [8, 33]. HBV infection is known to be transmitted from the mother to child and it is a thing of worry [34, 35]. Every year, about 25,000 infants are born to HBV-diagnosed mothers in the United States, and approximately 1000 mothers transmit HBV to their infants. This means that about 90% of HBV-infected newborns will eventually develop to chronic infection, and up to 25% of those infected at birth will eventually die prematurely due to HBV-related complications. Therefore, the standard care for pregnant women includes an HBV testing during each pregnancy, to prevent HBV-positive pregnant women from transmitting the viral agent to her unborn child [34, 35].

Inadequate infection control in healthcare settings also constitutes to a significant mode of HBV transmission. That is why immigrants from many countries are recommended to be tested for HBV [12]. Transmission by blood transfusion is now rare, whereas before screening of donor blood, it was not uncommon [32]. Cord blood is usually negative for the serological markers of HBV, but occasionally intrauterine infection might happen. Fetal blood sampling might enhance this risk, but amniocentesis does not appear to increase the chances of intrauterine transmission [36]. Infection presumably occurs at or soon after birth. It perhaps occurs through breast (feeding) milk, as it is known to carry the virus. Transmission could occur if there was an in apparent breach in the mucosa of the mouth or during teething [37]. Among adults, high-risk sexual activity is one of the most frequent routes of transmission for HBV [38]. Historically, male homosexual contacts have been associated with a high risk for the viral infection [38]. Sexual transmission accounts for a majority of the transmission occurring in adult life [38]. More recently, heterosexual transmission is reported to be the most common cause of acute HBV infection in adults [39]. Transmission may also continue to occur in healthcare settings. It is a result of nonadherence to isolation guidelines in a hemodialysis unit, or direct person-person exposure (e.g., surgeon-to-patient or dentist-to-patient) may transmit the virus [40]. Sharing of clothes and bed spaces could pose jeopardy because the virus could be found in saliva, tears, urine, breast milk, and any other body fluid [13]. Other possible means of transmission include an infected parent kissing the cut finger or scraped knee of his child and sharing of personal items of personal hygiene such as toothbrushes between parents and children [3].

6. Epidemiologic studies of HBV infection in travelers

There is insufficient information that depicts predisposing factors to travelers; however, there is scarcity of public reports of HBV infection in travelers, and there is low risk for travelers who are not engaged in high-risk behaviors [7]. The risk of the viral infection might increase in countries/regions that have a 2% prevalence of chronic HBV infection, such as in the African and Western Pacific regions; missionaries, long-term community development workers, and expatriates might be at high risk for the viral agent in such areas [41]. Travelers should take note on how

the virus is acquired and take precautionary measures to mitigate transmission. The risk of injury due to accident is much higher for travelers than for people in their own environment. These injuries may involve medical attention that will require injections, IVs, or blood transfusions, thereby enhancing the risk of HBV exposure [7]. Older aged travelers, especially those with heart problems, may also require medical treatments that will require the same risks of exposure.

The global prevalence of HBV indicated by the proportion of chronic HBV carriers in the population that is seropositive for the hepatitis B surface antigen (HBsAg) varies strongly between different geographical regions [12]. The virus endemicity level is different from one nation to another. The level is mostly lowered in the Western Europe, the United States, Canada, and some South American and Northern African countries (with an HBsAg chronic carrier rate < 2%); intermediate (i.e., 2–8%) in Eastern Europe, Central Asia, and some Eastern Asian countries; and high (above 8%) in Alaska, Sub-Saharan African countries, and some Asian countries [12, 42]. Infection with HBV is considered among the commonest immunization preventable infections among immigrants [12, 43]. The prevalence of the virus in travelers is associated with the status of the traveler's immunity, the duration of travel, and the level of HBV endemicity in the destination country. More so, there are peculiar populations of travelers that might be of higher risk of HBV acquisition which includes those visiting relatives and friends, the expatriates, dental surgery and medical procedure travelers, and those casual sex engagers [7]. Empirical information posited that travelers seeking urgent, unforeseen medical attention are common which makes travelers at risk of the viral agent [44]. There is paucity of empirical evidence to quantify the risk travelers might also be exposed to HBV through activities that involve tattooing, piercings, and acupuncturing [7].

Coppola et al. [42] reported HBsAg seropositivity of 9.6% among undocumented refugees and immigrants in Southern Italy. The study showed that male sex, SSA origin, low level of schooling, and minor parenteral risks for acquiring HBV infection (acupuncture, tattoo, piercing, or tribal practices) were independently associated with ongoing or past HBV infection [42]. A study in Thailand among international backpackers reported that 25% of its population had engaged in casual sex, while traveling and about half of the population did not often use condom [45]. The risk of HBV infection from sex without protection increase with the number of sex partners, and the incidence of unprotected sex was higher among the singles based on a study carried out on Dutch travelers to tropical and subtropical regions [46]. A study among Australian travelers reported that about half of them had indulged in at least one activity with an HBV risk during their last overseas trip to Southeast or East Asia [47]. Travelers without immunity for the virus traveling to high HBV prevalence countries like Nigeria might be at risk of acquiring the infection due to the many potential accidental and uncontrollable exposures during travel. A Netherlands study reported that 9% of all HBV cases between 1992 and 2003 were travel-related with an estimated incidence of HBV infection of 4.5 per 100,000 travelers [48]. In a study carried out between 1997 and 2007, HBV infection was reported in 51 cases of a cohort of ill travelers presenting to GeoSentinel clinics [49]. The study also found out that male sex and older age are associated with HBV acquisition statistically. Findings among travelers have shown that new sexual partners and unprotected sex are common, especially where there is excessive alcohol intake environment [44, 50, 51]. In countries with high HBV endemicity, the monthly estimated incidence of the infection ranges from 25 per 100,000 for symptomatic infections to 80–420 per 100,000 for all HBV infections in susceptible expatriates residing in such country [52]. Development/aid workers, volunteers, and missionaries pose greater risk of the infection due to extension of travel stay and local community close contact [7]. The prevalence of anti-HBc antibody was

5%, doubling that of the general population in a Swedish expatriate's population. Short duration of travel stay will obviously lower the risk of the infection [53]. Nielsen et al. reported that the incidence per month of HBV infection was 10.2 per 100,000 with 62% of cases traveling for less than 4 weeks [54]. Most research is hinged on travelers becoming sick after travel before testing to occur, so this tends to underestimate the incidence of the viral infection [7, 49].

Many cross-sectional research have find out that travelers have reduced baseline understanding on infections related to travels and put themselves in jeopardy to HBV infection through their actions while in foreign land [47, 55]. Nielsen et al. reported that 5% of short-term and 5% nonimmune travelers were under a great risk of getting infected with HBV via tattooing, injections, and operation activities [44]. About 41% high-risk endeavors were reported among travelers in more than 6 months with most of the endeavors being unintentional and involuntary [44]. In a retrospective study among Australian travelers, 281 (56%) had visited a country with medium to high prevalence of HBV, of whom only 43% had been vaccinated and 162 (33%) undertook activities associated with potential HBV exposure [55]. Medical tourism and transplantation of organs have been identified several times as predictors for the viral agent, which highlights that checking for transmissible infection cannot be guaranteed universally [56, 57]. A study among Australian patients finds out that 2 of 16 who traveled overseas for commercial kidney transplantation developed fulminant hepatitis related to HBV infection and died [58]. Significantly high-incidence rate of HBV infection was reported among patients receiving renal transplantations in India than in Saudi Arabia [59].

7. Genotypic distribution of HBV

Hepatitis B virus until now has been reported to have 10 genotypes (A–J) with identified peculiar distribution based on regions to its high degree of genetic heterogeneity [5, 60–62]. HBV genotyping is significant in diverse ways. First, it provides global data on the genotypic distribution of the virus including phylogenetic and phylogeographic evidence. Second, it justifies the relationship between the viral strain and course of disease. It makes us understand the role of human migration on the evolution of the virus [63, 64].

One of the three genotypes A, D, and E is predominantly circulating in Africa depending on the country. Genotype A is found in the Southern and Eastern regions, and genotype D is predominantly circulating in the Northern Africa region. Genotype E is more in most of SSA regions including Nigeria; this report excludes Uganda and Cameroon which are predominant with the A genotype [5, 60, 64, 65]. Genotype A is prevalent in Europe and Southeast Asia, including the Philippines [43, 66]. Genotypes B and C are predominant in Asia [67]; genotype D is common in the Mediterranean area, the Middle East, and India; genotype F is common in Central and South America [66]. Genotype G has been identified in Germany and France [67]. Genotype I has been detected in Laos, Vietnam, and China [68, 69], while the newest genotype J was identified in the Ryukyu Island in Japan [70, 71].

8. How HBV is diagnosed

HBsAg is the standard diagnostic marker used to screen for HBV infection in travelers. A positive test depicts an acute or chronic infection [2]. Quantifying HBsAg (qHBsAg) is also an essential tool in staging of HBV infection and predicting responses to HBV treatment. This tool depend on both viral and host factors,

such as genotype, preS/S gene variability, and hepatic disease stage [72]. The presence of hepatitis B envelope antigen (HBeAg) indicates that the virus is actively replicating and typically correlates with higher levels of HBV DNA. Immunoglobulin (Ig) G and IgM to hepatitis B core antigen indicates either that the individual has previously been infected or has an ongoing infection. IgG anti hepatitis B core (IgG anti-HBc) will often persists for life. The presence of anti-HBs shows that the individual has obtained immunity either from infection or vaccination [3, 6].

Touching upon the technical procedures behind the tests, tests for serological markers are carried out using different techniques, based on resources availability. Chemiluminescent microparticle immunoassay (CMIA) is one of those qualitative tests that detect the viral antigen in blood or serum. The technique has a high specificity and sensitivity and is based on the antigenic features (e.g., HBsAg or HBeAg) binding to commercially synthesized antibodies (anti-HB) with chemiluminescence [73]. The light produced in a chemiluminescent reaction can be measured. This method is more sensitive than the enzyme-linked immunosorbent assay (ELISA) [73].

Polymerase chain reaction (PCR) is an advanced technique to detect HBV. It amplifies the nucleic acid and greatly enhances the amount of DNA [3]. This method can qualitatively or quantitatively detect the amount of HBV DNA in patients' specimen, which reflects the replicative condition of the virus. To monitor and manage HBV infection, then a quantitative detection method is the technique of choice [73]. ALT levels are measured to help determine liver inflammation. ALT is an enzyme that is normally found in the liver, but also present in other body tissue, that is discharged into the circulation system as a consequence to hepatocellular injury [26]. ALT plays a role in characterization of HBV infection phases in synergy with HBV DNA [74]. Different noninvasive diagnoses such as aspartate aminotransferase (AST), platelet ratio index (APRI), and transient elastography (FibroScan) still exist. APRI is an index to determine the hepatic fibrosis based on a formula derived from platelet and AST concentrations [3]. FibroScan measures grade of liver fibroses through the detection of liver stiffness. Both methods are recommended by WHO to evaluate cirrhosis presence, but while FibroScan is preferred in a context where availability and cost is not an issue, APRI is used in settings with limited resources. Liver biopsy has been used to assess degree of necroinflammation and fibrosis degrees. However, the method has diverse demerits and constraints [6, 75].

9. How HBV infection is prevented and controlled

All travelers should be screened for HBV infection markers, so that they will not be at risk of acquiring the virus during stay [74]. Recently updated guidelines also recommend that pregnant women with chronic HBV be referred to a specialist and considered for HBV treatment to further reduce the chance of transmitting the virus [3]. In infants born to HBsAg-positive mothers, the risk of mother-to-child transmission is significantly greater if the mother is positive for HBeAg, has a high viral load, and/or is infected with HIV [33]. Such infants should be given both vaccine and HBIgG (0.5 ml) within 12 hours of delivery. The infants should be evaluated for HBsAg, anti-HBs, and anti-HBc at age 12 months. The presence of anti-HBs depicts vaccine-induced immunity, and detection of both anti-HBs and anti-HBc shows immunoprophylaxis-modified infection, whereas the presence of HBsAg indicates prophylaxis failure [15, 76, 77].

Individuals who have not received the HBV vaccination and are exposed to the virus (through needle stick injury, splashing, or sexual exposure to partners

infected with the viral agent) should be vaccinated with HBIG (0.04–0.07 ml/kg) as soon as possible after exposure. Immunization for the newborn babies should start immediately with the initial shot given at a site that is not similar with that for HBIG; an accelerated four dose immunization schedule (0, 1, 2, and 12 months) is required in the maternal-fetal transmission scenario [8, 77]. HBV can also be prevented by avoiding contact with contaminated blood and blood products and unprotected sexual exposure. Using condoms has also been shown to reduce the chance of sexually transmitted infections [8].

10. Immunization program for travelers

Several reasons why people did not opt for pre-travel vaccinations include traveler's pre-knowledge regarding the prevention of diseases during overseas travel, the limited number of healthcare settings that gives immunization, and that some countries have not yet approved the number of vaccines a traveler needs [9, 31].

There are commercially hepatitis B vaccines available currently, for example, recombinant HBV vaccine (Engerix-B®, GlaxoSmithKline, and Recombivax HB®, Merck & Co., Inc.) and the HAV and HBV combined vaccine (Twinrix®, GlaxoSmithKline) [78]. The complete HBV vaccination requires three shots of vaccine. The normal timeline of the three intramuscular injections is to have the second and third injections given 1 and 6 months after the first dose. An accelerated schedule (doses on days 0, 7, and 21 and then a post-travel dose at 12 months) might be required if there is an inadequate time for immunization prior to travel [79, 80]. An HBV vaccine can also be used to treat persons who have been exposed to the virus, in order to prevent disease development [31].

The prevalence of HBV differs between countries and regions, and therefore the number of persons acquiring protective immunity from a previous HBV infection also changes. Therefore, the recommendation of its vaccination should be hinged on likelihood of infection during travel and evidence of previous immunization or recovery from previous infection [74]. In those travelers without evidence of previous HBV immunity, HBV vaccination is recommended in those with HBV exposure risks and traveling to HBV endemic regions [78]. The CDC has recommend HBV vaccination to all persons without evidence of immunization before traveling to areas with intermediate and high prevalence of chronic hepatitis B and, irrespective of the traveler's destination, and based on the traveler's potential risky activities and exposures [11, 81]. High-risk activities might include unprotected sex with a new partner, getting a tattoo or piercing, or having any medical procedures like surgery [11, 81]. Studies have reported that only 19% of all American travelers and 30% of American travelers planning high-risk activities had received a completed HBV vaccination before departure irrespective of the recommendation made by the CDC [79]. This finding is in consonance with information from Europe that only 15% of international travelers to HBV endemic regions receive a completed HBV vaccination before travel [79]. There is often a very low immunity of HBV to travelers from low endemic regions and those born before the EPI schedules [82, 83]. Obviously, there are no recommendations for HBV serologic examination of international travelers currently. This might be because of the large population of international travelers, thus making it impossible to screen all for the virus. Reports have it that only 3.4–3.9% of the population in low endemic countries will have evidence of the HBV serologic markers prior infection [82, 83]. Vaccination of those populations should be considered when long-term travel is arranged to countries where HBV prevalence is intermediate or hyperendemic [31].

11. Treatment of HBV infection

There are several antiviral treatments available for chronic HBV infection, and everyone with chronic HBV should be linked to care, considered for treatment, and checked for liver damage and liver cancer regularly [84]. Therapy of HBV reduces the amount of virus in the system and lowers the chance of developing to serious liver disease and liver cancer. However, most people cannot be cured of the viral agent, and as such therapy is recommended to continue for life [85, 86].

Worthy of note is the fact that there are currently two main antiviral drugs for the treatment of chronic HBV infection [87]. They are nucleos(t)ide analogues (NA) and interferon (IFN) including normal IFNs and pegylated IFNs (Peg-IFNs). NA gives a direct antiviral effect by stopping DNA polymerase. It is usually given orally. There are six types of NAs as approved for treatment of HBV by the WHO: Lamivudine (LAM), Adefovir (ADV), Telbivudine (TBV), Entecavir (ETV), Tenofovir disoproxil fumarate (TDF), and Tenofovir alafenamide (TAF). IFNs, especially the Peg-IFNs, have a suppressed antiviral effect than the NA therapy, but its persistent effect can be achieved with a finite therapy. It is usually given via subcutaneous injection. There are reports of combination therapy of NA + NA and Peg-IFN + NA [86, 87].

There are serious ongoing clinical trials for the development of more effective treatments and a cure for HBV infection [3, 6].

12. Way forward in curbing HBV as a traveler's infection

12.1 Early screening and treatment

Early screening and treatment will help mitigate frequent transmission of the viral agent and curb morbidities and mortalities in infected persons [85]. The first line should be to give the exact medical advice and start antiviral treatment, if available. Sadly, undergoing this step is often a problem in developing regions where there is lack of access to good healthcare facilities, and antiviral treatment is often exorbitant [6, 86].

12.2 Advocacy of immunization exercise

Advocacy of immunization exercise for HBV infection should be key in eliminating the viral agent worldwide which is central to WHO's agenda [6, 10]. To maximize implementation of the WHO agenda, provision of technical guidance and support to reduce transmission of the disease such as adhering to safer blood transfusion and disposable needles among others. The virus vaccine is very effective in preventing disease progression. It has been reported that only 27% of newborn babies had receive a birth dose of hepatitis B vaccine globally [86]. Birth dose vaccination of the viral agent is fundamental to halting mother-to-child transmission as late immunization is not fully effective in destroying the chain of mother-to-child transmission. Coordination between maternal health services and immunization should be effectively established [88].

12.3 Self-protection measures

Self-protection measures are one of the pre-travel counseling given to potential travelers to HBV and other blood-borne pathogen endemic regions [7, 8, 43]. Persons should be guided from contaminated items or equipment used in medical

or cosmetic procedures, blood products, injection drug use or any exercise that involve piercing the skin or mucosa, or unprotected sexual activity. Travelers should be advised properly against the use of equipment that is not properly sterilized or disinfected on medical or beautification tourism (such as tattooing or piercing) [8]. The viral agent can be disseminated to others if tools are not sterile or if personnel do not follow proper infection control protocols [89].

12.4 Educational awareness

Educational awareness and programs that will be targeted towards HBV awareness lowers transmission of the infection [90, 91]. There is a large pool of persons suffering from chronic HBV infection in Sub-Saharan Africa that are not aware of their situation. Educational awareness and implementation of local health measures are pertinent in eradicating the scourge of the infection [2]. These should include training local communities on how to perform safe blood transfusion and establishing efficient screening methods for transfusion of donated bloods. Health education programs should include administration of safe injections (intravenous drug users and healthcare settings) and implementation of safer sex practices (especially the use of condoms). More so, occupational safety trainings should be advocated for health workers [92]. It is also worthy to note that effective communication and emphasizing the role of the virus testing, follow-up visits, and monitoring therapy will help eliminate HBV infection [43].

12.5 Socioeconomic condition enhancement

Enhancing the socioeconomic conditions of a particular population has shown reduction in the rate of HBV infection. Government and non-governmental organization (NGO) bodies should ensure that there is a universal access to portable water and encourage food handling that is safe and hygienic [92]. They should also implement good sanitation systems. Safe disposal practice of medical waste should be advocated in the health settings [43].

13. Conclusion

There are ongoing development of two novel anti-HBV drugs, namely, Besifovir and Myrcludex-B that will soon be in the market [3]. The infection is one of those preventable infections by immunization in travelers. Therefore, travelers should often be screened and immunized for HBV infection before traveling to endemic countries because immigrants and/or travelers who have the viral infection pose a great risk of HCC and death. They as well serve as transmitters of the viral agent to those not infected when returned from travel. Continuous health surveillance and strict checking of migrants to ascertain previous vaccination evidence will go a long way in mitigating the infection across travelers. There is no single measure strong enough to curb viral hepatitis epidemics, but having a global vision and implementing multiple strategies will go a long way towards eliminating HBV infection and other global disease burden in 2030.

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Marketing Cultural Resources as a Tourism Product

Amare Yaekob Chiriko

Abstract

This chapter presents the marketing aspect of cultural tourism resources by taking evidence from Sidama, Southern Ethiopia. It identifies the major cultural tourism resources of Sidama, and assesses their market readiness state through the lenses of tourists. It also presents the profile of cultural tourists visiting endowments in Sidama using descriptive research approach. Brief introduction of marketing approaches to cultural tourism and a review of literature on cultural tourism products and cultural tourists is also provided. As to its significance, the chapter offers analysis of cultural tourism assets and their marketability as a tourism product in a developing destination context. Practical implications for sound cultural tourism marketing are also discussed in the chapter.

Keywords: cultural tourism, cultural tourism products, marketing, Sidama, tourists

1. Introduction

Tourism has experienced unprecedented growth over recent years and in 2020, international tourist arrivals are expected to exceed 1.6 billion [1]. Cultural Tourism's popularity is continuously increasing on a faster pace than most of the other tourism segments, faster than the growth rate of tourism worldwide [2]. Because culture is a key tourism asset [3]; the unique cultural offer provided by destinations has become a major driver and motivation for visitors worldwide, inspiring millions of tourists to visit new destinations each year [4].

According to [5], cultural tourism includes the unique features of a place which reflect its culture, history, or environment, and by their experiential nature, promote the rich tapestry of cultural traditions, ethnic backgrounds and landscapes. A cultural resource can be defined as any cultural feature, tangible (material) or intangible (non-material), available within a country, region or area, which makes a positive contribution to cultural tourism [6]. These resources are not cultural tourism commodities unless they transform themselves into products that could be consumed by tourists [7] because, in a marketing concept, a product is considered as anything that can be offered to a market for attention, acquisition, use or consumption that might satisfy a want or need [8]. Hence when culture as a product is brought into transaction in the market, it therefore is useful to analyze what is transferred to the consumer by the seller [9].

Although cultures exist independently and for reasons other than tourism, there is a clear role for tourism in the process of expressing culture and cultural difference [10]. Because marketing is a social and managerial process by which individuals and groups obtain what they need and want through creating, offering and exchanging

the products of value with others [8]; the concept of product scope is extended to include anything, which is capable of satisfying a need. Culture as product would be consumed to satisfy the enhancement of knowledge need of tourists, who own the product culture during their experience of immersion in a cultural context [9].

Hence, cultural tourism product can be defined as anything that can be offered to tourists for participating in cultural tourism to satisfy their cultural needs and wants by using the cultural tourism resource as basis [5]. According to [11], the cultural tourism product can be defined as a composition of the core product and the additional product, being the general tourism product elements and the related tourist services (general tourist facilitates and services; and transportation infrastructure). In order to attract more tourists, cultural tourism providers always position their products uniquely by focusing on their core cultural element, whose elements include cultural tourism destination, cultural environment or cultural events which involve the special cultural themes and unique characteristics [7].

Though the emergence of cultural tourism as a social phenomenon and as an object of academic study can be traced back to the surge in post-World War 2 leisure travel, modern cultural tourism has only been studied in detail since the 1980s [12], after being recognized as a tourism category by the ICOMOS Charter of Cultural Tourism in 1976 [13]. Limited interest had been shown by academics, particularly in the social sciences, regarding the relationship between tourism and cultural heritage. However, over recent years, the inter-relationships between tourism and culture have attracted considerable scholarly attention [14].

Although the concept of culture appears to be complicated and multifaceted, it has been examined in a number of academic disciplines [9]. According to him, though such disciplines as anthropology, sociology, philosophy and management have analyzed the relationship between tourism and culture as a symbiotic combination generating cultural products or commoditized culture, little attention has been directed to the analysis of the characteristics of culture from a marketing view when culture becomes a product.

The first organized cultural tourism survey was conducted by European Association for Tourism and Leisure Education (ATLAS) in 1991 when it launched transnational cultural tourism project in Europe [13], Since then, interest has been growing in cultural tourism studies focusing on analysis of profile and behavior of cultural tourists, covering several destinations across Europe, US and Asia. Especially in Europe, several research publications [15–17] have come up on national, regional and local level cultural tourism scenarios, using ATLAS survey as a springboard. In Asia cultural tourism was studied in the context of religious tourism [18] while it drew attention in Africa from heritage and indigenous perspective [19].

After conducting baseline research on inter-linkages between tourism and intangible cultural heritage, [4] urged policy makers and academia for further research on marketing of cultural products in order to foster tourism development through the promotion of cultural heritages. Furthermore, [1] points to a number of areas of future cultural tourism issues including commoditization and marketing of culture. Out of global studies, research findings indicate that only gastronomy and culinary heritage are fairly well promoted by National Tourism Authorities (NTAs), while products based on oral traditions or knowledge of the universe require more attention [4].

This study focuses on the marketability of cultural tourism resources of Sidama. Sidama people are among the 86 nations and nationalities in Ethiopia, with their own culture and tradition. They their own unique administrative system called *Luwa* which plays an important role in solving every aspect of problems in the nation. The people of Sidama also have their own date counting method, calendar. The new year day, which is decided by traditional astrologers called *ayanto,* is called

fiche, and was registered in 2015 by UNESCO as intangible cultural heritage. The new year *fiche cambalala* is colorfully celebrated in the state capital Hawassa and other parts of the area [20].

In Sidama, the extent of turning cultural endowments into marketable tourism products has not been researched. Little research work exists regarding promotion, in local and international media, of the cultural resources of local communities. Though *fiche cambala*, Sidama's new year, is registered by UNESCO, the intangible products of rural lifestyle, music, dancing, local status, and other customs have not been assessed in academic enquiry with regard to their market readiness to end users and the profile of cultural tourists consuming them. Tourism related research works conducted in Sidama and its surroundings have focused on identification of cultural potentials; and conservation of heritages [21]. These studies, while capitalizing on exploratory aspects tourism and related sectors inquiry, have failed to specifically address culture and cultural tourism from a marketing perspective. This study was conducted to partly fill the gap apparent in this regard. The study objectives were two-fold: (1) to assess the market readiness of cultural tourism products of Sidama; and (2) to identify the major cultural tourists consuming cultural tourism products of Sidama.

2. Literature review

2.1 Cultural tourism products

The tourism product is complex as the varied elements of service, hospitality, free choice, consumer involvement, and consumption of experiences must be actualized in some way [22]. According to [23] people do not buy products for the sake of the product itself, they buy them for the benefits they provide or the problems they solve. Hence any discussion of products must be made from the perspectives of consumer.

From marketing perspective, the term product is defined as anything that can be offered to a market for attention, acquisition, use or consumption that might satisfy a need or want [24]; and by applying this to tourism context, [5] defined cultural tourism products as anything that can be offered to tourists for participating in cultural tourism to satisfy their cultural needs and wants by using the cultural tourism resource as basis". According to [11], the cultural tourism product is composed of two products. First there is the core product, which is the major cultural tourism supply (monuments, cultural events, local culture and etc.) and the related specific cultural tourist services, such as information and education. Secondly there exists the additional product, which includes the general tourism product elements and the related tourist services (general tourist facilitates and services and transportation infrastructure).

Further extending the definition provided by [11, 23] conceptually viewed products as having three levels: a core product which specifies the benefits of use, a tangible product which transforms these benefits into something to be consumed, and an augmented product that adds extra value.

According to them, the core product is the most important feature for it describes the core benefit or solution provided by its use. As they contend,

> *"It answers the questions of 'what personal needs is the product really satisfying' and 'what benefits does it offer ME'? …… The appeal of adopting a marketing approach is that the core problem being solved can vary widely, even for largely similar products. This variation enables different providers to position their product uniquely according to the benefits being promoted." ([23], p. 155).*

The tangible product according to them represents the physical manifestation of the core product that facilitates the need satisfaction. They give examples detailing,

> *"It is the historic fort that is entered, the battlefield site that is visited, the museum that is seen, the cultural tour that is joined, or the festival that is attended. The tangible product is not the core experience provided. It is the means by which the core need can be satisfied." ([23], p. 155).*

The final level in their classification constitutes augmented products, which provide additional features above and beyond the tangible product that add value and facilitate easier satisfaction of the core need. It could be something such as a free shuttle to and from the hotel, the provision of umbrellas for rainy days, a souvenir at the end of a tour, or a money back guarantee.

Slightly different approach developed by [9], which is called 'product culture model' views cultural tourism products in terms of four elements. These are *essence of product*, which the consumer receives to fulfill a need; *real product*, which encompasses those features that distinguish a product from those in the market; *processed real product,* where marketing interventions via promotional materials are done; and *additional product*, which explain the additional benefits and services added to the core one. At the heart of the model is *real product*, which encompasses the five product lines: tangible symbolic representations, intangible symbolic representations, staged symbolic representations, replicated symbolic representations, and transferable symbolic representations.

It can be concluded that though several cultural tourism product definitions and models exist [19], almost all of them place culture at the heart of the models with learning being the major core product.

2.2 Cultural tourists

Cultural tourists are an easily recognizable market niche [25]; and in wide body of literature [23, 26–29], they are highly regarded as visitors who tend to stay longer, spend more and travel in low seasons. In addition to this, they are also older, better educated, and more affluent than the traveling public as a whole [13] where women constitute a significant share. Furthermore, cultural tourists join in more activities than other tourists [26]. However, according to [30], these characteristics do not reliably represent cultural tourists; and as a result of this, there are several cultural tourism typologies [12].

The majority of cultural tourist typologies that exist these days are either adopted or elaborated versions of framework developed by [23]. This typology, which was tested in Hong Kong in 1999 and adopted widely by governmental and quasi-governmental agencies, identifies five types of cultural tourists based on centrality of trip purpose and depth of experience at destinations. First there is the *purposeful cultural tourist* to whom cultural tourism is the primary motive for visiting a destination, and the individual has a deep cultural experience. Then they identified the *sightseeing cultural tourist* to whom cultural tourism is a primary or major reason for visiting a destination, but the experience is shallower. The *serendipitous cultural tourist* is the one who does not travel for cultural tourism reasons, but who, after participating, ends up having a deep cultural tourism experience; while to the *casual cultural tourist, cultural* tourism is a weak motive for visiting a destination, and the resultant experience is shallow. Finally there is the *incidental cultural tourist,* who tourist does not travel for cultural tourism reasons but nonetheless participates in some activities and has shallow experiences. They concluded that most cultural tourists at a multi-product destination can be classified as casual or incidental; and

that the share of purposeful cultural tourists at most places is quite small, meaning products must be geared for a tourist seeking a shallower experience.

These categorizations of cultural tourists reflect the difference between formal and more informal modes of learning [12]. This classification scheme by [23] is more comprehensive in that it incorporated deeper discussions on cultural tourist typology efforts that had been conducted previously [31–32] who entirely emphasized on motivation aspect. [31] for example identified three types of cultural tourists: the genuine cultural tourist, who chooses a holiday because of its cultural opportunities; the culturally inspired tourist, who makes a once in a life visit to a specific site or attraction; and the culturally attracted tourist, who would like a few cultural attractions at destination they choose for other reasons. This classification was more or less similar to ATLAS study that identified 'specific' and 'general' cultural tourists [26, 33].

3. Methodology

Sidama Region is one of the 14 administrative states in Ethiopia. The region covers a total area of 72,000 square kilometers and is located in southern hemisphere around Equator in Horn of Africa at 6°14'N and 7°18'N latitude and 37°92'E and 39°19'E [20]. With the population of over 4 million inhabitants, the administrative structure of Sidama region constitutes 21 *woredas* (districts), 532 rural *kebeles* (counties) and 4 town administrations. With over 592, 539 households, the region has a population density $452p/km^2$, which makes it one of the mostly densely populated areas in the state [20]. The cultural and ethnographical riches of Sidama make it attractive to academic and industrial inquiries and this is the major reason the researcher was drawn to the study area (**Figure 1**).

This research adopted a descriptive research design employing a survey-based quantitative research approach. This is because quantitative approaches are common in cultural tourism research and have been in use since [34] work on the motivations of American cultural travelers. As [11] contend, the practice of conducting surveys of cultural tourists is well established in destinations around the world. This is mainly because of the advantages surveys provide in studying visitor activities, motivations, behavior and expenditure patterns. Surveys are also a useful means of monitoring trends over time. Several surveys in cultural tourism involve visitors and in most cases, foreign tourists [11].
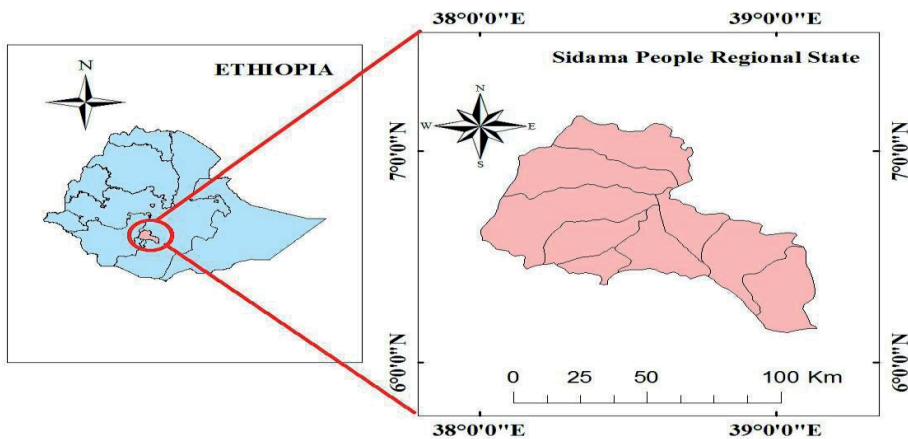

Figure 1.
Map of Sidama region, Ethiopia.

Because including whole population in surveys is impossible or unfeasible due to factors associated with data management and cost [11], taking samples becomes a necessity. As the subjects of this study were international tourists to Sidama Zone, convenient sampling method was employed to target them. This was done with the view to catch cultural tourists as representatively as possible given the limited international visitor flow the area. Across the survey, questionnaire was administered to 375 international tourists who visited Sidama zone during the study period. The sample size of was determined by applying the [35] formula, $n = N/1 + N(\alpha^2)$; Where, n = Expected Sample Size, N = Population Size and α = Level of Confidence Interval 0.05 or 95% level of confidence, out of 8100 international tourists who visited Sidama in 2015/16 based on the data obtained [20].

The questionnaire was designed either as an interviewer-assisted or self-completion one; and questions were translated in to German and French in addition to original English versions. International tourists were approached for data collection after trips to cultural tourist villages and other cultural attractions in Sidama and on *fiche cambalala* festival. The data collection was conducted between January and October 2018 as these months embrace most cultural festivals which attract international tourists [20].

Data analysis was conducted on 302 questionnaires after 7 of them had been excluded because of partial completion out of a 309 collected papers. The data was analyzed using statistical Packages for Social Sciences (SPSS) version 22; and tables have been used to present outputs of processed data.

4. Results and discussion

4.1 Demographic profile of tourists

The inbound tourism market to Sidama is largely comprised by German and American tourists which together account for about 48% of the total sample. This is because Germany and USA are the leading tourist generating countries internationally [1] and according to Ministry of Culture and Tourism, Ethiopia also receives tourists from these countries in bulk [36]. Ethiopian Diaspora who constitute a significant portion of the county's inbound tourism [36] largely live in these countries. Hence the same logical proportion is represented in tourist flow to Sidama. About 29% of tourists are from European countries other than Germany. Tourists in this group include nationals from Belgium, Denmark, France, Greece, Hungary, Netherlands, Norway, Slovakia, Spain, Sweden, Switzerland, Turkey and United Kingdom, which is a manifestation that traditional powers of USA and Europe remain the main tourist sources for Ethiopia in general and Sidama in particular, as opposed to other mature destinations receiving tourists from emerging BRICS, Arab and other Asian markets.

The gender distribution in the survey showed that the number of females exceeds that of males. According to Silberberg [32], women constitute an important part of cultural tourism market and this works for Sidama, an area endowed with cultural riches [21]. The survey also agrees with [26] observation that older tourists prefer cultural sites than the youth and children. With increase in age, people's interest in culture increases prompting them to explore historic things and develop a greater understanding of the past [37] (**Table 1**).

Cultural tourists are better educated and more affluent than the traveling public [13]; and the same has been evidenced in the survey with about 71% of tourists attending graduate and/or postgraduate degree programs. This confirms the contention of [23] that there is direct correlation between education level and interest in such activities as cultural and heritage tourism. According to them, the desire to

Variables	(%)
Nationality (*n* = 302)	
Americans	26.4%
Germans	21.5%
Other Europeans	28.8%
Other Countries' nationals	23.3%
Gender (*n* = 302)	
Female	55.9%
Male	44.1%
Age (*n* = 302)	
<20 years	1.3%
20–35 years	14.2%
36–50 years	20.1%
51–65 years	54.5%
>65 years	9.9%
Educational level (*n* = 302)	
High school or less	12.9%
Technical and vocational training	16.2%
College degree	46.6%
Graduate or postgraduate degree	24.3%
(Planned) length of stay in nights (*n* = 302)	
2 or shorter	87.5%
3–5	9.6%
Longer than 5	2.9%

Table 1.
Respondent demographics.

learn about things beyond one's own backyard, to learn about alternative lifestyles and cultures, and to experience different things is directly related to educational levels. As illustrated by [38], cultural enrichment and self-enlightment inspire a better-educated global public. However, findings from the survey appear to be at odds with tourism literature that suggests cultural tourists tend to stay longer at a destination. Only about 3% of them have length of longer than 5 nights, which could be explained by lack of developed festivals and cultural routes in Sidama [21].

Tourist demographics in the survey reveal the exact resemblance of inbound visitors of Ethiopia in terms of nationality, gender, age, educational level and travel experiences.

4.2 Cultural tourism products of Sidama

This section presents the major cultural endowments in Sidama zone which are developed to a certain extent in order to be consumed by visitors in general and cultural tourists in particular. Discussion of major cultural attractions and perceived level of market readiness by tourists is provided. Survey and the resulting narrative discussion is based on sources from promotional booklet published by [20].

4.2.1 Fiche cambalala festival

In past, it is believed that Sidama nation had different political, cultural and ideological structure of its own, one of the major manifestations of this being *fiche cambalala* [20]. According to the zone's department, *fiche cambalala* is a new year celebration and stands out as one of the most interesting holidays of Sidama. As it marks change of the nation's calendar, it is celebrated in great feast and community rituals. All community members involve in washing away the old year by recipro-cal change of meals in hamlet. The festival, which lasts nearly for two weeks, is believed to have been celebrated for about 2000 years and features the making and playing of cultural songs; dancing and chanting on various market places [21]. *Fiche cambalala* is often performed in two levels: household and community level. Household level celebration involves feast with neighbors and beatification of girls, boys and the elderly by home-made jewelries. At community level, locals, led by the elderly called *cimeye,* head to Gudumale Park in Hawassa to perform thanksgiving ceremony.

Local astrologers called *ayyantos* determine the date of new year by investigating the positions, movement, color, volume, directions of moon and stars. This is often done one month ahead of the festival as community elders begin month-long fast-ing. Declaration of the first day of first day of New Year (*fiche*) will be announced when the *ayantos* see close approximation of the moon to five constellations of stars with defined movements in relation to each other and to the moon [20]. The celebration at Hawassa Gudemale Park features the eve (*fiixaari hawarro*) and first day of the New Year (*cambalala*) where horsemen; boys, girls and the elderly appear decorated with jewelleries. Once the festival is over, there comes post *cambalala* event featuring elders' dancing on "*shashiga*" day and girls playing "*hore*" dance.

The major finding from the survey is that *fiche cambalala* festival, Sidama's new year celebration stands out cultural icon of the area (see **Table 2**). With a mean value of 4.61, *fiche cambalala* is judged by tourists as the most market-ready attraction of Sidama zone. Possible explanations for this include its registration in UNESCO under intangible cultural heritage in 2016 and the associated level

Statement	M	SD
Fiche cambala festival	4.61	.78710
Sidama Hanafa cultural tourist village	3.77	.81235
Cultural foods and drinks	3.11	.82442
Rural lifestyle	1.25	.93122
Traditional Sidama house	2.77	.82307
Sidama music	1.54	.88552
Sidama dancing	3.04	.82480
Cultural ceremonies (wedding, rituals)	1.23	.92338
Sidama cultural centre	2.33	.88552
Gudumale park	1.47	.97074
Cultural clothes and other souvenirs	1.79	.95502
Eco-lodges in Sidama zone	2.99	.84758
Enset brushing	3.71	.79610

Table 2.
Market readiness of cultural tourism products.

of planning and marketing to the festival at varying levels. It is common among destinations that UNESCO registered heritages often attract more tourists and generate higher spending than non-registered counterparts [1].

4.2.2 Sidama-Hanafa cultural tourist village

This tourist village is located 325 km South East of Addis Ababa, the nation's capital, around Yirgalem town. The village was set up for community based tourism by Sidama Communication, Culture, and Tourism Department; and features specially designed tourist facilities that cater to benefit women, youth, and the physically handicapped section of society in the area. The village boasts such services as production and processing of Sidama cultural foods; traditional coffee ceremony; coffee collection; village trekking; bird watching; and hot and cold mineral spring water facilities. According to the department, the village provides tourists with participatory activities where they can take part in coffee collection, production and serving; and water fetching from nearby streams. Tourists can also experience guided excursions of nearby localities [20]. A mean value of 3.77 indicates that the village is among the tourist spots of the zone and its market readiness state relatively matches tourists' judgment of a developed cultural tourist product. This confirms the contention that in cultural attractions of developing countries, products which offer collective and one-stop experience often get market appeal advantages over those with single attraction resources [3].

4.2.3 Sidama cultural house

Like many other traditional houses in Ethiopia, Sidama cultural house features two types of housing construction: highland and lowland houses [20]. There exists no much difference in house set up, style and interior design, except for the purpose they are built for (lowland houses are built with much ventilation openings). While both houses have *heelicho* (a pillar at the center), the highland house (*sheeka*) features the wall and its roof is constructed from the ground to the top, with the splinted bamboo wafted together like a basket. The lowland house has wooden walls with roofs thatched from the top to the ground with grass and its waft bamboo is wafted with sheath called "*honce*" [20]. With a mean value of 2.77, traditional Sidama house exhibits a modest level market readiness as a cultural product in the eyes of international tourists. Because the ultimate purpose of cultural tourists is learning [9], tourists prefer to visit tangible heritages out of which they make learning of concepts like construction. Traditional house of Sidama stands out to be a good example of this sort at the zone.

4.2.4 Built cultural resources

Attractions other than *fiche cambalala* festival, the Hanafa-Cultural village and Sidama traditional house stand at varying levels of market readiness stage as perceived by tourists. Among these are built resources which include Sidama Cultural Centre and Gudumale Park. Sidama Cultural Centre boasts resources in similar standings with Hanafa cultural tourist village; and exhibits collection of traditional costumes, cultural and historical ornaments. Currently the center serves as a mini-museum of Sidama. It lies on a huge park featuring statues of the zone's heroes who lost their lives fighting for independence and freedom from ethnic oppression. The center also has an exhibition and bazaar staging corridor and a meeting hall decorated by paintings reflecting Sidama cultural clothes and other traditional riches [20]. The Centre does not match a minimum cultural tourist product state of

market readiness as perceived by the tourists. An arithmetic mean value of 2.33 is a good indication here. Another tangible attraction belonging to this category is the Gudumale Park. An extensive park at the north-western shore of Lake Hawassa, Gudumale is the main venue of event staging for *fiche cambalala* festival [20]. It is also fenced with colorful walls and colons which demonstrate the different jewelries worn by girls, boys and the elderly in Sidama. Gudumale Park often hosts large-scale religious and sporting gatherings [21]. However, with a mean score of 1.47, it is rated not ready for market to be consumed as a cultural tourism product.

4.2.5 Countryside cultural resources

This category of resources includes traditional music and dancing; cultural foods and drinks; and traditional dresses. As product development and marketing normally go hand-in-hand, poor efforts exerted from development stage appear to hamper the amount and volume of marketing works in Sidama [21] and hence the result is poorly marketed countryside resources. Traditional music for example falls among these poorly marketed components. Despite a considerable growth and spread in the volume of production and promotion of authentic music in Ethiopia in general and Southern Ethiopia in particular [21], their packaging does not match the current demands of cultural tourists. Traditional dances (3.04), which are often performed and presented in *fiche cambalala* festival and other cultural events, seem to be at better market readiness than the music (1.54). This could be due to the participatory nature of dancing activities and their role in helping tourists get immersed in the culture being visited [39]. Other resources under this category include traditional foods and drinks which are served mostly in traditional restaurants in Hawassa and the surrounding towns. While dishes like *Bursame*, *Chukame* and *Omolcho,* all products of *enset* (false banana leaf common in Southern Ethiopia), are widely available in restaurants in Hawassa, traditional drinks are seldom served in bars. The short length of stay coupled with absence of tour packages involving cultural nights led to this modest level market readiness of traditional foods and drinks, which are rated with 3.11 mean score. Cultural dresses and other souvenirs do not make up a major part of tourist itinerary in Sidama, and mean value of 1.79 shows their market readiness as a tourism product is far below tourists' expectation. The presentation and perception of cultural clothes and souvenirs as icons of culture in developed destinations [33], is not a case in Sidama.

4.2.6 Intangible cultural resources

Turning the discussion to the intangibles category, we find Sidama languages, arts and literature, which normally draw attention of learning-minded tourists [33]. These attractions, which are very difficult to measure and quantify [25], are regularly presented in Annual Sidama Cultural Symposium held every year in Hawassa. This resource appears to be of modest market readiness stage as a cultural tourism product with a mean value of 3.03.

Rural life style and cultural ceremonies are also among attractions at low market readiness state as cultural tourism products. Because trips to poorly marketed destinations in developing countries often avoid deep authentic experience of local and aboriginal communities [33], tourists end up getting only superficial holiday experience and hence their knowledge of rural life and other life ceremonies is limited [25]. In slight contrary to this result, brushing of *enset*, which is common and day-to-day household activity in southern Ethiopia, has a mean score of 3.71 and is in relatively better state of market readiness. Because cultural tourists demand blended products, they seek to experience demonstrations of traditional life style

by visiting lodges and eco-lodges, which present commercialized versions rural life. For example market readiness state of eco-lodges found in Sidama, has a mean score of 2.99, reflecting a moderate tourist perception and impression. Lodges like Aregash Lodge and Blen Lodge, found around Yirgalem town, attract a reasonable share of cultural tourists to Sidama. In a similar accord, cultural ceremonies like weddings, funerals and rituals remain at poor market readiness level, with a mean score of 1.32. these ceremonies, which are often left out of tourist itineraries and are often organized to be presented to and performed before tourists, are thought lead to commercialization and acculturation of authentic traditions of societies [19].

To conclude, the majority cultural tourism attractions of Sidama are found at low level of market readiness state to be consumed by tourists as cultural products. Though few attractions including *fiche cambalala*, cultural icon of Sidama; Hanafa cultural tourist village; and *enset* brushing have relatively better score of market readiness, they merely constitute one-third of the areas' tourist appeal. Most attractions ranging from rural life to cultural ceremonies; from music to rural lifestyle and traditional ceremonies; from cultural centers and parks to clothes and souvenirs all exist in poor state of market readiness. In between these two extremes lie moderately marketed attractions like cultural foods and drinks, and Sidama dancing.

4.3 Cultural tourists to Sidama: profile

The profile of cultural tourists was analyzed out of a survey which was mainly adopted from cultural tourist typologies model developed by [23]. To suit it into the context of Sidama as a cultural tourist destination, few variables related to visitor attributes were also incorporated. The first part of tourist profile presents the proportion of each cultural tourist component while visitor attributes as a cultural tourist are portrayed in the second section (see **Table 3**).

Trip purpose and depth of experience	(%)
Visiting Sidama cultural resources is my primary trip purpose; and I ended up having deep cultural experience	15.23
Visiting Sidama cultural resources is my primary trip purpose; yet I ended up having shallow cultural experience	22.51
Though culture was not my primary reason of visiting, I ended up having deep cultural experience in Sidama	3.97
culture was not my primary reason of visiting; and I only had shallow cultural experience in Sidama	33.77
Culture was not my primary reason of visiting; and I did not visit any culture related experience at all in Sidama	24.50
Total	100
Attributes of visitors as a cultural tourist	**Mentioned by (%)**
Consider myself as being on culture holiday (while coming to Sidama area)	35.43
Tasted/had Sidama cultural food at traditional restaurants or somewhere	32.45
Tasted/had Sidama cultural drinks at traditional restaurants or somewhere	43.04
Learned few Sidama language words/phrases out of my trip	17.88
Took part in *fiche cambalala* festival	44.70

Table 3.
Cultural tourists to Sidama.

Study findings showed that the *casual cultural tourists* (33.77%), to whom cultural tourism is a weak motive for visiting a destination, and the resultant experience is shallow, make up the largest part of visitors. They are followed by the *incidental cultural tourists* (24.5%), *who* do not travel for cultural tourism reasons but nonetheless participate in some activities and get shallow experiences. The share of *serendipitous cultural tourists,* those who do not travel for cultural tourism reasons, but who, after participating, end up having a deep cultural tourism experience, is 3.97%. Simple summation of these three typologies of tourists yields the finding that about 62% of international tourists have trip purposes other than culture while visiting Sidama. They are either motivated by natural riches of the area or are on a package tour covering cultural visit to South Omo tribes, the biggest recipients of Ethiopia's cultural tourism [36]. As [40] contends, this group includes people traveling to a destination without a plan to visit a heritage site or any other cultural offering, but do so when some other factors force them to cultural visitation.

The rest 38% of tourists surveyed indicated that motives related to cultural tourism played an important role in visiting Sidama. This figure is closer to the percentage of tourists who consider themselves as being of culture holiday while visiting attractions in Sidama (35.43%). These tourists fall in either the *sightseeing cultural tourists* (22.51%), whose primary purpose of visiting Sidama is culture, but who ended having a shallow experience of the destination; or *the purposeful cultural tourists* (15.23%), to whom visiting cultural resources of Sidama is their primary purpose of trip while enjoying deep level of cultural experience at the same time. These are people who are 'highly motivated' and travel to a destination specifically because of, for example, its museums, cultural landscapes, churches or festivals [40].

Though learning is a primary motive of cultural tourists in standardized destinations [9], problems of proper destination development and marketing in Sidama zone have appear to show an opposite figure. This is manifested in small number of tourists who learned few Sidama language words/phrases out of trip (17.88%); and who tasted cultural foods and drinks of Sidama. This is mainly due to the very short length of tourist stay in the area and the resulting shallow touring experience of attractions [41].

Findings from typologies of cultural tourists to Sidama area reveal two main conclusions. First over one-third of tourists to the area could be regarded as cultural tourists. But to the significant majority of them, cultural tourism plays no role in their decision to visit Sidama. In fact, the share of those tourists, to whom cultural tourism is the primary trip purpose and who have deep experience, is very low [42].

5. Conclusion

The current study has found that the inbound tourism market to Sidama is an undeviating reflection of Ethiopia's international tourism industry in terms of nationality and other demographic indicators. Except for length of stay, the variables of gender, age, and level of education conform to what the wider literature of cultural tourism depicts about tourists. Regarding marketability, the findings uncovered that most of cultural tourism products of Sidama exist at low level of market readiness. The few exceptions in this regard include *fiche cambalala* festival, Hanafa cultural tourist village, and *enset* brushing ceremonies. As far typology of tourists is concerned, cultural tourist flow to Sidama is largely characterized by holidaymakers to whom cultural tourism plays no role in their visitation decision making. As an opening inquiry in to marketability of cultural tourism assets in Ethiopia, the study provides significant theoretical and practical implications. From theoretical

point of view it analyses cultural tourism assets and their marketability as a tourism commodity in a developing destination context. Practically, study findings offer helpful inputs to governments and destination marketing practitioners in Sidama to make the cultural tourism resources of the area market-ready and learn profiles of tourists consuming them. Academia and future researchers especially in tourism, marketing and anthropology disciplines are encouraged to undertake thorough analysis into cultural tourism through, for example, segmentation of tourists, typologies of cultural tourism products; level of efforts exerted in product development and marketing in Sidama and Ethiopia at large.

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Notes

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Tourism was booming until 2019 when the COVID-19 pandemic hit. Since then, tourism and related industries have suffered from negative economic impacts. This book examines current challenges and opportunities in the tourism industry using case studies from different parts of the world. It also examines the challenges and obstacles faced by the tourism sector due to lack of environmental policies, high crime rates, and poverty.