The Externality and Sustainable Development Priority of Cross Border Tourism

* WERENFRIDUS TAENA, 1 MARCE SHERLY KASE, 1 FELISISIMA AFOAN

1 Universitas Timor, Kefamenanu, Indonesia
Correspondence author: werentaena5@gmail.com

Abstract

The purposes of this research are as follows: (1) analyze the externality of cross border tourism on sustainable development in Wini Subdistrict, Indonesia, (2) analyze priorities recommendations for sustainable cross border tourism development in Wini Indonesia. The study uses survey methods and data collections by means of observations and in-depth interviews with 20 respondents. Data analysis used is the Analytic Hierarchy Process (AHP) with three dimensions of development sustainability. This study finds that the externalities of developing cross-border tourism are economic (53.20%), social (31.20%), and ecological (15.60%). The economic externalities are positive, social externalities are divided into positive and negative, while environmental externalities are generally negative. The results of the analysis also recommend the development of the creative economy and investment in cross border tourism (52.20%), more professional and integrated tourism management between cross border tourism objects in Indonesia and Timor Leste (30.20%), and tourism development based on ecotourism (17.60%).

Keywords: Cross Border Tourism; Externality; Sustainable Development

Introduction

Globalization has implications for the development of tourism, including tourism in border areas (Cross Border Tourism). Suwena K and Widyaatmajaya IGN (2017) stated that the interrelationships between countries are the basis for planning the development of cross border tourism. Suartini NN and Utama MS (2013) define tourism development as a development activity related to the phenomenon of tourism to maximize resources in the form of capital, humans, and the nature of obtaining the maximum of tourism products namely goods and services. Tourism development can be operationalized in accordance with the results of the study by Bahiyah C et al (2018), namely infrastructure development and increasing tourist attractions to optimize tourism potential.

The development of border tourism through the development of complete and quality infrastructure is a show of a country's development (Sari UC and Rahman B, 2019). Wini as one of the main crossing gates from and to the Oecusse District of Republica Democrática de Timor Leste (RDTL) country has a lot of potentials to be expanded as a cross border...
tourism because it has several tourist objects such as Tanjung Bastian Beach, Wini Beach, and the Manufonu Mountains. Other tourism that is developing in Wini is culinary tourism and tourist attraction.

The externality of cross border tourism development in Wini, North Central Timor Regency on the economy, social and ecological aspect. Pramanik PD and Ingkadijaya R (2017) stated tourism development has an impact on the socio-cultural component as it stated by Sroypech S (2016), which is coherent with Butarbutar R and Soemarno S (2013) who found ecosystems are disturbed due to the lack and constraints of ecological and physical capacity. The different externalities (positive or negative) of tourism growth depend on the ecological and social-economic conditions of a region (Sheng L et al, 2017).

Economic externalities include changes in people’s livelihoods, increased economic growth, and equitable distribution of people’s income. Appropriately, Firdaus (2018) noted that economic impact comprises increased job prospects, community competitiveness, and better access to purchasing and selling products. It is feasible since there are job possibilities and opportunities to start new business. The externality of economy has also negative impact that may arise when developing a tourism destination, including increased costs of goods and services, regular expenses, more expensive of property, and the coming of the non-residences who take benefits of the village (Li SN et al, 2017).

The social externalities of the cross border tourism development include changes in social relations in society due to the process of association and dissociation, changes in social institutions, and reduced property rights of local communities to natural resources. Deery M et al. (2012) stated that environmental harm, societal model, values, and norms are all impacted by sociocultural factors. In line with this, Enemuo et al. (2012) found that the sustainability of socio-cultural lives of host communities, and also their social and economic lives were significantly impacted by tourism development. Firdaus (2018) also stated the construction of cross-border posts has a social externality (ease of accessibility and equitable distribution of development infrastructure).

The development of cross border tourism also has an externality on the ecological component in Wini and its surroundings. Ecological impacts include damages to flora and conversion of land, beaches that are not clean, and the potential for erosion, flooding, and abrasion. The ecological externality has a secondary impact on the decrease in the carrying capacity. There are some detrimental effects on the environment that includes the environmental damage (vandalism), poor hygiene, and sanitation, decreased quality of air and water, increased noise and air pollution, tress and fields turned into tourist attractions, reduced open spaces, and poorly maintained plants and animals (Sunlu U in Pramanik and Ingkadijaya, 2017).

The analytic hierarchy process (AHP) approach is needed to analyze stakeholder perceptions of impact priorities and then provide appropriate alternative priority recommendations. According to Pysz JK and Woszczyna KS (2017), alternative priority recommendations for sustainable development in border regions are based on cross border tourism development, sustainable cross border, and inter-organizational cooperation in cross border resulting from the concurrent interaction of three groups of factors: (1) the quality of interpersonal relationship, (2) cross border planning, procedures and support mechanisms (e.g., the possibility of jointly planning the cross border cooperation and obtaining funds for the development of the cross border), and (3) environment (historical affinity and geographical proximity of neighboring border regions, support from local and regional communities and government in neighboring countries).

The novelty of this study is to analyze the dimensions of the sustainability of tourism development as the basis for the integration of tourism objects on the borders of Indonesia and Timor Leste as a tourism advantage compared to other regions in Indonesia. In line with Fitriani W (2017), economic and social development is realized through the identification and development of tourism advantages in each region. This study focuses on priority analysis of (a) professional and integrated management of tourism objects in cross-border tourism, (b) inventive economic growth and investment in cross-border tourism, and (c) cross border tourism development based on ecosystem services. Therefore, this research aims to (1) analyze the externality of cross border tourism development on sustainable development in Wini Indonesia, (2) analyze alternative priorities recommendations for sustainable development of cross border tourism in Wini Indonesia.

Research Method

The location of study is in Wini, a border area of Indonesia-Timor Leste. According to the Peraturan Presiden 124 of 2012, Wini is a border gate included in a special economic zone (Kawasan Ekonomi Khusus) since it has a strategic position between PKSN Kefamenanu and PKSN Atambua.
Wini is also accessible to the north route between the Dili District and Enclave District Oecusse of Timor Leste. The location of the research is displayed in figure 1.

![Figure 1. Location of Research](image)

Primary data were obtained through in-depth interviews and observations. Sugiyono (2016) stated that interviews facilitate the exchanges of information and construct the meaning of the data and information needed in research. The secondary data used are sourced from agencies related to cross border management and tourism management.

The primary data were obtained from a population of stakeholders in the cross border areas, especially Wini and its surroundings. The stakeholders refer to the government, business actors, tourists, and community leaders. The research sample was 20 people who were determined by purposive sampling with certain considerations (having knowledge and experience in cross border tourism) as stated by Sugiyono (2016). The details of the stakeholders sampled are as follows: (1) 5 people from the government, (2) 5 business managers as business actors in Wini and surroundings based on the type and size of business, (3) 5 people of community leaders, and (4) 5 people of local and foreign tourists.

Then, data is analyzed by the analytic hierarchy process (AHP). AHP is carried out on the externality and priority analysis of alternative recommendations. Clarke J and Godley K in Hidayat M (2011) stated that tourism development strategies are carried out in order to (1) setting a goal, (2) determining criteria and sub criteria, (3) setting policy recommendations and action plans. The stage of AHP are as follows: (1) Formulate the hierarchy of AHP that includes (i) set the goal of developing sustainable cross border tourism as hierarchy 1, (ii) determine the externalities of cross border tourism expansion as criteria-sub criteria of hierarchies 2 and 3, (iii) determine the priority of recommendations for sustainable cross border tourism development as hierarchy 4. AHP structure of the externality and sustainable cross border tourism development are shown in figure 2. (2) Perform pairwise comparison analysis and logical consistency using expert choice.
Figure 2. AHP Structure Model of the Externality and Sustainable Development Priority of Cross Border Tourism

Table 1

<table>
<thead>
<tr>
<th>No</th>
<th>Criteria</th>
<th>Sub-Criteria</th>
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<tbody>
<tr>
<td>A</td>
<td>Social</td>
<td>A1: The property rights of local community has reduced</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A2: Associative and dissociative process in society</td>
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<td></td>
<td></td>
<td>A3: Social institutions</td>
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<tr>
<td>B</td>
<td>Economy</td>
<td>B1: Changes in economic activity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B2: Growth income</td>
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<td></td>
<td></td>
<td>B3: Income distribution</td>
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<tr>
<td>C</td>
<td>Ecology</td>
<td>C1: The beach is not clean</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C2: Damage of vegetation and land use changes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C3: Erosion, flood, and abrasion</td>
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</table>

Results and Discussion

Priority Analysis of the Externality of Cross Border Tourism Development

The results of the analysis using AHP show that the economic externality is the most prioritized (53.20%) compared to the social impact (31.20%) and the ecological impact (15.60%). Table 2 displays the outcome of the AHP. The results of this study have similar priorities for economic externalities and differ for environmental and social externality priorities. The research of Khandare V and Phophueksanand N (2018) stated that tourism development has a major economic impact, also environmental and social–culture effects, especially change in lifestyle.

Table 2

| The Externality Priority of Cross Border Tourism |
|------|-------|--------|
| Externalities | Weight | Priority |
| Social | 0.312 | II |
| The property right of local community are reduced | 0.139 | 3 |
| Associative and dissociative process in society | 0.579 | 1 |
| Social institutions | 0.282 | 2 |
| Economy | 0.532 | I |
| Changes in economic activity | 0.616 | 1 |
| Growth income | 0.259 | 2 |
| Income distribution | 0.125 | 3 |
| Ecology | 0.156 | III |
| The beach is not clean | 0.554 | 1 |

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Economic Externality

The results of the analysis of sub-factor priority from economic externalities, respectively, are changes in economic activity (61.60%), an increase in people's income (25.80%), and income distribution (12.60%). Pramanik PD and Ingkadjaya R (2017) stated that tourism development has a positive externality on increasing people's income.

Firstly, changes in economic activity and increased entrepreneurship. One of the unique tourist objects in Wini is the beach and fish culinary, so that some of the farming communities changed their commodities from food crop to fisheries. Others migrated from primary sector to secondary sector (such as culinary business, eucalyptus oil agroindustry) and tertiary sector (trading business, transportation services, accommodation, and hotel business), which means providing a positive externality. Coherent with the previous study, Slavi (2011) admitted that the development of tourism creates beneficial economic and jobs for local population, as well as attracts workers from other regions. The constant influx of these workers take locals’ jobs and subsides their social welfare.

Secondly, growth income. The development of tourism industry increases people’s income directly and indirectly. Direct growth income comes from culinary and transportation business, trading in traditional markets, and trading in shops; while indirect income from multiplier effect economies. The results of the previous study by Taena and Afoan (2020) found the income of people increased by IDR 781,000,000 per year causing the development of cross border tourism. The finding is similar to research by Lobanova JZ, et al. (2017) which stated that they found an insignificant impact of the relationship between overall structural reforms and cross-border mergers and acquisitions on GDP per capita and domestic investment both in the short and long run.

Thirdly, distribution of income among community groups. The growth of cross border tourism in Wini increases the activities of tourism industry, which at the same time has economic linkages with the primary sector. This condition has an impact on increasing the prices of several agricultural commodities that previously had less value (such as fish, vegetables, bananas, and mangoes). In addition, land resources also experienced a high increase in value. Therefore, the externality is the distribution of income for the community, even though it gets a low priority, which means a positive externality. According to a study by Naik and Jangir (2013), the tourism sector was the sector that initiates significant changes in increasing employment and income, as tourism has developed into economic activity and a way of life. The policy to support tourism development while reducing the economic disparity between rural and urban areas include strengthening banking infrastructure and government expenditure on rural and undeveloped areas (Andari Y 2020).

Social Externality

The results of AHP showed that sub-factors of social externality with the highest ranking were the association and dissociation process of local communities with tourists (57.80%), changes in social institutions (28.30%), and reduced property rights of local communities (13.90%). In line with that, Cankar SS, et al (2014) found the most crucial elements for cross border cooperation are good interpersonal relationship, language proficiency, and common interests; but the degree of support provided and administrative obstacles are the biggest roadblocks in cross border cooperation. Different factors stimulating cross-border cooperation could be based on a variety of variables encouraging cross border tourism collaboration.

The first is the process of association and dissociation in society. The results of the study show that the association process in Wini is going well between domestic and foreign tourists, which is indicated by the good social relations of the Wini community with tourists. The association process occurs because the community in Wini is classified as a heterogeneous society thus it is easier to associate with other parties, and the community has a good perception that visiting tourists can increase people’s income. When tourists go across borders, it gives them a feeling of security and comfort. A previous study by Slusarcic M (2015) found that local communities are becoming more and more interested in regional collaboration to improve the social-economical standing of the regional communities and eliminate the detrimental externality of the border. This indicates the association between Wini communities and tourists is good, meaning it is a positive externality.

The second is a social institution. A good community association process needs to be supported by a good social institution in the community. The development of cross border tourism has an externality on increasing public awareness to work together in cleaning the beach from plastic

| Damage of vegetation and land use changes | 0.294 | 2 |
| Erosion, flood and abrasion               | 0.152 | 3 |

**Table:** Has an externality on increasing public awareness to work together in cleaning the beach from plastic.
waste that has the potential to reduce the charm (attractiveness) of tourist objects. It means the sub criteria (social institution) is a positive externality in cross border tourism. Trunajaya (2016) stated it is necessary to form a tourism awareness group whose duties are as follows: (a) provide motivation to the community to increase awareness about the importance of tourism development; (b) provide counseling in the context of socializing and civilizing Sapa Pesona (means: safe, orderly, clean, cool, beautiful, friendly, memorable); and (c) organize activities such as hygiene and reforestation movements with the core of caring for the tourism based on the environment.

Third, reduce the property rights of the (grass root) people in Wini. The development of cross border tourism in Wini also increases land for investment (generally through buying and selling mechanism) so that the community’s property rights are reduced. In addition, investments by the government and the private sector in several coastal locations reduce public access to these locations in other words some beaches are not open access. This condition shows a negative externality. Rustiadi (2013) states the combination of access and property rights would be having an externality on the sustainability of a resource.

**Ecological Externality**

The development of cross border tourism also has an externality on ecology with the highest ranking an externality on the beach and the surrounding environment that causing those places dirty/not clean (55.40%), followed by damage to vegetation and land use change (29.40%), as well as flooding, erosion and coastal abrasion (15.20%). The finding of this study support by Sunlu U in Pramanik and Ingkadiyaya R (2017) who stated that vandalism, poor hygiene and sanitation maintenance, a reduction in the amount of open space, and poor plant and animal habitat are all examples of negative externalities to the environment.

First, the beach and the surrounding environment are not clean. The development of cross border tourism in Wini which includes several tourist objects with high tourist visits, especially on weekends, has an externality on increasing the amount of waste. Some of the garbage is left scattered because of the low awareness of the public and tourists to dispose of garbage properly in its place. In addition, the infrastructure for waste storage is limited. Waste management is done conventionally by burning, which of course has an impact on increasing carbon dioxide emissions. Putra PTN et al. (2019) stated that economic activities both directly and indirectly contribute to the increase in carbon dioxide emissions.

Second, vegetation damage and land use change. The development of cross border tourism has an externality on the conversion of land that functions as conservation (such as shrubs, forests, and savanna) into settlements, roads, offices, and another built-up land. Land conversion causes damage to vegetation as a habitat for certain animals. Hidayati W and Faiz IA (2021) stated that the success of economic development, especially infrastructure, caused land conversion. The derivative impact is drought in the dry season and flooding in the rainy season. Every land cover affects surface runoff; land cover which has a conservation function has a lower surface runoff because it stores more water, while the cultivated land cover, especially built-up land, has a higher surface runoff.

Third, mountain erosion, flooding, and coastal abrasion. Topography in Wini which is an area surrounded by mountains has the potential to cause erosion, flooding, and abrasion. Erosion, flooding, and abrasion could be worse due to community agricultural activities that rely on slash and burn on dry land agriculture located on mountainous land that surrounds Wini as a location for cross border tourism development. Previous research conducted by Brida JG, et al. (2012) found investment in the tourism sector could be increased economic growth, but worsen the environmental condition. In line with that, Marsden S (2016) found infrastructure development has a negative externality on the environment, including on the cross border, thus requiring a wise solution for environmental protection on the cross border.

**Alternative Recommendation Priority for Sustainable Cross Border Tourism Development**

Based on the impacts grouped into externality as described earlier, alternative recommendations for sustainable tourism development on cross border tourism in Wini could be determined. Alternative recommendations from the lowest priority in a row are the cross border development based on ecotourism (17,60%), professional and integrated tourism management between tourism objects on the northern coast of Indonesia and Timor Leste (30.20%), and the growth of a creative economy and investment in cross-border tourism (52.20%). The AHP outcomes
of foreign investment, domestic investment, and regional expenditure as stated in previous findings of Yuliadi I (2020) have significant effects on Regional Gross Domestic Product as a component of sustainable development. The summary of AHP results is shown in Figure 3.

![Image of Priority Recommendation for Cross Border Tourism Development](image_url)

**Figure 3. Priority Recommendation for Cross Border Tourism Development**

### Creative Economic Development and Investment

The escalating of cross border tourism requires support of special products (souvenirs) in the border area; this souvenirs production is the result of the role of community through the community’s creative economy. Souvenir businesses on cross border tourism among others are woven fabrics, instant turmeric, instant ginger, products of processed fish and seaweed, and salt. Regional economic developments driven by border tourism activities have also increased the provision of capital facilities (Bank and Non-Bank), so that people have access to capital to invest. The growing investment in Wini as a border area of Indonesia increases the expenditure of local and foreign tourists and provides an economic multiplier effect on the border and surrounding areas. Floris D et al. (2017) stated that investment in tourism development should have knowledge about specific tourism products and tourists requirements.

The complexity of tourism product -which consists of goods and services offered to meet the needs of visitors- is an essential feature along with accommodation, food, transportation, also activities and entertainment. As a result, several distinctive elements of the product must be taken into account when evaluating the quality of the tourism offering. Therefore, the government through Peraturan Presiden No 179 of 2014 concerning spatial planning for border areas in NTT Province, declared Wini as a state border area designated as special economic zones to promote cross border development industry including the tourism industry.

Promoting the uniqueness of cross border tourism, Agustina IH (2020) stated to build the uniqueness/characteristics of a palace that can survive in the competition of the tourist industry. The sector of tourism played an important role as a driver for the development of new facilities and accommodation (Ianioglo A and Rissanen M, 2020). In tune with that, Skobkin SS, et al. (2020) state the hospitality and tourism industry continues to develop and drive the economy. The tourism industry development strategy in order to increase economic growth is carried out in the form of tourism industry clustering, the diversification of tourism industries such as culinary, and industries that produce certain products such as sugar, salt, and other (Li H, 2018).

### Professional and Integrated Tours Management

The establishment of a cross border tourism management agency is urgently needed which manages the tourist areas on the state border. This institution could be partnered with private sector in managing part or all of the tourist areas of the crossborder. Partners with communities or state institutions from Timor Leste are also carried out in order to realize the integration of tourism objects in The Indonesian border with tourism objects of Timor Leste, namely liberalization of tourism services. Adha MA et al. (2018) state liberalization of goods and services is a development policy strategy in order to increase economic growth and reduce poverty.

Holik A (2016) stated that professional tourism management is carried out by improving the capability and skills of management of the tourism services, and active participation of local
Development of Cross Border Tourism Based on Ecotourism

The preservation of tourist objects is the responsibility of the community, government, private sector, and also tourists who visit cross border tourism objects in Wini and its surroundings. Personal and group awareness is needed to keep tourism objects attractive. In accordance with the results of the study, several activities were carried out by the neighborhood’s resident to keep the tourism environment clean and well-maintained through joint cleaning of the beach, working together to maintain the mangrove forest around the coast of Tanjung Bastian Beach and the Manufonu Mountains in around to minimize erosion. A previous study by Butarbutar R and Soemarno S (2013) states the presence of ecotourism in the era of sustainable and tourism escalating missions should have a minimum negative impact.

Radianto E (2009) found that the development of tourism was closely related to economic growth, both in the short and long term. However, the construction of tourism infrastructure and other supporting tourism facilities on the coast by coastal landfills had sacrificed the growth of coastal mangrove forests. Therefore, the local government is encouraged to promote ecotourism by issuing regional regulations on the implementation of sustainable tourism businesses and educating the local community and visitors to play a role in protecting the environment of sustainable tourist destinations, namely ecotourism. The development of ecotourism means utilizing the natural potential that exists for tourism; Noor Dj (2011) stated ecotourism is determined by factors of location, topography, climate, flora-fauna, hydrology, and geology.

Ecotourism also means improving tourists’ knowledge and awareness of environmental preservation, helping them to understand the value of implementing low-carbon tourism, and enhancing their comprehension of sustainable development. Low-carbon tourism can flourish economically by incorporating the low-carbon idea into the tourism process and engaging in a low-carbon economy (Wang W et al, 2019).

Conclusions

The result of the study using AHP shows the impacts of developing cross border tourism, which are economic (53.20%), social (31.20%), and ecological (15.60%). The economic externalities are positive, social externalities are divided into positive and negative externalities, while environmental externalities are generally negative. The results of the analysis also recommend alternatives for the development of cross-border tourism in a row, namely the development of the creative economy and investment in cross border tourism (52.20%), more professional and integrated tourism management between tourism objects in Indonesia and Timor Leste (30.20%), and tourism development based on ecotourism (17.60%). Better management of the ecological dimension could contribute to increasing tourists’ visit, and cooperation between countries that accommodates wisdom could realize the integration of border tourism objects.

References


