

## ROAD-DEVELOPMENT STRATEGIES TO SUPPORT SELF-DRIVE TOURISM (SDT) IN BALI BASED ON SWOT ANALYSIS

Nicholas Marpaung\* & Tetsuo Shimizu\*  
Tokyo Metropolitan University, Japan

**Abstract:** Self-drive tourism (SDT) has become a potential alternative of tourism in Bali, an island that has dozens of tourist attractions scattered all over it. Unfortunately, Bali still has an insufficient integrated system of land transportation. Tourists tend to choose reasonable modes of transportation and drive themselves to reach their desired destinations by land vehicles such as passenger car or motorcycle. Consequently, roads have an important role to connect various tourist attractions and to accommodate tourists' mobility, especially foreign tourists that have different driving attitude compared to domestic road users. Adjustments need to be made to the existing road development plan in order to maintain the expected tourists' driving experiences. Therefore, the government needs some feasible strategies for road development as an available option of transportation in Bali Island, particularly in order to support self-drive tourism. One of the common methods to gather the information needed in making decisions related to strategies is SWOT Analysis. This study uses a qualitative approach that employs the Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis method to examine the internal and external factors comprehensively, in terms of road. Internal factors consist of the strengths and weaknesses of the road in Bali Island as tourism destination, and external factor consist of opportunities and threats presented by the road in Bali Island. The adjustment to the driving tourists will be considered in terms of four relations: strengths-opportunities (S-O), weaknesses-opportunities (W-O), strengths-threats (S-T), weakness-threats (W-T). The results of this study show that the strategy in road development is not only focused on conventional road development that relates to the physical road, access, routes and modes of transport but must be adapted to the social aspects that promote and maintain local values. The adjustment of this strategy is expected to provide an overview to the parties who play a role in developing the road to be able to encourage SDT as one of the choices for the development of sustainable tourism in Bali

**Keywords:** Self-Drive Tourism, Road Development, Adjustment, Decision Support, SWOT Analysis

### Introduction

Bali has become one of the favourable tourist destinations in South East Asia and earned the title 'The Island of God' for its beautiful and unique nature and culture (Prajnawrdhia, 2014). Bali is one of the Indonesian provinces that is famous as a tourist destination. Its total area reaches 5,634.40 km<sup>2</sup>, with its length of beach stretching along 529 km (Bali Government, 2010). As a tourist destination, Bali's economy including its income, employment generation, and livelihoods, depends on the tourism industry (Hampton & Jeyacheya, 2015). Bali's cultural resources and nature potentials become its main commodities of the tourism industry. In terms of culture, Hindu religion forms Balinese way of life that offers colourful and exotic experiences to tourists. Other cultural sites are temples, rites offering, music, dances, ceremonies, and rich craft heritage (Wall, 1996). In terms of natural landscape, Bali has various types of tourist destinations from beach to mountainous areas. As an island, Bali has dozens of tourist attractions that are scattered in several tourist areas and most of them can only be accessed by

land. This condition makes Bali island very dependent on transportation (Lohman & Duval, 2014), especially in land transportation.

In Bali, the development of the tourism industry has not been optimally supported by the development of transportation. Public transportation as an effective and efficient means for daily mobility has not developed optimally. The low level of public transportation service is further worsening by the very limited availability of bus or other public transportations. In general, land transportation is divided into rail-based transportation and road-based transportation. Since Bali does not have a rail-based transportation option, it heavily depends on road-based transportation such as passenger cars and motorcycles. The limited number of transportation options makes most of the tourists choose rental cars or motorcycles as their main mode of transportation when they travel in Bali. This condition offers a good opportunity for vehicle rental industry to grow and opens a chance to promote self-drive tourism as a promising market in tourism industry in Bali.

Self-Drive Tourism emerges in Bali for various reasons, but it has not been developed and managed optimally. Many tourists have rented private vehicles such as passenger cars or motorcycles to do their activities during their holiday in Bali. Driving-tourists potentially generate conflicts both in the aspect of transportation aspect and in the social aspect. In the aspect of transportation, the characteristics of road condition and traffic become the triggering factors. Every tourist uses their own knowledge, skills, and experiences to adapt to the road environment that is different with that in their country of origins. These factors will shape a unique tourists' driving behaviour that tends to be more aggressive compared to local people's behaviour. As for the social aspect, conflicts may potentially arise related to the local culture issue. Since Balinese people are very strict to hold their local or tradition rules, norms violation by the driving tourists will cause serious conflict.

These factors can become challenges to the development of self-drive tourism industry. For those reasons, some adjustments are needed in the road development strategy; the strategy shall not consider the transportation aspect only but shall also include social aspect as a part of consideration. The government, as the one who makes a decision regarding policy or strategy to develop tourism development in Bali, needs a strong basic decision to support self-drive tourism. At present, the government sets a strategic objective to reduce the travel time from 2.7 hours/ 100 km to 2.2 hours/ 100 km which still becomes the focus to handle transportation problem (MPWH, 2017). This paper shows strategies that can be developed to promote self-drive tourism in Bali, while considering the potential conflicts in transportation aspect and social aspect. The potentials of Bali as a tourist destination will be explored in terms of self-drive tourism using SWOT analysis.

## **Literature Review**

### ***Road Development and Tourism***

Transportation and tourism have a co-dependent relation (Hall, 1999) and should be considered simultaneously by the government (Lohman & Duval, 2014). Focusing only on the development of transportation will be an inefficient policy because of the large investment needed to build various facilities and infrastructures that are only used in certain periods like weekends or holidays season. On the other hand, focusing only on the tourism will stagnate the development of tourism industry due to the limited accessibility and mobility that should have been supported by transportation sector.

Transportation and tourism affect personal mobility. Tourism provides experiences and transportation provides facilities as expected by tourists (Lohman & Duval, 2014).

Transportation sector is built not only to accommodate the tourism industry. Some considerations or adjustments are needed because tourism industry's characteristic is different from the other industries. In road transport-based tourism industry, such as self-drive tourism, the tourists expect more satisfaction (Wu et al, 2017) rather than reducing distance and time travel, as they are expected at the other industries.

Road as one part of transportation plays an important role in the development of tourism industry. Road serves as a link between the centre of activity in tourist destinations and forms a hierarchical network. In general, road as a part of hierarchical network is classified based on the priority for mobility, access, and residential function (Goto & Nakamura, 2016). Every road will be designed based on its function to reach the expected performance while, at the same time, taking mobility and safety into consideration. Regarding tourism activities, road development does not only consider the factors of accessibility and mobility in designing roads but also must consider the aspects of satisfaction and experiences expected by tourists. So that the road development needs to pay attention to road facilities (Fjelstul & Fyall, 2015), 'forgiving roadside concept' (Yannis et al, 2007), types of road users who are unfamiliar with the road environment (Choocharakul & Siroongvikrai, 2017) and sustainable issues (Murjanto, 2015).

### ***Self-drive Tourism***

Self-drive Tourism is described as traveling using any form of mechanically powered passenger-carrying road transport with the exclusion coaches and bicycles (Prideaux & Carson, 2011). It is often seen as a tourism activity that has potentials to assist economic development in rural and regional areas (Rolfe & Flint, 2017). The model of self-drive tourism has two main factors. The first factor is push factor that consists of existing vehicle, motivations, decision criteria, marketing, policies, insurance and safety, and auto clubs. The second factor is pull factor that consists of new vehicle, lease vehicle, attractions, destination, accommodation, highways networks, general infrastructure, and specific infrastructure (Fjelstul & Fyall, 2015). The ability to manage the push and pull factors will determine the success and sustainability of self-drive tourism.

Self-drive tourism also emerges in several regions in Europe and Australia. The tourists can drive from one point to the other and they can pass through several attractions in which they can freely stop and choose their own routes. Some companies also offer some packages for tourists. They can choose various types of driving options including the type of vehicles to use, the choice of destinations, and the choice of accommodations. Self-drive tourism is also defined as a multi destination trip rather than just one (Shih, 2006). It is not tied into a single route or specific route and offers freedom of movement as well as experience in driving. Available resources and attractions become other factors that motivate the tourists to take routes other than the road condition (Shih, 2005). The tourists will move freely to each destination they want to visit, and they can drive through high quality road to poor quality road. As drive tourism becomes popular, road networks, facilities, and themed routes rise to be important elements for promotion (Shih, 2005). Hardy (2003) suggests that there are eight components forming drive tourism: (1) the road and all of facilities; (2) accommodation; (3) information; (4) refuelling and roadside services; (5) enforcement of traffic regulations; (6) vehicle repairs and recovery; (7) attractions for driving tourists; and (8) promotion of on-road attractions.

### ***Driving Tourist Conflict***

Conflicts in transportation are often related to the road safety issues. Some traffic accidents are caused by the driving tourists. Driving in an unfamiliar road environment may lead to violations of the local traffic rules or laws as tourists misunderstand and misinterpret the traffic signs (Choocharakul & Siroongvikrai, 2017). The severity of accident and the risk involving foreign drivers are heightened by insufficient driving skills under unknown conditions (Yannis et al,

2007). These problems become the main concern for road or traffic regulators when they target the foreign driver safety in their policy (Yoh et al, 2017). Safety related to tourist accidents should be assumed as higher priority, so the policy will be more proactive to guarantee tourist's safety and well-being (Page and Mayer, 1996).

Since transportation and tourism development strategies should be co-dependent, the road policy makers or road planners should develop the awareness of tourism's political and social impacts to support effective tourism planning (Hampton & Jyeacheya, 2015). Self-drive tourism as tourism activity has impacted the local social-cultural characteristics, habits, customs, social life, and belief and the values of the inhabitants of tourist destination (Garcia et al, 2015). Social impact of self-drive tourism policy should become main concern, together with the safety concern, to avoid conflict with locals.

Tourists prefer to move freely by personal mode rather stick to a specific route (Nakamura, 2016). Tourists will move using own or rental car to explore and have direct contact with residents. While they are driving in the tourist destination, their driving behaviour, perception, and understanding of different road environments from their origin country can potentially become sources of conflict with local social rules. Driving tourists can have misperception or are unable to pay attention to local rules such as local norms and traditions. This will lead to negative perceptions towards driving tourists by residents.

### SWOT Analysis

SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis is a method often used in the field of business and can be used as a decision support tool for policy makers. It is an efficient structured planning method used in the case of strategy planning by identifying the potential and priorities of a project for the accomplishment of the development strategy (Buta, 2007). This strategic planning method has also been used in the assessment of sustainable tourism (Mondal, 2011). SWOT analysis is used to identify and evaluate the strengths, weaknesses, opportunities and threats related to a company or organisation. Strengths and weaknesses are internal to a company/organisation and opportunities and threats are external. After identifying every factor representing strength (S), weakness (W), opportunity (O), and threat (T) in the project under study, an analysis was conducted using a matrix to identify the relations between strength-opportunity (S-O), weakness-opportunity (W-O), strength-threat (S-T), and weakness-threat (W-T) as shown by Table 1 (Khan, 2018).

**Table 1. SWOT Matrix**

Factor Relation	S: List strength	W: List of weakness
O: list of opportunity	(S-O) Strategies Use strength to take advantage of opportunity	(W-O) Strategies Overcome weakness by taking the advantage of opportunity
T: List of threat	(S-T) Strategies Use strength to avoid threat	(W-T) Strategies Minimize weakness to avoid threat

Modified from Khan, 2018

## Methodology

The first stage of research was conducting interviews with the related stakeholders that consist of academics, practitioners, and government in transportation and tourism sectors to know their perceptions about the current condition in Bali. The results of this stage will help to conclude some strategies to adjust the road development. The second stage was SWOT analysis, which is known as the basic analysis in marketing, to help promote tourism. Currently, Bali tourism experiences a decline in tourism quality due to mass tourism and tourism alternatives needed to overcome this problem. It is expected that this analysis will be one of the first studies that can harmonize the road development and tourism in Bali.

In the second stage, a SWOT analysis was performed to determine the possible road development strategies to support self-drive tourism in Bali. SWOT analysis is divided into two main steps. The first step is making the list of SWOT components based on Bali conditions. This step has two types of analysis: (i) analysis of internal factors on strengths and weaknesses aspects, and (ii) analysis of external factors discussing opportunities and threats. Every type of analysis will provide lists of SWOT components that are related to transportation and social aspects of self-drive tourism in Bali. The second step is determining possible strategies based on matrix relationship between internal and external factors; strength-opportunity (S-O), weakness-opportunity (W-O), strength-threat (S-T), and weakness-threat (W-T). The scope of possible strategies is only limited to transport aspects and social aspects.

Road infrastructures as 'transportation aspect' become one of the important factors to support self-drive tourism. In drive tourism model (Prideaux & Carson, 2011), road infrastructure plays the role as a pull factor of a tourist destination. It is represented by highway network, general infrastructure, and specific infrastructure. In this study, road infrastructure will represent road network to maintain the accessibility to a tourism destination and road quality to ensure mobility of the driving tourists. Conflicts part of the social aspect become an adjustment factor and it should be considered when developing a strategy. Especially in Bali, 'social aspect' is heavily influenced by local wisdom and it is translated into Regional Regulation. For example, Regulation of Bali Regional Spatial Plan 2009-2029 (Perda RTRW) Chapter 95, Verse 2b on the limitation of the height of the buildings in Bali as high as 15 meters. This regulation is based on local wisdom called *Tri Hita Karana*. *Tri Hita Karana* is a cosmopolitan value of harmonisations of human relationship with God (*sutata parhyangan*), human relationship with fellow human beings (*sutata pawongan*), and human relationship with its natural environment (*sutata palemahan*) (Suardita and Krisnawati, 2015). In many cases, right of way and even road closures are often happened for the sake of religion or traditional ceremonies. This shows how local wisdom has a very strong influence in Balinese life.

## Results and Discussion

In the early stages of this study interviews were conducted from those who understood the conditions of transportation and tourism in Bali. Interviews were conducted with eleven (11) experts. The aim was to get an overview of issues concerning self-drive tourism; key findings of the interviews include:

1. Self-drive tourism has a good potential in Bali with its increasing number of foreign tourists.
2. Bali lacks public transportation and has mixed traffic.
3. Infrastructure development should be conducted to support the growth of tourism, not the opposite.

4. Generally, local people are very opened to tourists, but in some areas, there are disturbances that reduce the quality of life of the local communities (culture, and environment), especially in the areas that are still closed.
5. Conflict can occur between communities due to inequality of income.

First step in SWOT analysis is to determine the internal and external factors of the issues in the context of Bali, with transportation and social aspects as the main scopes of the study. The factors are listed below.

### 1. Strengths

- i. The road accessibility around Bali island is quite good (MPWH, 2017). The road network in Bali Island consists of national highway, provincial road, and municipal road that form access to every location in Bali island including tourism destination. Regarding its size and quality, this road network can open the access to all tourism areas by passenger car and motorcycle.
- ii. The road quality in Bali Island is in good quality. The road quality in Indonesia is measured by Reliability Index (RI) based on road pavement performance. The government has set a national goal of 2019 that the RI of national road shall reach 90% and province road or municipal road shall reach 70%. Bali has 535.3 km national road as the main entrance from airport and seaport with its RI reaching 99.98%. (MPWH, 2017).
- iii. Balinese has strong ways of life based on local wisdom. Local wisdom in Bali has proven to be able to overcome various social life problems and conflicts. Besides *Tri Hita Karana*, several other local wisdoms are also upheld in Bali (Suardita and Krisnawati, 2015):
  - a. *Tri Kaya Perisuda*; balance in character building and human identity by uniting mind, word, and deeds.
  - b. *Tatwam Asi*; you are me and I am you. This social value recognises an existence by respecting others and having self-respect.
  - c. *Salunglung Sabayantaka, Paras Paros Sarpanaya*; a social value about the need for togetherness and equal cooperation with one another.
  - d. *Bhineka Tunggal Ika*; unity in diversity.
  - e. *Manyama Brayā*; contains the meaning of the equation and fraternity and social recognition that we are brothers.

### 2. Weaknesses

- i. Most parts of the road network have mixed traffic characteristics including long distance and commuter traffic and mixed with logistic transportation in west side of Bali Island. The road development still focuses on the effort to accommodate all types of industry. In Indonesia, 90% businesses use land road infrastructure as a means to transport their products (Murjanto, 2015).
- ii. Many roads in Bali do not have sufficient width to sufficiently accommodate multiple lanes. Even, some networks in national highway have lesser capacity than the regulation. Many roads are too narrow, especially the municipal roads, that is off-limit for coach (big bus). Sometimes, to reach certain tourism destinations, the visitors should go through residential areas. This condition limits the number of tourists to reach certain tourism objects.

- iii. There is social conflict with traditional or “*adat*” dimension. Social conflict that related to traditional dimension often happens in Bali. Conflicts are triggered by unequal economic activities related to tourism industry (Suardita & Krisnawati, 2015). Unequal economic activities are also caused by the development gap between the areas of tourist destination and non-tourist destination.

### 3. Opportunities

- i. Bali becomes a national concern. The government, through the President of Republic of Indonesia Regulation No.4 of 2011 on “Masterplan for Acceleration and Expansion of Indonesia's Economic Development” has appointed Bali as the main gate for foreign tourists. Then, it is followed by other ministries that set Bali as their main concern and investment target. The improvement of Bali international airport capacity and the construction of toll road above the sea are the examples of program in transportation sector.
- ii. There is increase in the number of foreign tourists. Bali is the main access gate for foreign tourists to travel in Indonesia. Central Statistics Agency recorded the number of foreign tourists that enter Indonesia through Bali reached 3,936,066 in 2015 or 38,74%. The foreign tourist number increases 4% - 5% every year. The tourists from Australia and China dominate the population of foreign tourists that come to Bali every year. Australia has a long history for self-drive tourism and it becomes the most popular travel style in China in the last five years (Liu, Zhang, & Nie, 2012).

### 4. Threats

- i. There is a rising of competitors. The government of Indonesia has an agenda to push the infrastructure development in the National Tourism Strategic Area as stated in the Government Regulation No.50 of 2011. The policy prioritizes 10 destinations called ‘New Bali’ as part of the National Goal to Support Tourism. Two of the destinations mentioned are Bromo area (East Java) in the west and Mandalika area (Lombok) in the east. This can reduce the driving tourist share in Bali.
- ii. There is concern about tourists’ driving behaviour. When driving in an unfamiliar road environment, tourists tend to violate local traffic rules (Choocharakul and Sriroongvikrai, 2017). Meanwhile, different driving behaviours such as extreme acts (shouting, doing malicious assaults, etc.) or less severe manifestations (roadside argument, gesture, etc.) are seen as aggressive driving behaviours (Vanlaar, 2008). This condition can lead to conflict between driving tourists and local residents.

The second step of SWOT analysis is the construction of matrix of relations; strength-opportunity (S-O), weakness-opportunity (W-O), strength-threat (S-T), and weakness-threat (W-T) to determine possible strategies. The matrix is described as follows:

#### 1. Strength-opportunity (S-O) to use strength to take advantage of opportunity.

- i. Good road infrastructure condition and well-connected network become the basic requirements to develop and promote tourism destinations. Local wisdom, combined with local natural resources such as traditional buildings or nature scenery, play a role as a unique attraction factor. These factors affect the tourists’ decision on driving route, especially when they want to experience the local scenery (Alivand et al, 2015). Since Bali has becomes a national concern and has potential factors to scenic routes, road infrastructure investment can be driven to construct or develop scenic route around the island.

- ii. Local wisdom plays a role as the sustainable development foundation, especially in rural tourism and has potential as an attraction (Vitasurta, 2015). With the increasing number of tourists who come from country with high driving interest every year, every area in Bali is exposed to drive tourism. To reduce the conflicts between residents and incoming tourists, the government can empower residents to promote local wisdom and local hospitality as attractions to the driving tourists.
2. Weakness-opportunity (W-O) to overcome weakness by taking the advantage of opportunity.
- i. Insufficient road lanes and mixed traffic cause congestion on narrow roads. Construction of road, road pricing, or traffic management generally become solutions for congestion on the roads (Calvert et al, 2018). With the increase in road investment, constructing new road corridors will increase the capacities of the existing road networks or develop alternative land transportation such as rail-based transportation. This can reduce potential conflict between tourists, as the new road users, with the other users who are accustomed to the driving routines on the road.
  - ii. The increase in road investment can be used to develop new access to minimize potential conflicts between residents and driving tourists. The increase in number of driving tourists can be too overwhelming to local roads that are not designed to accommodate high traffic volume. The change of road function will also trigger a change in the land used for it. In the case when the construction of new road access cannot be done, the traffic and access management involving the residents or communities can become an alternative solution.
3. Strength-threat (S-T) to use strength to avoid threat.
- i. Bali has a reliable road infrastructure and its unique local wisdom becomes a strong marketing tool. The road planners shall be able to take advantage of this condition as a value to give positive experience to the driving tourists. For example, they can build an iconic road facility based on local uniqueness.
  - ii. Good road infrastructure combined with increasing number of vehicles such as cars and motorcycles that are used by the driving tourists can increase safety problem issues. These cause traffic conditions and characteristics that may never be experienced by the driving tourists in their countries and potentially triggers aggressive behaviour by the driving tourists. In this case, the government with local-residents can hold courses for driving tourist regarding safety rules before the tourists can drive in Bali.
4. Weakness-threat (W-T) to minimize weakness to avoid threat.
- i. Mixed traffic condition, narrow roads, and traditional conflict can create negative influence in promoting self-drive tourism in Bali. In this case, the government should increase the road network capacities, manage logistic transport, and ensure the equal distribution of development to avoid social conflict.
  - ii. Driving tourists will feel that they are special road users who deserve special treatment and tend to act more aggressive compared to the other road users (Bushman et al, 2018). Traffic condition, narrow roads, and driving tourists' behaviour can cause accident and conflict with local-residents. Traffic management can be applied to divert the route away or to restrict access to sensitive areas such as temple or holy places. Introduction of local laws to driving tourist is also possible. This can preserve the locals' tolerance of driving tourists.

The summary of possible strategies for road development resulted from relation matrix is shown in Table 2.

**Table 2. Possible strategies for road development in Bali**

<b>Factor Relation</b>	<b>S: Strengths</b> i. Good accessibility ii. Good road conditions iii. Local wisdom	<b>W: Weakness</b> i. Mix traffic ii. Narrow roads iii. Traditional conflicts
<b>O: Opportunity</b> i. Become national concern ii. Increasing number of tourists	1. Develop scenic route in Bali 2. Promote local wisdom as attractions	3. Develop alternative mode 4. Develop new access.
<b>T: Threats</b> i. Rise of competitor ii. Tourist behaviour	5. Branding SDT in Bali 6. Introduction safety driving	7. Increasing road capacity 8. Preserve local tolerance

## Conclusion

This study examines the strengths, weaknesses, opportunities, and threats of road development to support self-drive tourism in Bali. Bali has a great potential to be a self-drive tourism destination with beautiful nature and unique culture; the strong points compared to other competitors. Bali becomes the centre of attention of the government and plays an important role in Indonesia tourism industry. The road infrastructure, which has an important role to support the tourism activities, should be developed according to the need of self-drive tourism. To maintain its sustainability as a tourist destination, the road development in Bali should consider not only the transportation aspect for foreign tourists, such as providing better signage, road facilities, information, etc. Instead, it shall also minimize the effects caused by driving tourists' behaviour and diminish the traditional or “*adat*” conflicts. This conflict can be eliminated by involving local residents to self-drive tourism activities.

Based on the SWOT analysis, some road development strategies are possible to implement in order to promote self-drive tourism in Bali: (1) developing scenic routes, (2) promoting local wisdom as attractions, (3) developing transportation modes, (4) developing new access, (5) building the brand of SDT in Bali, (6) introducing safe driving, (7) increasing road capacities, and (8) preserving local tolerance. These strategies can be applied by policy makers or road planners to consider not only transportation sector, such as increasing road capacities, but also its effects on social life. This study is a preliminary study of road development that is related to the needs of SDT in Bali which has only limited use of a qualitative approach through literature review. It is necessary to develop a study with a quantitative approach to be able to describe the factors of influence that affect each strategy. With this, it is expected that the strategy in road development can be determined by implementation priorities which depend on the ability of resources such as funds, time and human resources.

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**Contributors:** Nicholas Marpaung, PhD Student of Tokyo Metropolitan University Japan;  
 Professor Tetsuo Shimizu, Tokyo Metropolitan University, Japan.  
**Corresponding Author:** Nicholas Marpaung. Email: [nicholas.16marpaung@gmail.com](mailto:nicholas.16marpaung@gmail.com)