Architectural Tourism Development Model as Sustainable Tourism Concept in Bandung

A Y Permana¹, I Susanti², K Wijaya³

¹,² Department of Architecture, University of Pendidikan Indonesia, Bandung, Indonesia
³ Department of Architecture, Kebangsaan University, Bandung, Indonesia

Corresponding e-mail: yudi.permana@upi.edu

Abstract. Bandung is famous tourist destinations in Indonesia which experiences rapid tourism development. It is supported by city’s diverse tourism potential, include in: nature, culture, heritage building, culinary, fashion, recreation, and entertainment. Moreover, infrastructure and public facility improvement increase tourism attractiveness of Bandung. Two major infrastructure projects, namely Cipularang Toll and Jakarta - Bandung Fast Train will support Bandung tourism development. This condition is benchmark of Bandung tourist attractions. To maintain such potential, it is necessary for Bandung to have programmed, structured, and controlled tourism development model. Current tourism model is inclined to sustainable industrial concept preserving environment and local culture. Tourism programme is directed to generate income and green employment, with regard to conservation. This study aims to assist planning and management of sustainable tourism development by increasing level of understanding on how tourist destinations develop and change. Results of this study can be taken into consideration for stakeholder to develop a framework for strategic planning toward economically, environmentally and culturally sustainable tourism.

Keywords: destination, nature, heritage, environment

1. Introduction

Nowadays, tourism [1] and creative economy play an important role in Indonesia's development, as both has significant contribution to Gross Domestic Product (GDP) and employment - both directly and indirectly. Tourism [2] contributes to 11.8% of Indonesia's [2] GDP and creative economy contributed to 14.66% of total employment. Ministry of Tourism and Creative Economy has established a vision of "the realization of welfare and life quality of Indonesians through tourism and creative economy" [3]. The ministry, supported by International Labor Organization (ILO) and Australian Government develops Strategic Plan for Sustainable Tourism and Green Jobs for Indonesia [3]. This strategic plan is framework and reference to achieve sustainability and provide environmentally friendly employment in tourism sectors in Indonesia [3]. Strategic Plan for Sustainable Tourism and Green Jobs is an answer to improve welfare and life quality within communities. The program is supported by the ILO and Australian Government, as Indonesian government partners in exchanging views and building consensus to build a strong tourism industry. The strategic plan is designed based on consultations among tourism stakeholders, include in government, social partners, communities, industries, and the citizens. Richness of natural and cultural resources has become a major potential in both domestic and
international tourist markets. Government is challenged to cultivate these potential into national asset for prosperity of the communities. In addition, hospitality and human resources are strategic in achieving national development goals and increasing nation's competitiveness.

After Brazil, Indonesia tourism potential occupies second position. Local culture, natural beauty, and heritage buildings are pillars of Indonesia tourism. As the largest archipelago nation in the world, Indonesia has 17,508 large and small islands making it an extraordinary natural potential. Abundance of natural resources and green environments, West Java has enormous potentials in tourism. Tourism activities in West Java, especially Bandung, requires supporting facilities. Tourism activities have become Bandung main economy sector since 1920. Nowadays, tourism is growing more with the support of Cipularang toll road and fast train lines construction connecting Bandung to Jakarta. Tourism sector is significant in increasing local revenue of Bandung. Nearly 70% of Bandung local revenue comes from tourism sector, according to Bandung Culture and Tourism Office. Bandung has experienced an increase in domestic and foreign tourist arrivals for almost 14% per year. Therefore, tourism sector becomes critical subject of urban planning.

Bandung is not only known as capital of West Java Province, but also famous tourism city. This city preserves cultural heritage that has superior values. Bandung is wellknown for its old architectural style inseparable from city development history itself. It owns several tangible or intangible relics. The long history of Bandung leaves a number of historical buildings. Bandung is given predicate of the most complete architectural laboratory because of its art deco architecture treasures. Sturdy old buildings inherit architectural beauty styles. As a favorite tourist destination, Bandung has potential to (1) heritage tourism; (2) shopping and culinary tourism; (3) educational tourism; (4) recreational and cultural tourism; and (5) as well as Meeting, Incentive, Convention, Exhibition (MICE) destination. Bandung has diverse tourist destination, supported by geographical location, nature, adequate urban planning, and good accessibility. Based on the background, this study is intended to review development of tourist destinations in Bandung through Quality Function Deployment (QFD) analysis. This analysis is conducted over development of holistic tourist destinations by considering all related elements. Result of this analysis is expected to provide input for increasing tourist visits and managing historical buildings as assets of Bandung.

2. Bandung Tourism Potential

Besides Bali and Yogyakarta, Bandung is also the place of interest tourist visit. The city has unique, extraordinary beauty and industrial creativity. Bandung is especially crowded on weekend due to domestic and foreign visitation. The following table (Table 1) shows number of tourist visiting Bandung within the last five years.

| Year | Overseas | Domestic | Total |
|------|----------|----------|-------|
| 2014 | 180,143  | 5,627,421| 5,807,564|
| 2015 | 183,932  | 5,877,162| 6,061,094|
| 2016 | 191,289  | 6,112,248| 6,303,538|
| 2017 | 193,129  | 6,378,299| 6,580,428|
| 2018 | 198,923  | 6,578,918| 6,777,841|

Source: Bandung culture and tourism agency, 2018

Tourist visits in 2015 has reached over 6 million; and increased to almost 12% (around 4% per year) in 2018. This increase is considered significant. This potential stimulates acceleration of tourism businesses growth and other tourism-related businesses, which affect increase in community welfare and local revenue. There are 14 (fourteen) potential tourism clusters in Bandung, include in: (1) Shopping and health tourism clusters on Sukajadi-Setrasari-Pasteur roads; (2) Traditional art and
2.1 Bandung Tourism Destination Development
Tourism sector is vital to push economic growth in many countries [4,5,6,7,8]. Therefore, it is necessary to consider several approaches in planning and developing tourism, including: (1) Continuous Incremental and Flexible Approach (in sense of planning as continuous process based on needs and results); (2) System Approach (tourism as an integrated system which needs to be planned through system analysis); (3) Comprehensive Approach (tourism development approach holistically considers elemental and environmental institutions as well as socio-economic implications); (4) Integrated Approach (tourism development approach as an integrated system of area plan and development); (5) Environmental and Sustainable Development Approach (tourism approach starts from planning process, continued by developing process and managing preserved natural and cultural resources as well as performing environmental analysis); (6) Community Approach (developing tourism approach by maximizing community involvement starting from planning until decision making on aspects that affect socio-economic conditions); (7) Implementable Approach (tourism development should formulate objective plans and recommendations, as well as applicable technique and strategies); and (8) Application of Systematic Planning Approach (an approach applied in tourism planning based on logical activity).

2.2 Sustainable Tourism Concept
Butowski (2012) refers sustainable tourism [9] concept to sustainable development [10] concept which emphasizes the need for rational management of natural resources [9]. This is in line with the UN's Secretary General’s report on the need to change general concept of economic development through a clear natural resource management. Threats to the environment were main [9] issue in 1972 Stockholm UN conference [9]. The term of sustainable development was actually introduced at that time. Moreover, 1992 UN Conference in Rio de Janeiro agreed upon two important documents on the environment and development known as Rio Declaration. It contains 27 principles defining the rights [9] and obligations of countries in field of sustainable development, and AGENDA 21 [9], global action plan referring to actions needed to achieve sustainable development and high quality [9] of life.

Concept of tourism development referring to principle of sustainable development [9] has actually been discussed since 1980s. Krippendorff (1986) develops concept of alternative tourism [11]. It identifies industrial society system as small-scale, treated [9] as the right [9] choice. Ceballos-Lascurain (1987) introduced concept of ecotourism [12], since then various terms of alternative tourism emerges [9], include in: green tourism, soft tourism, nature tourism, environmental friendly/ environmentally sensible tourism [9], responsible tourism, discreet tourism, appropriate tourism, and ecoethnotourism [11,13,14,16,17,18]. These tourism model are designed under evaluation approach which juxtaposes new forms of tourism with old mass tourism model.
Butler (1980) states that sustainable tourism is the right answer in dealing with tourism problems today [18]. Butler proposes two ideas in tourism. (1) Based on semantic approach, sustainability guarantee [19] long-term survival [19] in accordance with changing market, and (2) concept of sustainable development [9], in sense of treating tourism as regional development without violating principles of sustainable development. This opinion is supported by Niezgoda, (2006) who states that conception of sustainable tourism [9] represents relationship between tourism, environment, and development, as shown in Figure 1.

![Figure 1. Sustainable tourism concept (Source: modification from various sources, 2019)](image)

Based on Figure 1, sustainable tourism is essential for tourism development itself. According to Farrell and Twining-Ward (2004), sustainable tourism must be based on interdisciplinary approach due to degree of complexity and uncertainty of people behaviour in [9] tourism system [9] that affect tourism [9] itself, yet cannot guarantee satisfactory results [9]. The approach covers fields of ecosystem ecology [9], ecological economics, global change science, and complexity theory [9]. Farrell and Twining-Ward (2004) convey new concept of sustainable tourism [20] with the term "comprehensive tourism system and complex adaptive tourism systems (CATS)" [9].

Principle of sustainable tourism [9] must consider long-term needs of natural environment, positively influence the economy sector [9], and accepted in terms of ethics and culture [9] of local [9] community. Based on the 2008 World Conservation Congress in Barcelona, it was agreed basis of sustainable tourism concept (Table 2).

| Document | Publishing subject | Year | Place of publication |
|----------|--------------------|------|----------------------|
| Charter for Sustainable Tourism | World Conference on Sustainable Tourism | 1995 | Lanzarotte, Canary Islands |
| Agenda 21 for the Travel Tourism Industry; Towards Environmentally Sustainable Development Berlin Declaration | WITC, UNWTO, Earth Council | 1995 | Madrid |
| | International Conference of Environmental Ministers on Biodiversity and Tourism | 1997 | Berlin |
Global Codes of Ethics for Tourism | UNWTO | 1999 | Santiago de Chile
The Encyclopedia of ecotourism | Weaver D.B (ed,) CABI Publishing | 2001 | Oxon (UK) – New York (USA)
Sustainable Development of Tourism, Conceptual definitions | UNWTO | 2004 | Madrid
Global Sustainable Tourism Criteria | World Conservation Congress (Rainforest Allies, UNEP, UNWTO) | 2008 | Barcelona

Source: organized from various sources, 2018

Based on Table 1, sustainable tourism must consider natural, socio-cultural, and economic [19] aspects [19] and maintain balance of these aspects.

3. Method and Research Location

3.1 Research Method
This research applies qualitative studies using Quality Function Deployment (QFD) method. This method is intended to plan and develop structured products and allows to get specific results clearly about target as desired by customer. Main focus of QFD is to involve customers during product development process as early as possible. QFD is divided into two parts, namely customer table (shows customer information) and technical table (describes technical terms in response to customer need). In detail, QFD involves four matrices of: (1) Product Planning (House of Quality/ HOQ) Matrix; (2) Product Deployment Matrix; (3) Process Planning Matrix; and (4) Production Planning Matrix [10].

![QFD matrix](Source: low cohen, 1995)

3.2 Research Location
Bandung as research location is divided into six sub-city areas (SCA), namely: (1) SCA Bojonegara, (2) SCA Cibeunying, (3) SCA Bandung Kulon, (4) SCA Maleer, (5) SCA Ujung Berung, and (6) SCA Gedebage (Figure 3).
Figure 3. A. Map of Bandung City, B. Satellite map of Bandung City (Source: processed from digital and google map, 2019)

4. Result and Discussion
Tourist attraction and object potential are basic requirement for area or city development to become tourist city. Bandung owns potential in heritage building, natural environment, and socio-cultural asset [17,21,22,23] based on 2018 Bandung profile data. Planning and assisting development of travel destination are important factors in tourism. There are six important factors in tourism planning and development, including: (1) planning must be able to increase quality growth, it requires constructive change, in addition to development of potential attractions/objects to be sold; (2) tourism policy have important role in promotional activities (based on research result); (3) tourism planning requires public and private cooperation to realize expectations of stakeholders; (4) regional and local policy planning must be able to strengthen and support tourism development; (5) regional and local policy planning must be able to stimulate business people to contribute in regional development; and (6) business planning policies should be supported by both business people and government to provide accommodations for all nature and culture attraction.

4.1 Heritage buildings: from architectural to educational tourist destination
A destination can be grouped as developing tourism object when tourism activities exist from the start. To increase tourism potential, it needs sustainable development through ecological, socio-cultural, and economic stability. In 2011, Bandung Cultural Heritage Conservation Society issued a list of 100 old buildings categorized as cultural heritage and preserved buildings, which are divided into 6 groups
Figure 4. Heritage buildings in Bandung City (Source: organized from various sources, 2018)

Of 100 cultural and heritage buildings preserved, 18 have potential to become educational destination and attraction as shown in figure 5.
4.2 Object Analysis, Tourist Attraction, and Market Analysis

Based on 2018-2023 Bandung Strategic Plan, heritage buildings in the city are object to Bandung Heritage association investigation. As many as 100 buildings are classified into six categories. Of 100 cultural heritage buildings, there are 18 buildings which have potential to become architectural tourism destination and tourism attraction. Market segmentation of both domestic and foreign visitations are natural and artificial recreation, shopping, culinary, recreation, entertainment, education or religion travel. Current market conditions are based on:

(a) Geographical aspect. Most of tourists visiting Bandung for shopping and culinary destination (52.74%), followed by educational tourism (32.56%). The origin of tourists visiting Bandung are mostly from West Java, Jakarta, and major cities in Indonesia. Tourists motivations coming to Bandung include in fun experiences, togetherness, out of routine, authentic experience, learning, refreshing, fresh physical environment, health motive, and pride.

(b) Demographic aspect. Visitors who come to Bandung are mainly women (+ 54.25%) and the rest are men. Female tourists have tendency to enjoy shopping and culinary objects in Bandung. Age of visitors ranges from 20-35 years old. Young tourists play out various activities, such as shopping, culinary, knowledge/architecture sightseeing, and others.

(c) Psychographic aspect. Besides take joy in beauty of nature and heritage buildings the city, tourists are spoiled by diverse factory outlets and culinary places offering traditional to modern foods.

(d) Behavioural aspect. Many get information about Bandung from relatives which have come and enjoyed beauty of Bandung, besides other information.

Based on actual potentials, potential market segmentation of tourism objects in Bandung can be arranged in table 3.
Table 3. Potential market segmentation

| Aspect       | Actual Market                                                                 | Potential Market                                                                 |
|--------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Geographical | The origin of tourist from the area around West Java, Jakarta, and some from major cities in Indonesia | Most of potential tourist come Most of potential tourist come
|              |                                                                              | Some are from overseas, especially Malaysia, ASEAN countries, and other Asia Countries |
| Demographic  | • Aged 20-35 years old • Students, students families • Mostly women           | • Aged 20-50 years old • Aged 20-50 years old
|              |                                                                              | • High school students, university student, executives, families, business partners |
|              |                                                                              | • Balance in number between men and women                                          |
| Psychographic| Motivation to enjoy the beauty of Bandung, besides nature and many Dutch heritage building, factory outlets, and culinary places | Motivation to enjoy the beauty of Bandung (nature and buildings left by the Dutch, factory outlets, and culinary places, architectural tourism, educational tourism, religious tourism |
| Behavioural  | Information source: relatives/friends Modes of transportation: private vehicles, tour buses, shuttle bus In a form of visits with families or friends | Information source: family/friends, relations, business, companies, websites Modes of transportation: private vehicles, tour buses, shuttle bus, airplanes In a form of visits with families or friends, business relations, company partners |

Source: organized from various sources and research results, 2018

Numerous tourist attractions makes Bandung favourite destination in Indonesia. But Bandung is still classified as transit city due to 1-3 days average hotel occupancy. Hostelry in Bandung is usually crowded only during weekends (Friday to Sunday) or school and religious holidays. For this reason, it is an opportunity for tourism service entrepreneurs to initiate tour and travel businesses packages combining tourism potential in Bandung.

There are still few tour and travel agencies take this opportunity. This potential should be considered as business opportunity outside existing standard tour package. In order to meet customer demand, market players should enclose these aspects into tour packages. Analysis in determining tour packages must meet four aspects of tourist needs, namely:

1. **Attraction**: main product of a destination. It answers question of “What to see and what to do” during travel exploration. Attraction may be in form of nature’s beauty and its uniqueness, local community culture, historical building, or artificial attraction (games and entertainment). Attractions should be unique and different from other region in order to have high value.

2. **Accessibility**: infrastructure and means of transportation to get to a destination. Highway access and road guidance are important aspects, beside reliable public transportation.

3. **Amenity**: means a supporting facility that can meet the need and desire of tourists in a destination. It includes accommodation and restaurant, or other essential facilities for tourists, such as public toilet, parking lot, rest area, praying room, and resting place.

4. **Ancillary**: related to ability to manage a destination. Even though a destination is attractive, accessible, and supported with enough amenities, it will be neglected if not well managed.

Considering potential market and tourists demand aspects, planning strategy for development of sustainable tourism in Bandung can be seen in figure 6.
Analysis on Quality Function Deployment (QFD) matrix delivers three development planning strategies as follows:

1. **Policy strategy** in form of clear travel guidelines and good tourism management will open private investment opportunities. It is also necessary to increase promotion of all potential destinations, improve quality of human resources, and socialize local regulations related to tourism development.

2. **Tourist facility and activity strategy** are needed to optimize physical quality of buildings and services. Improved access to infrastructure and facilities and excellent service will support tourism development in accordance with applicable standard.

3. **Marketing strategy** should be divided into four strategies, namely (a) **product strategy** (promoting tourism object by adding unique tourist attractions and attracting broader segments); (b) **price strategy** (carried out through changes in market behavior patterns by giving adjustments to prices); (c) **place/distribution strategy** (renowned destinations as fundamental tourist attraction which need to be socialized continuously); and (d) **promotion strategy** (built through various promotional media, including optimizing sub-variables of attractions, amenity, accessibility, and ancillary services by allocating more funds for tourism development).

5. **Conclusion**

Bandung is a popular travel destination among domestic (Nusantara) tourists, especially for its shopping and culinary attraction. Dutch heritage buildings are potential to be promoted as excellent architectural and educational tourist destination of Bandung in particular and West Java in general. Evaluation on tourism products and actual market shows that heritage buildings have great potential in developing Bandung tourism business, especially as architectural and educational tourism destination. Improvement of supporting facilities is vital to development of architectural and educational tourism. Besides, government need to allocate greater funds for tourism development as regional leading sector. Management of business object and community-based tourist attraction need to be improved. The government needs to establish stronger and sustainable cooperation with tourism stakeholder, such as
travel agent, hotel managements and academics in developing architectural and educational tourism destination.

**Acknowledgement**

In regards with completion of this research, we would like to thank parties involved, among others: LPPM UPI which grants assistance for development research scheme in 2018; students of Architecture FPTK UPI Generation 2015 and students of Faculty of Architecture, Kebangsaan University Generation 2014 for the involvement in survey and interviews; as well as other parties helping finish this research.

**Reference**

[1] Nizic M K and Drpic D 2013 Model for Sustainable Tourism Development in Croatia *Tour. South. East. Eur.* 159–73 [crossref]

[2] Kusumadewi T, Harini S, Diana I N and Segaf 2015 Development of Tourism Prigen Area Base on Structural Concepts *Adv. Environ. Biol.* 9 473–7

[3] Ministry of Tourism and Creative Economy Indonesia 2012 *Rencana Strategis Pariwisata dan Green Jobs untuk Indonesia* vol 53 (Jakarta: ILO Country Office Jakarta)

[4] Breakey N M 2005 *Tourism Destination Development – Beyond Butler* (University of Queensland)

[5] Miller G, Twining-Ward L, Bakker M, Carbone G, Duka T, Farrell B, Font X, Jack E and Tapper R 2005 Monitoring for a sustainable tourism transition: The challenge of developing and using indicators *Monitoring for a Sustainable Tourism Transition: The Challenge of Developing and Using Indicators* pp 1–324

[6] Pernice R 2006 The Transformation of Tokyo During the 1950s and Early 1960s Projects Between City Planning and Urban Utopia *J. Asian Archit. Build. Eng.* 9 473–60 [crossref]

[7] HIGHAM J 2007 Ecotourism: competing and conflicting schools of thought *Crit. Issues Ecotourism* 1–19 [crossref]

[8] Harrison D 2015 Development theory and tourism in developing countries: What has theory ever done for US? *Int. J. Asia-Pacific Stud.* 11 53–82

[9] Butowski L 2012 Sustainable Tourism – A Model Approach *Visions Glob. Tour. Ind. - Creat. Sustain. Compet. Strateg* [crossref]

[10] Das D and Mukherjee K 2007 A QFD approach to addressing the impacts of tourism development *J. Qual. Assur. Hosp. Tour.* 8 1–38 [crossref]

[11] Shelley M and Krippendorff K 1984 *Content Analysis: An Introduction to its Methodology.* vol 79 (London and New Delhi: Sage Publications)

[12] Ceballos-Lascurain H 1987 The future of ‘ecotourism’ *Mex. J.* 13–4

[13] Boo E 1990 *Ecotourism: the potentials and pitfalls: country case studies* (Washington, DC.: World Wildlife Fund)

[14] Cater E and Lowman G 1994 *Ecotourism: a sustainable option?* (New York: Wiley)

[15] Niezgoda A 2006 *Obraz recepcji turystycznej w warunkach rozwoju zrównoważonego (Poznaniu: Wydawnictwo Akademii Ekonomicznej w Poznaniu)

[16] Dwi W. H and Subekti N. B 2017 Upaya Indonesia Meningkatkan Pariwisata Maritim melalui Diplomasi Kebudayaan di Asia Tenggara *Indones. Perspect.* 2 51

[17] Saepudin E, Budiono A and Halimah M 2019 Pengembangan Desa Wisata Pendidikan Di Desa Cibodas Kabupaten Bandung Barat Sosiohumaniora 21 [crossref]

[18] BUTLER R W 1980 the Concept of a Tourist Area Cycle of Evolution: Implications for Management of Resources *Can. Geogr. / Le Géographe Can.* 24 5–12 [crossref]

[19] Butowski L 2019 Tourist sustainability of destination as a measure of its development *Curr. Issues Tour.* 22 1043–61 [crossref]

[20] Farrell B H and Twining-Ward L 2004 Reconceptualizing tourism *Ann. Tour. Res.* 31 274–95 [crossref]

[21] Purnamasari A M 2011 Pengembangan Masyarakat Untuk Pariwisata di Kampung Wisata
Toddabojo Provinsi Sulawesi Selatan J. Reg. City Plan. 22 49–64

[22] Pratama A and Octavia D 2016 Analisis Faktor Sustainable Tourism Di Kota Bandung Factor Analysis of Sustainable Tourism in Bandung City 3 1272–8

[23] Rusdi J F 2017 Kolaborasi Pariwisata Bandung Raya (Bandung: Informatika)