RETHINKING SUSTAINABLE TOURISM DEVELOPMENT IN SURAKARTA CITY, INDONESIA

Presentation of Thesis Progress

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Research Progress
# Research Timeline

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- **Done**
- **In Progress**
- **Next Tasks**
Outline

• Current Status of Thesis Work
• Introduction
• Objectives
• Literature Review
• Methodology
• Preliminary Finding and Analysis
Introduction
Introduction

• Sustainable tourism is part of sustainable development which deals with environmental protection, economic viability and social equity.

• Sustainable tourism is defined as tourism that takes full account of its current and future economics, social and environmental impacts, addressing the need of visitors, the industry, the environment and host communities (UNWTO, 2015).

• The purposes of sustainable tourism are to make optimal use of environmental resources, respect the socio-cultural authenticity, ensure long-term economic operations and providing socio-economic benefits to all stakeholders.

• Sustainable tourism has been examined from different perspectives: economic, cultural, social and spatial.

• Sustainable tourism has received scant attention.

• This research attempts to rethink the sustainable tourism by modelling environmental, economic and transportation indicators in the City of Surakarta.
Introduction

- Tourism sector has contributed **27% of total GDP of Surakarta** City in 2013. By the same token, the level of *hotel occupancy* was 47% and *of length of stay rate of local tourist* was 1.42 local tourist and *foreign tourist* was 2.2 days in 2016.

- Surakarta’s development policies deal with *heritage, economic development, ecology, infrastructure development, community’s involvement and public private partnership*.

- In Surakarta, there are 3 main destinations for tourism which are called the “*Golden Triangle*” are located within walkable distance but developed without integration.

- In building a sustainable tourism model and due to the dearth of published quantifiable data on economy, environment, transportation, energy on Surakarta, this research employs national averages of Indonesia for the above criteria. **None quantifiable data has been excluded** in the model namely, heritage, community’s involvement and public private partnership.
The importance of sustainable tourism

• Tourism *encourages the general welfare for local people* because the income is distributed directly to local people.

• In economic sector, the positive impact of tourism will create jobs for local people and increase local tax.

• In environmental sector, sustainable tourism concept will preserve the natural resources, maintain conducive nature, and tackle any pollution and environmental degradation

• Surakarta’s rapid growth of tourism, albeit necessary for hotels, restaurants and retails, etc. warrant careful consideration of natural resources to avoid negative impacts on host communities and the environment.
What Makes Tourism Sustainable?

Sustainable Tourism Development

**ECONOMY**
Attractiveness

- Local Communities
  - Job generation
  - Local Income Increase

**ENVIRONMENTAL & SOCIAL**
Conservation

- Tourist
  - Cityscape
  - Tradition/Performance

- Physical
  - Building & Cityscape
  - Maintenance (Money)
  - Planning (Zoning)

- Non-Physical
  - Identity & Tradition
  - Education
  - Life Value
Why do we need to Rethink Sustainable Tourism in Surakarta?

The concerns for Surakarta’s Tourism have been spilled out in the city’s action plan of 2015.

<table>
<thead>
<tr>
<th>Natural Disaster</th>
<th>Physical and non-physical degradation</th>
<th>Development Pressure of Rapid Urban Growth</th>
<th>Government and Regulations</th>
<th>Low quality of human resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Flood, earthquake, fire</td>
<td>• Riot and human vandalism • Modernisation and apathetic</td>
<td>• Urban structure and morphology change &amp; Land conversion</td>
<td>• Rules enforcements are not firm to punish the trespassers</td>
<td>• Low participation • The number who concern to heritage preservation is limited</td>
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Source: Action Plan of Surakarta Heritage City 2015-2035.
Literature Review
Literature Review

• The review of literatures has covered sustainable tourism, modelling, multi-criteria evaluation, measurement and data normalization.

• Sustainable tourism quantitative indicators consists of economic (38 indicators), social (28 indicators) and environmental (24 indicators) dimensions, was addressed by United Nations World Tourism Organization (UNWTO) in 2005.

• Blancas, F. J. et al. (2011) suggested a method for obtaining sustainability indexes by aggregation that reduces the subjectivity associated with the composite indicator.

• Lozano-oyola, M. et al. (2012) presented an indicator system to evaluate sustainable tourism at cultural destinations and suggested a method based on goal programming to construct composite indicators.

• Torres-Delgado, A. and Palomeque, F. L. (2014) employed those indicators and synthesized them into 26 indicators of social, economic and environment using Delphi Method (scientific consensus) then calculated for 20 cities in Spain.
Literature Review

• Research about indicator weighting is an important issue in the measurement of tourism sustainability that has a significant effect on the rankings of analysed regions and subsequent policymaking (Mikulic, J., Kožic, I. and Krešić, D., 2015).

• Using GIS and Exploratory Spatial Data Analysis (ESDA), Sarrión-gavilán, M. D., Benítez-márquez, M. D. and Mora-rangel, E. O. (2015) analyzed tourism flows and their impacts with specific reference to the provision of accommodation and size of local population.

• Oppio, A. et al. (2015) explored the use of multicriteria-spatial decision support systems (MC-SDSS) in order to define enhancement strategies for cultural built heritage. The integration among different evaluation methodologies (SWOT analysis and analytic network process) and tools with spatial analysis strengthens the explorative role of this kind of approaches.

• Predictive toolkit for urban heritage in relation to urban cultural endangerment was developed to analyse and forecast urban growth and provided seemingly and timely information on the risk of overburdening the carrying capacity regarding the historic-cultural heritage at local and regional levels (Noronha, E. De et al., 2012).
Conclusions of Theoretical and Methodological Framework

• There appears to be no study that has addressed sustainable cultural tourism indicators in a generic quantitative evaluation model which can be generally applied to every single city.

• Furthermore, a special study about spatial evaluation of tourism in Surakarta City is in planned but has not been scientifically conducted yet.
• How to measure tourism sustainability performance in Surakarta City?
Objectives

• The primary objective of this research is to rethink the sustainable tourism development in Surakarta.

• The secondary objectives are:
  • To build a multi-criteria evaluation model for the measurement of sustainability indicators, namely: economic, environment, transportation and energy.
    • To set out benchmark for indicators from multiple sources.
    • To normalize data for modelling and calculation.
    • To test the proposed model on 10 pilot cities and validate it to Surakarta.
  • To review the relevant literature on sustainability, sustainable tourism, multi-criteria evaluation and modelling in order to establish theoretical and methodological frameworks for the evaluation of sustainable tourism.
  • To propose appropriate policies for future tourism in Surakarta.
Research Framework

Rethinking Sustainable Tourism

- Indicators
- Existing Condition
- Literature Review
- Criteria and Indicators Selection
- Benchmark Setting
- Model Testing and Validation
- Data Normalization

Model Development

Model Testing and Validation

- Score Cumulative & per Criteria
- Sustainable Tourism: Yes / no

Analysis

- Future Condition
- Descriptive Analysis
- Spatial Impact Analysis
- Target / Expected Condition

Proposed Policies

Comparison

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How does this research work?

Current Model (Past – Present – Future Tourism Trend)

Illustration with dummy data
Methodology
Proposed Multi-Criteria Evaluation Model for Sustainable Tourism

• Criteria and Indicator Selection
• Data Normalization
• Benchmark Setting
• Model Testing: 10 pilot cities
• Model Validation: Surakarta City
Selected criteria and Indicators

• The criteria and indicators are adapted from multiple sources, including:
  • UNWTO, 2005
  • World Bank, 2015
  • Lozano-Oyola, M. et al. (2012)
  • Sala, S., Ciuffo, B. and Nijkamp, P. (2015)
  • Njoroge, J. M. (2014)
  • Swarbrooke, J. (1999)
## Key Performance Indicators of Sustainable Tourism

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Parameter</th>
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<tr>
<td>Economic</td>
<td>Contribution of tourism to GDP</td>
<td>Percentage of GDP attributable to the activities of Hotels and Restaurants</td>
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<td>Contribution of tourism employment to total employment in the city</td>
<td>Percentage of employee in the tourism sector with respect to the total volume of employment</td>
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<td>The land-use planning, including for tourism</td>
<td>Percentage of soil surface intended for services and residential uses</td>
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<tr>
<td>Environment</td>
<td>Intensity of tourist use</td>
<td>Total tourists per unit area</td>
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<tr>
<td>Transportation</td>
<td>Access to the destination</td>
<td>Proportion of roads and railway that can be accessed by private and public transportation to the tourism site</td>
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<tr>
<td></td>
<td>Public Transportation</td>
<td>Proportion of tourists using public transportation to the site</td>
</tr>
<tr>
<td>Energy</td>
<td>Energy Consumption</td>
<td>Total energy consumption in tourism sector</td>
</tr>
<tr>
<td></td>
<td>Renewable Energy</td>
<td>Percentage of energy renewable consumption from renewable sources</td>
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Tourism in Surakarta City
History of the City of Surakarta

Kasunanan / Kingdom Era (1745-1856)

Keraton/Palace were symbol of governance where must be located in the center between the four directions of the wind and surrounded by its domains.

Colonialism Era (1857-1945)

Urban development was emphasized on the functions than symbolizations, which supported its main activities, e.g. trading, warehousing,, governance and leisure.

Post Colonialism (1946-1994)

The governance was taken over by Mayor which then established Keraton as important asset of Surakarta that should be conserved with its traditions.


Tourism potential began to be realised as important sector on 1995-2000 in 5 major activities with tourism as its first concern, through heritage asset inventory.

Surakarta at Present

• Surakarta is planning to be listed in World Heritage Cities through the Rencana Aksi Kota Pusaka (action plan of Surakarta heritage city) 2015-2035.

Development Sector of Surakarta City

PERCENTAGE OF GDP DISTRIBUTION 2016 (%)

- Manufacture: 9%
- Construction: 27%
- Retail Trade: 22%
- Accommodation and Restaurant: 6%
- Information and Communication: 10%
- Finance and Insurance: 4%
- Real Estate: 4%
- Others: 18%

Hotel Occupation Rate 2016 (%)

Worker Status in Tourism Sector, 2016 (%)

- Permanent: 59%
- Non-Permanent: 41%
Vision of Surakarta City Development

• Vision:

"The realization of Surakarta City as a Safe, Convenient, Productive, Communicative and Sustainable National Activity Centre based on Industrial Potential with emphasis on Creative Industry, Tourism, Trade / Services, Education and Sports Industry".

• Missions:
  • Integration of governments, private sectors and local communities
  • Local Economic Development
  • Infrastructure Development
  • Inventory, Analysis and heritage establishment
  • Information, Education and promotion
  • Mitigation of natural disaster risk

Source: Master Plan of Surakarta City 2007-2026.
Economic Generation

Heritage Building

Culinary

Arts Performance

Crafts
Surakarta in the Future

• Surakarta is prepared to be World Heritage City through the Action Plan of Surakarta Heritage City 2015-2035. The main focus of development are:

• Tourism Development Strategies
  • Stakeholders Involvement
  • Heritage asset inventory
  • Increasing the promotion intensity through digital media
  • Promoting Local Economic Development
  • Disaster Management

• The establishment of priority area
  • 5 priority area: zero point, Kasunanan palace, Sriwedari, Mangkunegaran, Laweyan

• Spatial plan of the heritage area
  • Conservation, Development and Utilization

• In Surakarta, there are 3 main destinations for tourism which are called the “Golden Triangle” are located within walkable distance but developed without integration.

Map of Building Heritage
Location
Surakarta City
Priority Area of Tourism Development in Surakarta City

Source: Action Plan of Surakarta Heritage City 2015-2035.
Pura Mangkunegaran
A part of palace area where crown families lived and become main heritage asset for tourism today.

Keraton Surakarta
It was a center of government in the Kasunanan Era. Today, some crowns family and their servants still live there.

Pasar Gede
The main traditional market that still operated and also categorized as heritage building.

The Golden Triangle Tourism Area

Source: Action Plan of Surakarta Heritage City 2015-2035.
Physical Urban Redevelopment Strategy

Batik Village
Golden Triangle

Physical Urban Redevelopment Strategy

Golden Triangle
Physical Urban Redevelopment Strategy

Public Transportation
Physical Urban Redevelopment Strategy

Cityscape
Preliminary Finding and Analysis

• Surakarta released the Action Plan to develop the tourism sector, yet it’s only based on qualitative research without proper scientific approach and impact analysis in the future.

• Evaluation model is developed based on simple arithmetic approach.

1. The model starts with data normalization shown in Eq. 1 and 2.
   ▶ \[ y_i = \frac{x_i - x_b}{x_b} \] (1)
   ▶ \[ y_i = \frac{x_b - x_i}{x_b} \] (2)
   where \( y_i \) is normalized data of assessed object on \( i \) indicator, \( x_i \) is original value of the object on \( i^{th} \) indicator, \( x_b \) is benchmark value of \( i^{th} \) indicator. While Eq.1 is used for indicators with positive effects on carbon emissions level, Eq.2 is used for indicators with negative effects.

2. The calculation is shown in Eq. 3
   ▶ \[ S_t = \sum_{c=1}^{c}(S_c \times w_c) \] (3)
   where \( S_t \) is the total score of assessed city, \( w_c \) is the weight factor of \( c \) category, and \( S_c \) is total score of \( y_{ic} \) in \( c^{th} \) category.
Preliminary Constrains

• Limited sustainable tourism city preferences that have been established by international organization and researches.

• Difficulties on the benchmark setting which can represent and be used in every city.

• There is no quantitative target of Surakarta Development, instead, national target will be used as references.
Thank You

جزاكم الله خيرا كثيرا

ايريثك اريريخ الله مكازج

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