
Encouraging Sustainable Urban Tourism through Understanding Environmental Knowledge and Supporting Environmentally Friendly Behavior for Urban Tourists in the West Java Region

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Abstract

The problem raised in this study is that tourism not only aims at the number of visitors but also talks about sustainability issues, where uncontrolled urban tourism activities have an impact on urban tourism sustainability in the long term in environmental, social, cultural, economic and health and safety aspects. Research conducted by researchers related to environmentally sustainable urban tourism is still considered very relevant, where the development of tourism concepts can have a long-term impact on the environment, social, cultural, economic and health as well as safety for the present and future for all local communities and tourists who visit. The purpose of this study is to develop a conceptual framework model from our research by testing and analyzing the influence of environmental knowledge on sustainable urban tourism. And the effect of mediating environmentally friendly behavior variables between environmental knowledge and sustainable urban tourism

Keywords: *Environmentally, Sustainability, Urban Tourism, Value Belief Norm*

INTRODUCTION

The development of urban tourism activities will have a lot of impact on environmental conditions, for example waste and air pollution problems. For example, crowded tourist locations will produce a large amount of garbage and waste, vehicle noise and air pollution levels, and are prone to damage to the environmental ecosystem (Rahayu et al., 2022). This condition is also felt by the management of urban tourist attractions at a time when tourist locations experience an increase in visitors. For example, in the momentum of the Eid holiday in one of the cities in western East Java, namely Madiun City, where the city's tourist locations experienced an increase in the number of tourists which had an impact on increasing the amount of waste from weekdays of 129 tons per day of waste production increased to 133 tons per day. The increase in waste production of 4 tons per day comes from household waste, leftover food and beverage packaging from shopping centers, restaurants and tourist sites.

The description of potential environmental problems related to waste production from urban tourism activities needs to be anticipated, considering that

sustainable urban tourism in small cities has opportunities to develop like urban tourism in big cities. For example, the potential and opportunities of Madiun City which has great potential as a future tourist city are expected to have a sustainable urban tourism destination. Madiun City tourism has so far developed into three urban tourism models, namely: modern tourism, cultural heritage tourism and religious tourism. For modern tourism, it is an educational tour and shopping center including: PSC (Pahlawan Street Center), Edu Park Ngrowo Bening, Edu Park Pecel Land, Sugarcane Cigarette Factory, Sugarcane Factory, and other locations. Cultural heritage tourism in Madiun City includes: Chinese Capitaton House, Military Detention House, Madiun City Hall, Bakorwil Complex. For religious tourism, it includes: Kuncen Tomb and Mosque, Garden Ancient Tomb and Mosque, Donopuro Tomb, Great Mosque, Saint Cornelius Church, Hwieing Kiong Temple (Madiun City Disubparpora, 2024).

To realize the sustainability of urban tourism destinations, Madiun City Regional Regulation Number 6 of 2021 concerning the Madiun City Tourism Development Master Plan for 2020-2035 was issued. This Regional Regulation has the scope of Regional Tourism development which includes: development of regional tourism destinations, tourism marketing development, tourism industry development and tourism institutional development.

This policy related to urban tourism is not only to reduce the negative impact of declining environmental quality, but also to anticipate the level of urbanization. Based on a report from The Comparative Urban Studies Project in Woodrow Wilson. explained that the development of the urban population is relatively high, and it is even predicted that by 2050, there will be 85% of the world's population living in urban areas. If you look at the conditions in Indonesia, according to World meters data (2022) the number of urban residents in Indonesia is increasing. In 2020, the urban population was 154.2 million people or 56.4% of Indonesia's total population of 273.5 million people. This figure will increase in 2025 to reach 170.4 million people or 59.3% of Indonesia's total population of 287 million people. The success of the city in developing urban tourism will be followed by an increase in urbanization which can increase residential density in the city area. Of course, the condition will also have the impact of decreasing the quality of the environment as a sustainable urban tourism area.

Sustainability urban tourism in this study is carried out with a Value Belief Norm (VBN) theoretical approach which is a development of the Norm Activation Theory (NAT). VBN is based on the idea that values are uncontrollable and intangible even though they affect beliefs. Conversely, beliefs can be altered through the knowledge that individuals possess, where knowledge contributions can shape norm-driven behaviors (Onel & Mukherjee, 2017). Therefore, this study recommends a model to encourage specific behaviors that are responsible for the environment, such as the prevention of littering. This study adopts the framework proposed by Park et al., (2022), Fenitra et al., (2022) which is supported by the Value Belief Norm (VBN) theory in the context of sustainable urban tourism.

The concept of the research model is related to sustainable urban tourism as a solution to protect environmental resources, respect local culture and social development, and ensure long-term economic benefits at the local, national and

international levels (Lozano-Oyola et al., 2012). Sustainability urban tourism is influenced by environmentally friendly behavior (Park et al., 2022). Environmentally friendly behavior is an individual action or activity directed to prevent environmental problems (Ren et al., 2021). This concept originated from the field of environmental sociology in the 1960s, where environmentally friendly behavior is also made as pro-environmental behavior, and conservation behavior to describe the responsible behavior of individuals in protecting the environment (Manika et al., 2015).

The concept of this research was developed from the results of research conducted by Fenitra et al., (2022) who researched related to environmentally responsible behavior using the Theory Value Belief Norm (VBN) approach. The suggestions given for the development of the next research model are: it is necessary to compare the perception of international and domestic tourists related to environmentally responsible behavior. Consider approaches with qualitative and experimental analysis to support and deepen the quantitative results of the relationship between variables. The researcher is also recommended to add a research framework model with variables of actual behavior of tourists who are responsible for the environment. The limitation of this study is known to be the absence of indirect influence between variables, so researchers can then add mediation variables to test the direct and indirect influence of each exogenous variable on the intention to behave responsibly towards the environment.

Referring to the previous research model that is a reference in this study, a development research model was developed by adding environmental knowledge variables as exogenous variables that are predicted to have an influence on environmentally friendly behavior and sustainable tourism development. Understanding environmental knowledge is a person's ability to identify a number of symbols, concepts, and patterns of behavior related to environmental protection. Furthermore, environmental knowledge is the basic knowledge that consumers have about various things that can be done to help environmental protection activities facilitated by a behavioral commitment to buy environmentally friendly products (Adiputra et al., 2023).

This research model will be tested on local tourists in urban tourism in western East Java, the selection of this location is based on the argument that the development of urban tourism in western East Java has a policy that leads to sustainable urban tourism by considering environmentally friendly tourist locations and prioritizing environmentally friendly products for tourists. One of the western East Java regions, namely the city of Madiun, also has a leading tourist location in the "Pahlawan Street Center" (PSC) area on street Pahlawan, Madiun City. Tourists can explore several countries at once and be satisfied with taking pictures with a number of world icons, including: taking pictures with a miniature Merlion statue in the background and feeling like visiting Singapore, taking pictures with a miniature Kaaba as if performing Umrah, and taking selfies with a miniature Eiffel Tower as if on vacation in the Romantic City of Paris. Take a photo in front of the statue of Liberty, the Shinkansen and many more selfie locations with world icons. To increase the attractiveness of urban tourism, in 2024 rafting tourism will be built

at the Madiun City Center by utilizing the flow of mail in the middle of Madiun City (Madiun City Disubparpora, 2024).

Theory Review

The Theory Value Belief Norm (VBN) emerged in 2000 which is a development of the Norm Activation Theory (NAT). NAT is a theory that offers a framework for discussing prosocial behavior triggered by personal or individual moral obligations. VBN developed by Stern (2000) postulates the value-belief-norm theory (VBN) which is based on the development of NAT, which takes a broader belief in the biosphere caused by human actions. VBN causally explains the initiation of environmental realization at the individual level in accordance with the individual's personal values (Wensing et al., 2019).

Value Belief Norms Theory explains the activation of personal and social norms to empower the intention to engage in pro-environmental behavior. Pro-environmental behavior is a conscious action taken to reduce the adverse impact of one's actions on nature, minimize the use of resources, and reduce waste or energy consumption (Wynveen & Sutton, 2015). Based on the VBN theory, the following research concept framework is made:

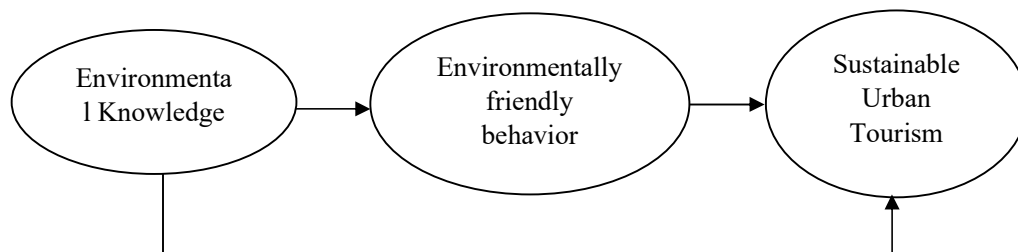


Figure 1 Conceptual Framework

The figure above shows that environmentally friendly behavior is triggered by environmental knowledge and has an impact on achieving an increase in urban tourism sustainability.

METHOD

The research design used in this study is explanatory research or explanatory research. This type of research is fundamental research, namely research that refers to empirical studies with the aim of developing existing theories or testing new model concepts from model modifications that have been made by previous researchers (Riyanto & Hatmawan, 2020). The method used in this study is a survey method, namely a study that takes a sample and a population and uses a questionnaire as a data collection instrument because the variables of this study were obtained in the same period of time. The population in this study is local tourists who visit tourist sites in Madun City, the number of samples in this study is 385 people. The variables in this study consist of environmental knowledge, environmentally friendly behavior and sustainable urban tourism, with the following indicators

Table 1 Research Indicators

Variable	Indicator
Environmental Knowledge	<ol style="list-style-type: none"> 1. Prevents littering which can help remove unpleasant odors from litter and reduce the spread of harmful organisms 2. Excessive waste knowledge will damage the environment of tourism destinations
Environmentally Friendly Behavior	<ol style="list-style-type: none"> 1. Willing to engage in environmentally friendly behavior 2. Willing to visit eco-friendly destinations 3. Willing to buy eco-friendly products 4. Willing to allocate money and time to eco-friendly tourism activities
Sustainable Urban Tourism	<ol style="list-style-type: none"> 1. Environmental aspects 2. Socio-cultural aspects 3. Economic aspects 4. Health and safety aspects

Source: Adopted from research Fenitra et al., (2022), Park et al., (2022), Durovic & Lovrentjev (2014); Handbook-Destination-CHSE., (2020); Kurniati et al., (2023)

RESULTS AND DISCUSSION

Based on the results of statistical analysis, it is proven that the environmental knowledge variable has a positive and significant effect on sustainable urban tourism in East Java. The amount of contribution of environmental knowledge to increase sustainable urban tourism based on the value of the path coefficient is 0.121 or 12.1%. The results of this study can be interpreted that sufficient environmental knowledge in tourists will increase sustainable urban tourism from the comfort and cleanliness of the environment in urban tourist locations. In addition, the results of statistical analysis for indirect influence tests prove that environmental knowledge has a positive and significant effect on environmentally sustainable urban tourism through the mediation of environmentally friendly behavior. This can be interpreted that environmentally friendly behavior has a contribution to increasing the influence of environmental knowledge on sustainable urban tourism in East Java.

Respondents' responses related to environmental knowledge were highly rated and respondents had a good understanding of environmental knowledge. This can be seen from the statements of respondents who stated that reducing the amount of waste at tourist sites can start from oneself. This shows that respondents have good awareness and understanding in protecting the environment based on their knowledge. The statement made by the respondents is in accordance with the reality at tourist sites, where the availability of garbage cans at tourist sites is easy to find and makes it easier for visitors to dispose of garbage in its place. On the other hand, MSME traders at the location also provide independent trash cans to facilitate buyers who will dispose of waste. This shows that the local community and visitors have become aware of disposing of garbage in its place.

The results of this study are in accordance with the research of Rahayu et al., (2022) that environmental knowledge contributes to shaping environmental protection behavior. Individual contributions to protecting the environment are manifested in behavior to use environmentally friendly products wherever they are. The decision to use environmentally friendly products made by individuals is based on the level of environmental knowledge that they have so far. Regarding environmental problems in tourist areas, there may be some tourists who ignore the correct rules or procedures in protecting the environment, for example throwing garbage in any place. This is due to the low knowledge and attitude of tourists about how to behave well and harmoniously when in public places. To increase understanding of the importance of a clean environment, several appeal boards have been installed to maintain cleanliness. This appeal board is in the form of posters, banners and pamphlets containing appeals to maintain cleanliness.

Research by Fuchs (2023) and Ghosh & Satya Prasad (2024) also confirms that environmental knowledge shapes attitudes and behaviors that lead to intentions to maintain environmental sustainability. On the other hand, there are also tourist locations that make appeal boards with interesting and unique words so that they are easy to remember by supporters. This activity is carried out as an educational medium for tourists to be active and participatory in maintaining the cleanliness of the environment at tourist sites. On the other hand, tourism managers also realize that knowledge and understanding from tourists related to environmental cleanliness have different levels that have an impact on tourist behavior in maintaining cleanliness at tourist sites. To always remind the importance of maintaining environmental cleanliness for the sustainability of urban tourism, the manager makes a cleanliness education board in every corner of tourist attractions with various and attractive shapes.

CONCLUSION

The results of the study support the Value Belief Norm (VBN) theory which has high relevance related to environmental issues at this time. The environmental issues discussed in this study are associated with environmentally sustainable urban tourism, where the sustainability of urban tourism is significantly influenced by environmental knowledge and environmentally friendly behavior. This provides information that urban tourism sustainability has a strong relationship and is influenced by environmental issues

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