

Measuring the tourism sustainability of Asian cities: An analysis of STM (Sustainable Tourism Model) technique

Vijay Pandey*

Delhi School of Economics, University of Delhi, India

Research Abstract

Sustainable tourism, sustainable tourism development and sustainable principles are, within the framework of a sustainable development. The main concepts both tourism researchers and practitioners are trying to understand, develop, integrate and apply. Tourism planning processes have been analyzed, sustainable strategies identified and optimal goals defined. The theoretical discussion has progressed considerably. The problem is that the theoretical discussion seems to be too far ahead and too abstract in comparison to the development found on an operational level. Given the complexity of the issues surrounding the concept of sustainable tourism, the current manuscript tries to provide a unified methodology to assess tourism sustainability, based on a number of quantitative indicators. The proposed methodological framework (Sustainable Tourism Model- STM) will provide a number of benchmarks against which the sustainability of tourism activities in various countries can be assessed. The methodology used includes the following steps: identification of the dimensions (economic, socio-ecologic, infrastructure) and indicators, method of scaling, and chart representation. To illustrate the usefulness of the STM, tourism sustainability is assessed in developing Asian countries i.e., India, Malaysia and Thailand. The preliminary results show that a similar level of tourism activity across countries might induce different economic benefits and might have different consequences for the socio-ecological environment. Therefore, the STM is a useful tool to assess the heterogeneity of developing countries and detect the main problems each country faces in their tourism development strategy.

Keywords: Sustainable development; Sustainable tourism; STM model; Asian countries

* Corresponding author. Tel.: +91 8860197531.

E-mail address: vijay.dse15@gmail.com (V.Pandey).

An overview of the study:

The selection of a core set of indicators for sustainable development of tourism necessarily depends on the understanding of the two concepts: sustainable development and sustainable tourism. Various ways to tackle the problems of interpretation of these and similar concepts have been described in the literature reviewed within this project. This discussion is especially important as the meaning or definition of the word sustainability very much depend on the professional background, the general knowledge and also the ethical and ideological orientation of the different authors. As a starting point for the discussion, some examples of the proposals or definition put forward by different authors will be given in the following.

Sustainable Development:

The concept “sustainable development” was widely accepted by the international community after the presentation in the Brundtland Report (Our Common Future) in 1987. It was described as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. Although the wording is easy to understand, it has been criticized for being difficult to apply for more practical planning purposes within different sectors. In the handbook on national accounting (2003) the capital approach of sustainable development is discussed. Within this discussion a interpretation of sustainable development from a capital standpoint is as follows “Sustainable development is development that ensures non-declining per capita national wealth by replacing or conserving the sources of that wealth; that is, stocks of produced, human, social and natural capital”. The concepts of weak and strong sustainability are also discussed from the point of view of the natural capital substitutability.

The definition of the concept environment has been discussed by Holden (2000). The human environment is understood as consisting of the sum of external conditions, including physical, social, cultural, economic, political dimensions. Furthermore, this book includes a discussion about the various ways to interpret “sustainability” and “sustainable tourism”. The latter can be interpreted as the sustaining of tourism at a specific destination. On the other hand tourism may also be looked upon as the means to achieve a “sustainable development” within a much wider region, including e.g. conservation of animals and landscapes due to tourist’s preferences and expenditures.

Sustainable Tourism:

After the almost global acceptance of the expression "sustainable development", although it might have been in the very general way, as mentioned above and described by Bramwell (2004), there has been a development within various sectors or academic fields trying to incorporate the concept of sustainability into the understanding and practice of the different sectors or areas. This is true also for tourism. But as could be expected, the lack of a more precise definition of the concept sustainability, means that there is a similar confusion about what should be meant by "sustainable tourism".

Objective of the research study

The objectives of this research paper is based on the methodological work carried out in the field of tourism and environmental research to put together a methodological framework for the measurement of the sustainable development of tourism and to test a selected number of indicators described in the manual. The results of the study provide recommendations on how to compile statistics on tourism sustainability and concentrate specifically on the definition of sustainable development in the terms of tourism statistics. Both the positive and negative impacts of tourism in this field are considered.

Sustainable Tourism Indicators (STI)

Most studies assessing tourism activities often deal with one aspect of tourism. For instance, the economic impact of tourism activities is usually estimated on the basis of data on number of arrivals, receipt per tourist, average length of stay and other economic indicators. In order to correctly estimate tourism activity and tourism's impact on national economies, some studies have developed tourism account methodologies (e.g. Frechtling, 1999). Other studies have focused on the use of tourism resources (natural, cultural, etc). However, a growing literature deals with the sustainability assessment, trying to develop indicators and provide methodologies for sustainable tourism. For instance, Miller (2001) focuses on the development of indicators measuring tourism sustainability. Unlike many studies that cover only the physical and human environment, Miller (2000) presents several indicators covering all aspects of sustainability: environmental issues (physical and human), employment, financial leakages and customer's aspects (satisfaction levels, etc.).

Methodological Framework of the manuscript:

The main reason for a comprehensive methodology aimed at improving the prospects for sustainable tourism in developing countries stems from the growing importance of tourism activity in developing countries. Tourism has already emerged as one of the world's most important socio-economic sectors, and has been steadily expanding at an average rate of about 4-5 per cent annually. The combination of domestic and international tourism is now acknowledged as comprising the world's "largest industry". In 1995, tourism globally generated an estimated US\$3.4 trillion in gross output, contributing 10.9 per cent of the world's gross domestic product (GDP), creating employment for about 212 million people and producing \$637 billion in government tax revenues.

The Sustainable Tourism Measurement (STM) Model

The objective of the STM is two-fold. Firstly, this methodology should be able to detect the sustainability problems in a tourism destination. Secondly, using benchmarks and policy relevant indicators, the methodology should enable policymakers to make informed decisions and improve the prospects for sustainable tourism development in their countries. The following steps were followed to construct STM. First, seven key dimensions were singled out, namely:

1. Tourism assets;
2. Tourism activity;
3. Tourism-related linkages;
4. Tourism-related leakages;
5. Environmental and social sustainability; and
6. Overall infrastructure
7. Attractiveness

The STM framework is based on several dimensions (assets, activity, linkages, leakages, sustainability, infrastructure and attractiveness) and the complex interaction between these interactions. Such a framework will make it possible to create a descriptive map of the score for individual countries on each dimension (assets, linkages, etc.), but will also allow a comparison of different countries in different areas. Moreover, the framework allows us to address specific tourism-related issues in developing countries by analysing various linkages between specific areas.

Conclusions

Based on the extent to which it has been quantified and discussed in cross-country analyses, the concept of sustainable tourism is still considered to be in its infancy. The current manuscript tried to fill this gap by providing a simple methodology to assess tourism sustainability, based on a number of quantitative indicators. The proposed methodological framework would allow the creation of a comprehensive database against which the sustainability of tourism activities in various countries can be assessed. The STM methodology developed in this paper relies on quantitative indicators that are policy-relevant and, as such, it is hoped that it will become a useful tool for decision-makers, researchers and businesses involved in tourism activities in developing countries. The usefulness of the STM methodology is illustrated by using three case studies: India, Malaysia and Thailand. While the STM methodology used in this paper may need further refinement and elaboration, the results and findings obtained suggest that the STM can become a valuable tool for researchers and policymakers involved the assessment and design of sustainable tourism strategies. This illustration shows us that an equal level of tourism activity might induce different sorts of improvements and might have different consequences on development. Some countries therefore need to increase the number of tourists' arrivals, while others have to extend length of stay or receipts per tourists. Furthermore, the STM can be extended to other fields linked to tourism activity, in particular by expanding the analysis of leakages. The main advantage in following this methodology is that grouping many countries into one analytical toolbox is relevant and does not remove the heterogeneity aspect, contrary to Ko (2004) argument. Indeed, the heterogeneity of developing countries is useful to detect the main problems of each country in their tourism activity. Therefore, The STM could form a solid basis for a rigorous analysis that could shed further light on the main problems detected by conducting country specific studies by following a consistent methodology that allows comparability of results across tourist destinations