Sustainable Tourism Development in the South-West Region of Bangladesh

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Abstract: Tourism can play an important role in accelerating the economic growth of Bangladesh. This study tries to address the tourism sector of Bangladesh from sustainability viewpoint. The study selects four tourist spots in the south-west region of Bangladesh to address the study objective and collects primary data from the tourists of the selected spots through using interview schedule. Accordingly, it tries to trace out the prevailing situation of the tourist spots. It also attempts to trace out the factors determining the probability of future trip generation towards the spots. The study findings indicate that travel time, travel cost and travel distance negatively influence the probability of future trip generation. Similarly, married people are less interested to revisit the tourist spots. However, environmental consciousness campaign and existing resource caring initiatives of the spot authority have a positive impact on trip generation possibility. An opinion survey reveals that the tourists value the prevailing resource caring activities and environmental consciousness campaign which attracts them to revisit the spots. However, the tourists poorly rank the ecotourism maintaining effort and pollution protective mechanism in the spots. Therefore, an integrated approach towards maintaining and uplifting the efforts towards sustainable tourism management might contribute towards long run stability of the tourism sector.

Keywords: Tourism, Sustainability, Development, Resource, Satisfaction

1. Introduction

Bangladesh has been trying to grab economic development and efficiency through utilizing its resources and capabilities. Tourism has turned into a very potential and dynamic sector in this respect in the country. According to World Travel and Tourism Council [1], travel and tourism industry is one of the fastest growing sectors, whose direct contribution to GDP of Bangladesh is BDT 184.4 billion (2.3 percent of total GDP) in 2011, which is rising by 6.3 percent per annum. Travel and tourism sector accommodates 3.326 million jobs in 2011, which is about 4.2 percent of total employment in the country.

Sustainable tourism development refers to ensure the sustainability of tourism through environment, economic and socio-cultural factors where these issues should be maintained appropriately by lessening the level of negativity of these factors. It is concerned with environmental, economic, socio-cultural and management issues. The expansion of tourism activities, tourist visiting and socio-cultural exchanges triggers economic growth, while it causes environmental degradation and socio-cultural problems. Sustainable tourism management is not meant to augment the tourist number at a large volume. Rather, it is to protect the environment and enhance economic growth simultaneously in a sustainable manner where tourism management bodies and tourists can extract the positive effect from this issue. Sustainable tourism development should focus on the relations of proper environmental asset usage, their process protection, natural biodiversity protection, socio-cultural respect of local communities, building maintenance, cultural heritage, traditional values, inter-cultural understanding and tolerance providing, economic benefits including job creation, earning income and social services to local community and poverty reduction. Sustainable tourism meets the needs of present tourists and
tourist spots. Moreover, it attempts to check whether
benefit the mass people and community.

Khomeriki and Meladze [5] state that ecological tourism can
play a certain role in solving the problems of environment
protection and sustainable and safe development of a country.
Ali [6] state that many economists, sociologists,
anthropologists, psychologists, geography and administration
experts are showing increased interest in various service-
related activities undertaken in different fields of tourism,
and in tourism’s relation to sustainable development; issues
that have also become the subject of social and economic
demand. Nara et al. [7] suggest for solving issues related to
the conflict between the need of tourism developmental and
services requirements, as well as to preserve environment
and resources in coastal tourism. German NGO Forum [8]
develops strategies to maintain the relationship between
sustainable development and tourism. UNEP [9] highlights
some goals and policies to develop the tourism sector with
specific focus on sustainability. It illustrates some guidelines
and polices for the private bodies and govt. to create a
contractual bridge for the development of tourism. Fen [10]
also highlights policies to develop sustainable development
practices in some specialized zones of the world.

Based on the prevailing literature, sustainability of
tourism might be divided under three broader dimensions:
environmental, economic and social. Environmental
sustainability refers to using natural resources like fuel,
energy, land and water at a sustainable rate with perfect
and appropriate procedure. No resources will be used
desperately, which might lead it to be diminished soon.
Proper resource utilization will ensure appropriate slice in
the pie for future generation. Economic sustainability
refers to sustain an economic agent with making a
standard level of margin and generate a long term
sustainable plan through making a creative business policy
and technique. It also refers to using resources efficiently
and responsibly. Social sustainability refers to ensure the
social well being of people as well as the country and
society through making a long term plan which will
benefit the mass people and community.

This study attempts to address the tourism sector of the
south-west region of Bangladesh from sustainability
viewpoint considering the above discussed issues and
dimensions. The study tries to understand the existing
scenario of the tourist spots in the study region. It also
attempts to identify the factors influencing future trip making
plans of the tourists. Moreover, it attempts to check whether
there is any link between sustainable tourism development
practices and probability of future trip generation in the
tourist spots.

2. Materials and Methods

Recreational benefits of tourism constitute a substantial
part of total economic value of national and local
economy. The applications of the Travel Cost Method
(TCM) and Contingent Valuation Method (CVM) are quite
common to calculate the recreational values of tourism
[11-13]. Some studies follow TCM and CVM to estimate
the recreational value of forest [14-18]. TCM is dependent
on an idea first put forward by Hotelling [19] and then
expressed concisely by Hof and King [20]. It is a widely
used tool to calculate the environmental value of tourist
spots in different regions of the world. TCM is based on
the theory of consumer demand. The fundamental
principle of TCM is that the value people attach to a
location of environmental significance can be inferred
from the cost they incur in travelling to it.

Trip number of a tourist indicates his/her preference
towards a tourist spot. It also indicates the satisfaction
level of the tourist with the assumption that rational
tourists design future tour plan based on the consumed
or expected satisfaction level from a spot. Such trip number
is considered as the proxy of sustainability in this study
with the assumption that an increase in trip number
indicates that the tourists are more interested towards the
spot and hence the probability of sustenance is higher for
the spot. Accordingly, this study attempts to focus on the
sustainability issue which is indirectly revealed through
customer satisfaction where tourists plan for making
future trips if they are satisfied with available facilities
and services in a spot.

This study follows TCM to calculate the recreational
devalue of tourist spots. The authors purposively select Shat
Gumbuj Mosque, Mozaffar Garden, Niribili Park and
Chandramahal Eco-park in the south-west region of
Bangladesh as the study sites. Travel cost method in this
study considers trip number (TN) as the dependent
variable. The corresponding explanatory variables are:
one-way travel cost (TC), two-way travel distance (TD),
two-way travel time (TT) and other socio-demographic
features of the tourists including age (AG), gender (GN),
marital status (MS), residential status (RS), educational
qualification (EDU), monthly family income (FI), number
of earning members in the family (EM), multiple visit
purposes (MPV), spot facilities (SF), food qualities (FQ),
safety and security (SS), environmental consciousness
campaign (ECC), existing resource caring (ERC),
environment friendly products and services (EFP), riding
facility (RF), natural beauty (NB) and location dummy
variables (Table 1). The authors select three dummies
(SGM, MZG and NP) for four locations with
Chandramahal Eco-park as the reference in econometric
analysis. Three consecutive years (2012-2014) are
considered in collecting field level primary data on trip number and other variables. The main objective of considering the listed variables and econometric analysis (equation 1) is to identify the influential factors of trip generating probabilities.

\[ TN = \beta_0 + \beta_1 TC + \beta_2 TD + \beta_3 TT + \beta_4 AG + \beta_5 GN + \beta_6 MS + \beta_7 RS + \beta_8 EDU + \beta_9 FI + \beta_{10} EM + \beta_{11} MPV + \beta_{12} SF + \beta_{13} FQ + \beta_{14} SS + \beta_{15} ECC + \beta_{16} ERC + \beta_{17} EFP + \beta_{18} RF + \beta_{19} NB + \beta_{20} SGM + \beta_{21} MZG + \beta_{22} NP + \epsilon \quad (1) \]

**Table 1. List of explanatory variables for TCM analysis.**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Explanation</th>
<th>Measurement unit</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC</td>
<td>One-way travel cost</td>
<td>BDT</td>
<td>[21]</td>
</tr>
<tr>
<td>TD</td>
<td>Two-way travel distance</td>
<td>Km</td>
<td>[21-22]</td>
</tr>
<tr>
<td>TT</td>
<td>Two-way travel time</td>
<td>Hour</td>
<td>[23]</td>
</tr>
<tr>
<td>AG</td>
<td>Age of the tourist</td>
<td>Year</td>
<td>[21]</td>
</tr>
<tr>
<td>GN</td>
<td>Gender</td>
<td>1=Male, 0=Otherwise</td>
<td>[24]</td>
</tr>
<tr>
<td>MS</td>
<td>Marital status</td>
<td>1=Married, 0=Otherwise</td>
<td>[22]</td>
</tr>
<tr>
<td>RS</td>
<td>Residential status</td>
<td>1=Rural, 0=Otherwise</td>
<td>[23]</td>
</tr>
<tr>
<td>EDU</td>
<td>Educational qualification</td>
<td>Years of Schooling</td>
<td>[21]</td>
</tr>
<tr>
<td>FI</td>
<td>Monthly family income</td>
<td>BDT per month</td>
<td>[14]</td>
</tr>
<tr>
<td>EM</td>
<td>Earning member in the family</td>
<td>Number</td>
<td>[25]</td>
</tr>
<tr>
<td>MPV</td>
<td>Multiple purpose visit</td>
<td>1=Yes, 0=Otherwise</td>
<td>[21-22]</td>
</tr>
<tr>
<td>SF</td>
<td>Spot facility</td>
<td>Ranking (1-5)</td>
<td>[26]</td>
</tr>
<tr>
<td>FQ</td>
<td>Food quality</td>
<td>Ranking (1-5)</td>
<td>Field survey</td>
</tr>
<tr>
<td>SS</td>
<td>Safety and security</td>
<td>Ranking (1-5)</td>
<td>Field survey</td>
</tr>
<tr>
<td>ECC</td>
<td>Environmental consciousness campaign</td>
<td>Ranking (1-5)</td>
<td>Field survey</td>
</tr>
<tr>
<td>ERC</td>
<td>Existing resource caring</td>
<td>Ranking (1-5)</td>
<td>Field survey</td>
</tr>
<tr>
<td>EFP</td>
<td>Environment friendly products and services</td>
<td>Ranking (1-5)</td>
<td>Field survey</td>
</tr>
<tr>
<td>RF</td>
<td>Riding facility in the site</td>
<td>Ranking (1-5)</td>
<td>[27]</td>
</tr>
<tr>
<td>NB</td>
<td>Natural beauty</td>
<td>Ranking (1-5)</td>
<td>Field survey</td>
</tr>
<tr>
<td>SGM</td>
<td>Shat Gumbuj Mosque</td>
<td>Location Dummy*</td>
<td>Field survey</td>
</tr>
<tr>
<td>MZG</td>
<td>Mozaffar Garden</td>
<td>Location Dummy*</td>
<td>Field survey</td>
</tr>
<tr>
<td>NP</td>
<td>Niribili Park</td>
<td>Location Dummy*</td>
<td>Field survey</td>
</tr>
</tbody>
</table>

N. B.: Dependent Variable: Trip numbers during 2012-2014; *Chandramahal Eco-park is the reference for location dummies.

In this research the authors try to estimate the impact of explanatory variables on the dependent variables which is trip number. Tourism industry is bearing a lot of potentiality and possibility to improve the local as well as national economy. Sustainable tourism development is a long run phenomenon which ensures the recreation of the future and present generation from the resources and optimal using attitude towards resources. Sustainable tourism development refers to the situation when the tourist zone will be environmentally and ecologically feasible and sustainable where the tourism development will not hamper the animal habitant and ecosystem of the environment. The variables ECC, ERC and EFP of Table 1 proxy the sustainability of tourist spots.

### 3. Results and Discussion

Table 2 lists the TCM estimation results. The results reveal that TC, TD and TT variables are negatively related with trip number, which indicates that for an increase in the value of the said variables (TC, TD and TT), trip number will be decreased because, tourists will not probably make future trip plans bearing higher costs in terms of money, time and distance. More specifically, the study findings denote that for an increase in travel cost, people might be reluctant to generate trip plans to pass free time in tourist spots with family members or friends. Similarly, for an increase in travel distance and travel time, tourists might not be enthusiastic to make trip plan due to long time requirement for traveling a long distance path.

Married people have to remain busy with multi-dimensional household affairs and hence they usually get less time for leisure if compared with unmarried people. Accordingly, this study finds that married people are less interested to revisit tourist spots in comparison to unmarried counterpart. Multiple purpose visits have a negative relation with trip generation probability. Multiple purpose visits refer to visiting a tourist spot in addition to accomplishing some other tasks or visiting some other places simultaneously. Accordingly, such visitors might be less interested to make future tour plan for solely visiting a tourist spot.

This study considers several variables such as ECC, ERC and EFP which act as indicators of sustainable tourism development. A positive sign of the marginal effects of these variables signals that sustainable tourism development attracts tourists to make more tour plans in the future. Among these three issues, the influences of ECC and ERC are statistically significant at 5 percent level. More specifically, environmental consciousness campaign (ECC) through banner, leaflet and signboard setup at the tourist spots influences the tourists to increase the frequency of tours. Similarly, existing resource caring (ERC) through taking care of existing resources like animals, birds and trees motivates the tourists to be more passionate for visiting the same site in the coming days.

Riding facility (RF) has a positive impact on trip generation by the tourists. If the tourist spots provide better riding facilities, it will create a positive impact on future trip generating plan. Generally, tourists want to pass their leisure through enjoying various kinds of ridings. Accordingly, RF has a statistically significant positive influence on the trip making probability.

Some other explanatory variables such as, age of the tourist (AG), educational qualification (EDU), family income (FI), spot facility (SF), food quality (FQ), safety and security (SS) and natural beauty (NB) exert positive influences on future trip making probability, though the influences are not statistically significant. Similarly, this study finds that the probability of future trip making is comparatively lower for male tourists (GN) and rural people (RS) compared to female and urban counterpart, though the influences are not statistically significant.
The location dummies indicate that tourists are more interested to revisit Niribili Park (NP) followed by Shat Gumbuj Mosque (SGM) and they are least interested to revisit Mozaffar Garden (MZG) while comparing among four tourist spots with Chandramahal Eco-park as the reference for forming dummies. Location of the spots, distance from residence and prevailing services are the probable determinants for getting variation in spot preferences by the tourists.

This study attempts to understand the satisfaction level of the tourists on several aspects of tourism sustainability, for example, environmental consciousness campaign (ECC), existing resource caring (ERC), providing environment friendly products and services (EFP), ecotourism maintaining effort (EMF) and pollution protective mechanism (PPM) through using a ranking scale of 1-5. The results (Table 3) indicate that tourists are satisfied about the resource caring activities (ERC). The tourists highly value the effort given by the spot management authority for maintaining the forest and animal resources. Similarly, the tourists are somewhat satisfied towards the environmental consciousness campaign (ECC) of the spot authority as evident through signboard, poster and banners for creating people more conscious about the management and preservation of environment and resources. However, further efforts are needed on environment friendly products and services (EFP), ecotourism maintaining effort (EMF) and pollution protective mechanism (PPM) as the assigned scores by the tourists are less than 3.00 in a scale of 5.00 (Table 3).

### Table 2. TCM estimation of trip generation probability.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Explanation</th>
<th>Measurement unit</th>
<th>Possion Model</th>
<th>Marginal Effect of Possion Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC</td>
<td>One-way travel cost</td>
<td>BDT</td>
<td>-0.0025***</td>
<td>-0.0055***</td>
</tr>
<tr>
<td>TD</td>
<td>Two-way travel distance</td>
<td>Km</td>
<td>-0.0022**</td>
<td>-0.0048**</td>
</tr>
<tr>
<td>TT</td>
<td>Two-way travel time</td>
<td>Hour</td>
<td>-0.0326**</td>
<td>-0.0705**</td>
</tr>
<tr>
<td>AG</td>
<td>Age of the tourist</td>
<td>Year</td>
<td>0.0081</td>
<td>0.0176</td>
</tr>
<tr>
<td>GN</td>
<td>Gender</td>
<td>1=Male, 0=Otherwise</td>
<td>-0.1463</td>
<td>-0.3156</td>
</tr>
<tr>
<td>MS</td>
<td>Marital status</td>
<td>1=Married, 0=Otherwise</td>
<td>-0.3703*</td>
<td>-0.7991*</td>
</tr>
<tr>
<td>RS</td>
<td>Residential status</td>
<td>1=Rural, 0=Otherwise</td>
<td>-0.0283</td>
<td>-0.0611</td>
</tr>
<tr>
<td>EDU</td>
<td>Educational qualification</td>
<td>Years of Schooling</td>
<td>0.0136</td>
<td>0.0294</td>
</tr>
<tr>
<td>FI</td>
<td>Monthly family income</td>
<td>BDT per month</td>
<td>0.0000018</td>
<td>0.0000038</td>
</tr>
<tr>
<td>EM</td>
<td>Earning member in the family</td>
<td>Number</td>
<td>-0.0001</td>
<td>-0.0003</td>
</tr>
<tr>
<td>MPV</td>
<td>Multiple purpose visit</td>
<td>1=Yes, 0=Otherwise</td>
<td>-0.2984***</td>
<td>-0.6440***</td>
</tr>
<tr>
<td>SF</td>
<td>Spot facility</td>
<td>Ranking (1-5)</td>
<td>0.02546</td>
<td>0.0549</td>
</tr>
<tr>
<td>FQ</td>
<td>Food quality</td>
<td>Ranking (1-5)</td>
<td>0.0118</td>
<td>0.0255</td>
</tr>
<tr>
<td>SS</td>
<td>Safety and security</td>
<td>Ranking (1-5)</td>
<td>0.0034</td>
<td>-0.0074</td>
</tr>
<tr>
<td>ECC</td>
<td>Environmental consciousness campaign</td>
<td>Ranking (1-5)</td>
<td>0.2374**</td>
<td>0.5122**</td>
</tr>
<tr>
<td>ERC</td>
<td>Existing resource caring</td>
<td>Ranking (1-5)</td>
<td>0.4631***</td>
<td>0.9993**</td>
</tr>
<tr>
<td>EFP</td>
<td>Environment friendly products and services</td>
<td>Ranking (1-5)</td>
<td>0.1525</td>
<td>0.3291</td>
</tr>
<tr>
<td>RF</td>
<td>Riding facility in the site</td>
<td>Ranking (1-5)</td>
<td>0.1379*</td>
<td>0.2976*</td>
</tr>
<tr>
<td>NB</td>
<td>Natural beauty</td>
<td>Ranking (1-5)</td>
<td>0.1535</td>
<td>0.3312</td>
</tr>
<tr>
<td>SGM</td>
<td>Shat Gumbuj Mosque</td>
<td>Location Dummy*</td>
<td>0.4657</td>
<td>-1.0049</td>
</tr>
<tr>
<td>MZG</td>
<td>Mozaffar Garden</td>
<td>Location Dummy*</td>
<td>-0.0841</td>
<td>-0.1814</td>
</tr>
<tr>
<td>NP</td>
<td>Niribili Park</td>
<td>Location Dummy*</td>
<td>0.2709*</td>
<td>-0.5845*</td>
</tr>
</tbody>
</table>

**Note:** N. B.: Dependent Variable: Trip numbers during 2012-2014; N=200; Log Likelihood Ratio = -468.56; Probability > chi2 = 0.00; LR chi^2 = 113.06; ***p<0.01, **p<0.05, *p<0.1; a refers to Chandramahal Eco-park is the reference for location dummies.

Source: Author’s compilation based on Field Survey (2016).

### Table 3. Satisfaction level on tourism sustainability.

<table>
<thead>
<tr>
<th>Indicators of tourism sustainability</th>
<th>Score (in a scale of 5.00)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing resource caring (ERC)</td>
<td>4.05</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Environmental consciousness campaign (ECC)</td>
<td>3.55</td>
<td>Average</td>
</tr>
<tr>
<td>Environment friendly products and services (EFP)</td>
<td>2.97</td>
<td>Dissatisfied</td>
</tr>
<tr>
<td>Ecotourism maintaining effort (EMF)</td>
<td>2.45</td>
<td>Dissatisfied</td>
</tr>
<tr>
<td>Pollution protective mechanism (PPM)</td>
<td>2.85</td>
<td>Dissatisfied</td>
</tr>
</tbody>
</table>

Source: Author’s compilation based on Field Survey (2016).

### 4. Conclusions

Tourism is considered as one of the fastest developing industries in the present era of globalization. It has been regarded as a spine-strength of some countries where a handsome amount of the GDP is formed from attractive tourist spots. The tourism sector has enormous significance from many perspectives including economic, social, cultural and political. It is the fastest growing and single largest industry in the world. About 0.3 million foreign tourists visit Bangladesh per year on average and the country earns more than 50 million US$ per year from the foreign tourists [28]. The numbers will significantly increase if the local tourists...
Acknowledgements

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