Preparation of solutions for improving cultural tourism in rural areas, by synthesizing strategic planning models and artificial neural network

Maryam Ghasemi*
Assistant Prof. of Geography and Rural Planning, Ferdowsi University of Mashhad, Iran

Hadis Kamranifar
M.Sc Student of Geography and Rural Planning, Ferdowsi University of Mashhad, Iran

Salman Hayati
Young Researchers and Elite Club, Lamerd Branch, Islamic Azad University, Lamerd, Iran

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Extended Abstract
Introduction
World tourism organization estimates that tourism industry, as the most important industry in 2020, with an overall income of 2 trillion dollars and 1.561 billion travelers, has the first role in development of economics of countries. So this industry is a good opportunity for developing countries like Iran, which has rich cultural and wilderness attractions. Because of growing tourist with cultural targets in world, and Iran's rank in cultural heritage attractions (10th in world), a special attention is needed to cultural tourism and abilities spread in villages, a scientific understanding of facilities and limits, opportunities and its threats is also vital. Many villages posses rich and unique cultural background and valuable historical monuments, each of which contain a part of historical identity of this land. Unfortunately despite of this richness and diversity, this type of tourism has not grown enough in our villages. Villages of The city of Binaloud being adjacent to Mashhad metropolis (24 km) on one hand, and on the other hand because of its intact nature, accept lots of eco-tourists each year. To develop cultural tourism in potential villages, the need for using scientific strategies to reconstruct and develop cultural tourism is raising. The aim of this study is to identify and chose best strategies in developing cultural tourism in potential villages in the city of Binaloud, and to provide a base for planning and developing cultural tourism in rural areas. Following questions are proposed to achieve this goal: 1- What kind of strategy is effective for cultural tourism in current situation; this strategy shall prevent threats and then utilize good points and opportunities, and meanwhile resolve our weaknesses? 2- What are the best strategies for reaction to current conditions of rural cultural tourism in the city of Binaloud?

Methodology
The research method and type are descriptive-analytic and practical-developmental,

* Responsibility Author: Email: magh30@um.ac.ir
respectively. Data collection has been carried out by documental and field methods. First, weaknesses, strengths and opportunities and threats in developing cultural tourism were identified by wide documental studies. Then primary surveys were proposed to some of experts and village chiefs to ask for important internal or external factors which can be strengths, weaknesses, opportunities or threats for the development of cultural tourism. Then necessary adjustments were done based on theoretical literature and extraction of common points. Final factors – as most limiting or helping ones in improvement and continuity of development of cultural tourism in rural areas under study - were distributed among 40 responsible officials and experts in Cultural Heritage, crafts and tourism Organization of the city of Binaloud and also 10 village chiefs those have enough potential in their villages to give their views. After conduction and correction of strategies, they scored the strategies from 0 to 20, based on respondent’s answers. A combination of strategic planning models and artificial neural networks was utilized to analyze the data and to present strategies for developing cultural tourism in villages.

Results
First step in strategic analysis is to identify key strategic factors in relation to the problem under investigation. Overall, 13 strengths and 13 weaknesses were identified in internal factors, and 8 opportunity plus 5 threats were recognized among external ones, and must-do strategies were conducted based on these points. Then its elements were laid-out in the combined model of strategic planning and artificial neural network SWOT-ANN, and a first model was created. The aim of this model is to select the best strategy, and because of its good ability in modeling, the ANN method was used to analyze an prioritize the strategies of the research. After creating the network and calculating based on the mentioned pattern, 10 prior strategies were found. Based on normalized points, those belonging to conservative strategy, defensive strategy, offensive strategy and competitive strategy gained 0.5431, 0.2842, 0.1727 and 0.1256 points, respectively. Based on these points it can be said that conservative strategy shall get more attention and priority because it has the highest score.

Conclusion
Because of more complicated effects impose by local conditions, shallow and one-dimensional determinations are not beneficial for solving multi-dimensional and complicated problems any more. Managers should facilitate themselves with efficient tools to overcome this environment a face the problems. Systematic or holistic approach can help managers and planners greatly to understand and solve the problems better. That is why SWOT technique with such approach is used in this study and respective strategies are presented; but SWOT is not able to rank the strategies; so different prioritizing methods should be used to achieve this goal. Artificial neural network (ANN) method is one of the most important methods for prioritizing which has been used in the world. Because lateral relations - in addition to longitudinal ones - are present – between SWOT’s four factors, i.e. strengths, weaknesses, opportunities and threats – in SWOT analysis, ANN is one of the best ways to prioritize SWOT strategies, and it makes possible to set relations between all levels of a model and to compare them toward each other. Investigations show that conservative strategies has gained overall score of 0.5431 and after them defensive strategy with overall score of 0.2842 was chosen as second strategy. Choosing conservative and defensive strategies in cultural tourism conditions of the villages of the city of Binaloud will show the best performance, and competitive and
offensive strategies can be used after current situation has improved in the areas under study.

**Keywords:** artificial neural network, the city of Binaloud, cultural tourism, strategic planning, village.

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