Chapter 1

Systems Approach as a Creative Driving Force for a Tourism Destination

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ABSTRACT

This chapter introduces the systems approach as a creative driving force for a tourism destination. The approach encompasses methods of systems thinking and system dynamics that broaden horizons, search for synergy and involve decision makers in a tourism destination. As a complex system, a tourism destination needs an optimal approach to balancing its activities in tourism markets and solve problems, which occur because of the complexity. The chapter per author presents complex systems in general, the complexity of tourism destination, models of simulation methodology determination with participants' involvement and group decision-making support. On the basis of systems simulation methodology a causal loop diagram of dependence among environment attractiveness, a number of tourists and infrastructure investments are created. The chapter states that the main strength of system dynamics modelling lies in considering feedback loops, which are the answers to the behaviour of the system in the environment today and in the future.

INTRODUCTION

A tourism destination is a complex system that encompasses a wide variety of economic, social and environmental subsystems. It is a type of inter-organisational system with both global and local properties. The demands for fast, creative and integrated decisions for maintaining the sustainability of a tourism destination require an excellent creative strategy to transform the conventional analytical or linear approach to a sustainable holistic one. In this chapter, we introduce the systems approach as the strategy that enables decision makers and tourism experts to express creativity in thinking systemically. The presented methods of the systems approach are called systems thinking and modelling in the context of system dynamics. We introduce a diagram model of the relation between decision makers and a tourism
destination, as well as a qualitative model of a tourism destination in the frame of system dynamics. System dynamics models are essentially simple and serve as tools for sustainable planning. A description of creative thinking within systems thinking as a method is presented with a simulation model, which also represents the result of the above-mentioned methodology. This examination of implementing the systems approach for a tourism destination (and even beyond) points out that systems methodology, using systems thinking and modelling, represents a creative drive for decision-making and the sustainable development of a tourism destination.

BACKGROUND

The details of constructs, such as system complexity, systems thinking, decision-making creativity, building causal loop models and creating a simulation model in the frame of system dynamics for a tourism destination are discussed in this section.

Complex Systems

According to Sayama (2015), complex systems are networks created from many components that interact in a non-linear way; they may evolve through self-organisation, such that they are neither completely regular nor completely random. They have large number of different interacting elements, interaction with environment and their collective behavior cannot be a sum of individual behaviors. Normally their interaction and evolution rules are not linear, which is visible when small perturbances can create huge cascading effects. Complex systems are usually understood by intuition, as a phenomenon consisting of a large number of elements organised in a multi-level hierarchical structure where elements themselves could represent systems (Mesarovic & Takahara, 1989). They are robust, self-organising, adaptive, and highly sensitive to initial conditions. They interact with one another and with the environment at different levels (Mobus & Kalton, 2015). The large number of classical works dedicated to different models and methodologies for system areas includes:

- System Dynamics (Forrester, 1961)
- Systems Thinking (Senge, 1994, 2006)
- Autopoietic Systems (Maturana & Varela, 1998)
- Living Systems (Miller, 1978)
- Viable Systems (Beer, 1959)
- Anticipatory Systems (Rosen, 1985)
- Systems Thinking and Modelling (Sterman, 2000)
- General Systems Theory (Skyttner, 2007)
- Thinking in Systems (Meadows 2008)

Following Baggio’s (2008) study, tourism has become an extremely dynamic, complex adaptive system. Globalisation, increasingly demanding customers, modern transportation systems and information technologies strongly influence the industry. In this scenario, the intensified marketing efforts of all tourism organisations have led to the more effective, destination management approach (Ritchie & Crouch 2003). Such a strategy requires creativity to see the big picture of its elements. Considering the