ABSTRACT

An analytical review of destination competitiveness’ indicators

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Background: The role of indicators in assisting tourism planners and decision makers in evaluating performances, setting targets and anticipating future scenarios has been widely acknowledged by scholars (Mendola and Volo, 2015; Mendola et al. 2013). The complexity of tourism creates several challenges in the evaluation of destination competitiveness (Crouch, 2011). Conceptual models and theories have been framed around the highly diverse tourism destination’s offerings, experiences, goals and actors.
Hence, there is a pragmatic need for synthetic indicators that incorporate the elements characterizing destinations’ attributes and their abilities to compete (Croes, 2011). Recent attempts recognize the complex and holistic nature of tourism destination competitiveness (TDC) and propose composite indicators to measure its multifaceted aspects (e.g.: Garau-Taberner, 2007; Cracolici and Nijkamp, 2008; Blanke, Chiesa, and Crotti, 2013). The application of these indicators to international tourism areas has provided preliminary rankings of destinations and offered relevant input attributes. Most importantly, it has also opened the debate on how appropriate the currently used definitions and measurements of destination competitiveness are (Croes, 2005 and 2011; Papatheodorou and Song, 2005). In this vein, it is relevant to evaluate the currently available composite indicators as their assessment –against currently available guidelines- can assist research to further develop tourism indicators.

**Objectives:** The purpose of this study is to provide an evaluation of existing composite indicators of TDC and propose a statistical toolbox/protocol to assess their effectiveness in empirical evaluations.

**Methods:** This study uses a systematic review approach to achieve its aims. A “systematic review” is based on an explicit and organized evaluation of past researches that encompasses the following steps: identification of the relevant studies, assessment of their quality and synthesis of the evidences by use of a protocol (Tranfield, Denyer and Smart, 2003). We built the study’s protocol enriching the OECD technical guidelines (Nardo et al., 2005) to build composite indicators. The protocol contains now 15 criteria used to examine the reviewed indicators, among these two useful quality measures. Ten studies were identified as providing a composite indicator of tourism destination competitiveness.

**Results:** Indicators on the reviewed tourism literature barely frames the construct of TDC within its complexity and never purposely assesses the measurements’ validity and reliability using the proper statistical tools. The review showed a lack of an explicit definition of TDC in most of the papers, this is somehow surprising since they all aimed at measuring the TDC. All the studies provide a theoretical framework with some justification for the inclusion of variables, but then with reference to the number of individual indicators some papers stand out for their extremely poor “input set”. A preliminary statistical analysis of the properties of selected variables and of their interrelations is presented only in few papers and mostly with primitive attempts. Furthermore, the effects that different imputation strategies for missing data may have on competitiveness rankings is underestimated in the reviewed papers as they do not report evidence of the implication of this critical phase. In the ten reviewed studies there is no evidence of any critical concern in the choice of the weighting system, the
transformations and the aggregation functions. The reviewed indicators also lack in the robustness check and sensitivity analysis. On the other hand most authors do apply criterion validity tests and some make an effort to disaggregate the computed composite indicator into its original sub-dimension indicators assessing the relationship between the CI and its dimensions.

**Conclusions:** The results and the knowledge gained through the analysis of the selected indicators provide tourism scholars and practitioners involved in measuring destinations’ competitiveness with both an assessment of available indicators’ ability to capture tourism competitiveness complexity and a statistical toolbox to assess their effectiveness in empirical evaluations. The guidelines here proposed offer a methodological check list useful to build new composite indicators. The results show that greater awareness is needed with respect to the statistical choices operated when building TDC indicators. Selecting the aggregation function is not a trivial matter as it results in strong or weak interpretative value of the crafted indicator. Furthermore, the existence of a suitable causal link between the concept and the individual indicators has to be carefully evaluated prior to include them into the measurement.

**Main references**


