

A DYNAMIC INDEX FOR DESTINATION COMPETITIVENESS MEASUREMENT

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RESUMEN: Esta investigación presenta un enfoque para evaluar la competitividad de los destinos turísticos en un período, a fin de determinar el avance hacia un mayor nivel de competitividad. La metodología se basa en un índice dinámico creado a partir de la Programación por Metas. El indicador se puede descomponer en dos componentes, uno que permite evaluar los cambios producidos en cada destino por mejoras internas en su desempeño y otro que estudia los cambios relativos a cuestiones externas. Es posible obtener más información sobre el cambio en el tiempo para cada destino evaluado. El estudio contribuye a llenar el vacío de investigación en la medición de la competitividad turística ya que es posible determinar si las políticas y programas implementados resultan en una mejora o empeoramiento de la competitividad. Su aplicación tiene lugar en la región del Caribe, considerada entre las áreas más dependientes del turismo a nivel mundial.

Palabras Clave: Competitividad turística, índice dinámico, programación por metas, indicador sintético, destinos caribeños.

ABSTRACT: This research presents an approach to assess the competitiveness of tourism destinations in a period, allowing determining the progress made towards a greater competitiveness level. The methodology is based on a dynamic index created from Goal Programming. The indicator can be decomposed into two components, one that enables the changes produced in each destination to be evaluated due to internal improvements in their performance and the other which studies the changes relative to external issues. It is possible to obtain more information regarding change over time for each destination evaluated. The study contributes to filling the research gap in tourism competitiveness measurement since it is possible to determine whether policies and programs carried out in the tourism sector result in improvement towards or away from a greater competitiveness. The methodology is applied in the Caribbean region, which is amongst the most tourist dependent areas worldwide.

Keywords: Destination competitiveness, dynamic index, goal programming, composite indicator, Caribbean destinations.

1. Introduction

Tourism destination competitiveness (TDC) has emerged as a salient topic for policymakers and scholars over the last 30 years and there remains extensive debate regarding the definitions, parameters, and measurement of the concept (Abreu-Novais et al., 2016). The increasing importance gained by this subject has triggered the existence of numerous studies. Several of these encourage the creation of destination competitiveness models (Chung et al., 2021; Croes & Semrad, 2018; Drakulić Kovačević et al., 2018; Ritchie & Crouch, 2010), while others pursue the measurement of the competitiveness of a single destination (Andrades & Dimanche, 2019; Perna et al., 2018), or propose new methods and approaches for the comparison of the destinations (e.g., Pérez León, et al., 2021; Rodríguez-Díaz & Pulido-Fernández, 2021). Notwithstanding, the literature reveals that no universal set of items, attributes or indicators to measure the competitiveness of tourism destinations exists (Mior Shariffuddin et al., 2022)

In this regard, the present research aims to introduce a dynamic index to measure destination competitiveness. The goal is to analyse whether policies and programmes carried out in the tourism sector result in improvement towards or away from a greater competitiveness. The proposal is supported by multicriteria decision methods, specifically Goal Programming, that aid in the creation of composite indicators in destination competitiveness measurement.

2. Destination competitiveness measurement

Tourism destination competitiveness has been conventionally measured through indexes, among which the Travel and Tourism Competitiveness Index (TTCI), developed by the World Economic Forum (WEF) has been the most noteworthy and referenced (Uyar et al., 2022) and, consequently, the most criticised (Rodríguez-Díaz & Pulido-Fernández, 2021; Salinas et al., 2022). Nevertheless, each methodology presents its own strengths and weaknesses and the research in destination competitiveness measurement is still latent, given the difficulties comprised in its achievement. Abreu-Novais et al. (2016) have excellently developed this topic. The authors argue that measuring tourism competitiveness involves four aspects: The type of data gathered, the tools and methods employed, the level of destination used and the number of destinations chosen for the comparison.

In general, it should be stated that there is no methodology signalled as the one most preferred to measure TDC. The choice of methodology involves the decision maker's preferences and depends on its facility to analyse the results obtained.

3. The Dynamic Goal Programming Synthetic Index

The procedure to develop a new dynamic synthetic indicator is due to Pérez et al. (2018), and is created based on the Goal Programming Synthetic Index (GPSI). Once the GPSI is defined, this approach involves: (1) its calculation for two temporary instants; (2) the estimation of the dynamic net goal programming indicators; and (3) its decomposition into catch-up and innovation components.

Assuming that the information of each destination is available for two different temporary instants t_1 and t_2 , for which the aspiration levels (u_1 and u_2) are also available. The Net Goal Programming Synthetic Index for the i th destination ($GPSI_i^n$), denoted as ($NGPI_i$), can be calculated and can easily be interpreted and, for each unit (tourism destination), its internal (catch-up) and external (innovation) achievements can be determined. This allows the success of the policies, investments, and strategies implemented by a destination/country to be verified.

4. Study

The study comprises 33 destinations from Central America and the Caribbean for which the information of 35 indicators grouped according to the TTCI with information of 2007 (t_1) and 2015 (t_2) was gathered (WET, 2015, 2017).

For positive indicators, the aspiration level is 80% of their average values, while for negative indicators, the reciprocal percentage of the average values is suggested, following the proposal of (Pérez et al., 2018). For those indicators for which the data from the continent is available, the reference value is this value calculated for Latin America and the Caribbean region, offered by the same source. Their aspiration levels are calculated using the same operation as that for the average of the remaining indicators, but with respect to the value for Latin America and the Caribbean region.

5. Results and discussion

The results revealed that from the 33 destinations, 25 and 24 (75.76% and 72.73%) destinations achieved positive NGPSI values in 2007 and 2015, respectively. This indicates a generally high level of competitiveness in accordance with the desired levels established, with higher values for strengths than weaknesses in the majority of the destinations. Twenty-three destinations reached positive scores in both 2007 and 2015, while 7 attained negative values (greater weaknesses than strengths), and 3 reached GPSI values with different signs. Two destinations were positive in 2007 and remained negative in 2015 and just one passes from negative to positive at the end of the period.

Ten destinations maintain the same position in both rankings. There is major stability between the rankings with an average variation of two units in the period. The highest improvement score corresponds to Aruba (0.2502), with a difference higher than 50% above the following destination, according to the improvement score. Aruba also recorded positive values in both moments and varies three positions. In contrast, Bermuda registered the greatest drop in score, even greater than for Aruba, in absolute values. Bermuda ranked third in its degree of competitiveness in 2007 and eleventh in 2015. Its NGPI scores declined from 0.986 to 0.381, sharper than any other destination between 2007 and 2015.

Fourteen destinations improved their competitiveness level from 2007 to 2015. Five of these improved due to negative competitiveness scores in 2007 (which means they had more weaknesses than strengths that year). Among those five destinations, only one achieved a positive score in 2015 (that is, its strengths outweighed its weaknesses). The remaining four destinations still have negative values, but lower than in 2007. Despite these negative outputs, this signifies an improvement in their degree of competitiveness over the time span. Among those whose situations worsen, just two passed from positive to negative in 2015; while the weaknesses were greater than their strengths in 2007, and even more so in 2015 for three destinations.

6. Conclusions

The dynamic Goal Programming Synthetic Index enables the competitiveness of a given destination to be analysed over time in such a way in which it is possible to evaluate its performance across a time span. This is consistent with the affirmation that a higher-than-average rate for the indicators analysed could be considered a gain in competitiveness. The information obtained enables the evaluation of the extent to which destinations move closer to or further away from their competitiveness goals at different points of time, thereby filling the gap in previous studies that used either common references for all the units or multiple benchmarks.

Including a dynamic index allows measuring the tourist competitiveness by recognising the destinations' progress or regress in the period judged. Unlike other dynamic synthetic indicators, which use absolute measures, this approach is composed of two components, referred to as catch-up and innovation components. The decomposition of the index helps researchers and decision-makers to access information regarding the causes of the improvement or the decline of the competitiveness level of each destination.

The proposal allows to ascertain whether the competitiveness values are due to improvement or decline, either caused by a destination's internal performance or affected by external issues, in other words, whether they were due to changes relative to a destination's own deviation variables or due to changes in the newly defined aspiration levels, respectively.

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