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Economics of Sustainable Tourism

Edited by **Fabio Cerina,**
Anil Markandya and
Michael McAleer

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The economics of sustainable tourism

Summary and suggestions for future research

Fabio Cerina, Anil Markandya and Michael McAleer

The purpose of this concluding chapter is to summarize the primary issues raised in the ten main chapters, evaluate the main findings and messages, and discuss some future developments in this exciting area of research in tourism economics.

The book was divided into three parts, namely 'Tourism demand and the host community', 'Tourism and productivity' and 'Sustainable tourism: environment and cultural heritage conservation'. Part I presented four chapters that were concerned with the analysis of tourist satisfaction and the impacts of tourists on the host community, namely a rigorous analysis of the determinants of tourism demand and the effects of tourism demand on residents' attitudes and residential demand for water. Part II dealt with the productivity of the tourism sector. This issue was investigated, from both empirical and theoretical perspectives, by three chapters that analysed how different factors (environmental resources, trade relationships, rural areas and labour) may contribute to increasing the productivity of an economy that specializes in tourism. Part III focused on the sustainability of tourism development. Sustainable tourism was investigated from three different perspectives, namely: (1) methodological, through the construction of an index that is able to measure sustainability of tourist destinations; (2) theoretical, through a growth model that analyses the dynamic properties of an economy specializing in tourism based on environmental resources; and (3) empirical, by means of an analysis of the economic benefits derived from a proposal that is designed to preserve and restore a cultural heritage site.

The ten chapters comprised an interesting and vibrant combination of theory and applied research, time frequency and analysis of data (namely, annual and monthly time series, cross section, panels, surveys, contingent valuation), variety of countries (Italy, Japan, Spain, Thailand, the United Kingdom and Vietnam), different model specifications (ARMAX, cross section, panel, logit, factor analysis, dynamic optimization and causality analysis), and a wide range of numbers of observations (from hundreds to thousands). It is to be expected that these chapters will be invaluable to both researchers and tourism practitioners with a wide variety of interests.

The availability of panel data (to and from various countries, and for a variety of variables) and different time frequencies (monthly, weekly and daily), make it

possible to consider a wide range of sophisticated models and techniques for empirical analysis. Dynamic panel data analysis, with seasonal, periodic and zero-frequency unit roots, and corresponding co-integration processes, will undoubtedly expand the horizons of research in tourism economics in the years ahead. Furthermore, the increasing availability of weekly and daily international tourist arrivals data, as well as daily observations on exchange rates (as a proxy for relative prices), will make it possible to estimate univariate and multivariate VARFIMA models containing measurement errors, fractionally integrated and long memory processes, and heterogeneous autoregressive processes.

The availability of high-frequency data, such as daily international tourist arrivals, has already enabled challenging analysis of international tourist arrivals data in the same light as financial time-series data. This leads to the requirement that appropriate models be chosen sensibly from among a wide variety of univariate conditional, stochastic and realized volatility models, with a concomitant emphasis on choosing models that can accommodate thresholds, asymmetry and leverage. In addition, the complexity of multivariate volatility models should not be underestimated. Finally, careful thought should be given to the choice of appropriate forecasting models and forecasting expertise, as well as the optimal combination of models using both formal models and the intuition of expert forecasters.

The careful analysis of data is also shown to be useful in determining preferences of tourists and local communities. Such analysis should aid in the design of facilities that better meet the needs of visitors while also recognizing those of local communities. Certainly there is scope for more efficient provision of key services that are in short supply, such as water, as Chapter 4 clearly demonstrates.

As far as sustainability is concerned, the question of the sustainability of current tourism practices remains only partly answered. Indices like the one developed in Chapter 8 are needed to track sustainability and to respond to changes that result in a lower recorded measure of this indicator. We also need to understand the trade-offs between increased tourism and its environmental footprint so that more informed choices can be made. Models like the one in Chapter 9 are helpful in that regard, as is Chapter 5. Finally, the protection of cultural assets is a sensitive issue where many see a conflict with tourism. Yet with care, such assets can be better protected and managed if revenues from tourist visitors are used for that purpose. The design of such schemes is a complex issue, but one that can be tackled, as has been well explained in the last chapter of the book.