

ÁLVARO MATIAS
PETER NIJKAMP
MANUELA SARMENTO
Editors

Tourism Economics

Impact Analysis



Physica-Verlag

A Springer Company

Álvaro Matias • Peter Nijkamp •
Manuela Sarmento
Editors

Tourism Economics

Impact Analysis



Physica-Verlag
A Springer Company

Editors

Prof. Dr. Álvaro Matias
Universidade Lusíada de Lisboa
School of Economics and Business
Rua da Junqueira 188-198
1349-001 Lisboa
Portugal
amatias@lis.ulusiada.pt

Prof. Dr. Peter Nijkamp
Free University
Faculty of Economics
and Business Administration
Department of Spatial Economics
De Boelelaan 1105
1081 HV Amsterdam
Netherlands
pnijkamp@feweb.vu.nl

Prof. Dr. Manuela Sarmento
Universidade Lusíada de Lisboa
School of Economics and Business
Head of the Tourism Department
Rua da Junqueira 188-198
1349-001 Lisboa
Portugal
manuela.sarmento@edu.ulusiada.pt



Associação Portuguesa para a Investigação
e Desenvolvimento em Turismo

Publication sponsored by the Portuguese Association for Tourism Research and Development

ISBN 978-3-7908-2724-8 e-ISBN 978-3-7908-2725-5
DOI 10.1007/978-3-7908-2725-5
Springer Heidelberg Dordrecht London New York

Library of Congress Control Number: 2011931966

© Springer-Verlag Berlin Heidelberg 2011

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilm or in any other way, and storage in data banks. Duplication of this publication or parts thereof is permitted only under the provisions of the German Copyright Law of September 9, 1965, in its current version, and permission for use must always be obtained from Springer. Violations are liable to prosecution under the German Copyright Law.

The use of general descriptive names, registered names, trademarks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

Cover design: eStudio Calamar S.L.

Printed on acid-free paper

Physica-Verlag is a brand of Springer-Verlag Berlin Heidelberg
Springer-Verlag is a part of Springer Science+Business Media (www.springer.com)

Editorial Preface

Tourism has moved from an elitarian leisure activity to a democratic mass movement. Open borders, the rise of welfare societies, free exchange of information on exotic destinations, the emergence of the ICT sector and the decline in the costs of travelling have led to a prominent position of tourism – and more generally, leisure activities – in modern economics. Tourism is supposed to spur economic growth, but may also mean a serious challenge to sustainable development, both locally and globally. World-wide, tourism has become a new vehicle for international and interregional competition. Consequently, smart marketing and creative positioning of the attractiveness of tourist destinations has become an art in itself.

Clearly, the tourist market has turned into a complex niche market with many heterogeneous products in order to satisfy the pluriform needs of visitors. As a result, nature, culture, entertainment, local identity, socio-cultural atmosphere may all be spearheads in tourist policy, depending on the target groups concerned. The economic and broader societal impacts of tourism may be manifold, and depend on both supply and demand conditions in a heterogeneous tourist product market. Against this background we see also the emergence of new marketing and information tools in the tourist market, such as advanced e-services.

The assessment of local, regional or national impacts of an influx of tourists – of different kind and origin – has in recent years become a new challenge for economics research in the tourism sector. The present volume brings together a set of recent impact studies – of both a theoretical-methodological and an applied policy-oriented nature – which have been selected on the basis of their originality or novel contribution to the research in this field. Various chapters in this volume were the offspring of papers presented at the third international conference on Advances in Tourism Economics, held in Lisbon (2009). All papers selected for publication went through a thorough review procedure and are now presented in a polished and revised form.

Additionally, the editors would like to take this opportunity to thank Ellen Woudstra and Sandra d'Afonso Matias for their important assistance during the editorial stage.

Spring 2011

Álvaro Matias
Peter Nijkamp
Manuela Sarmento

Contents

- 1 Impact of Tourism 1**
Álvaro Matias, Peter Nijkamp, and Manuela Sarmento

Part I Destination Impact Analysis

- 2 Education of Human Capital as a Source of Competitiveness
in Tourist Destinations 11**
Sandra M. Sánchez-Cañizares, Tomás J. López-Guzmán, and Helena Reis
- 3 Competition Between and Within Tourist Destinations 31**
Lorenzo Zirulia
- 4 Flows of Tourists, Commodities and Investment:
The Case of China 43**
Jianhong Zhang, Haico Ebbers, and Chaohong Zhou

Part II Demand Impact Analysis

- 5 An Econometric Study of German Tourism Demand
in South Tyrol 67**
Juan Gabriel Brida and Wiston Adrián Risso
- 6 Modelling Tourism Demand in Portugal 79**
Ana C.M. Daniel and Paulo M.M. Rodrigues
- 7 Instruments of Structural Policies for Tourism Sustainability 95**
Salvatore Bimonte and Lionello F. Punzo

Part III Growth Impact Analysis

- 8 Migration and Tourist Flows** 111
Masood Gheasi, Peter Nijkamp, and Piet Rietveld
- 9 A Dynamic Correlation Approach of the Swiss Tourism Income** ... 127
Costas Leon and Bruno Eeckels
- 10 Dynamic Model of Economic Growth in a Small Tourism
Driven Economy** 149
Stefan F. Schubert and Juan G. Brida

Part IV Economic Performance Analysis

- 11 Hotel Chain Performance: A Gravity-DEA Approach** 171
Valerio Lacagnina and Davide Provenzano
- 12 Panel Seasonal Unit Root Tests: An Application to Tourism** 183
Nazarii Salish and Paulo M.M. Rodrigues
- 13 Monopolies at Sea: The Role of Onboard Sales
for the Cruise Industry's Growth and Profitability** 211
Michael P. Vogel
- 14 Optimality of Casino Taxation – The Case of Portugal** 231
Stefan F. Schubert, Álvaro Matias, and Carlos M.G. Costa

Part V Local Impact Analysis

- 15 Explaining the Residents' Attitudes Towards Tourism Development
in the Spanish Province of Huelva** 247
Alfonso Vargas-Sánchez, Nuria Porras-Bueno,
and María de los Ángeles Plaza-Mejía
- 16 Measuring Seasonality: Performance of Accommodation
Establishments in Sicily Through the Analysis
of Occupancy Rates** 261
Stefano De Cantis and Mauro Ferrante
- 17 Hospitality Management in Rural Areas: An Empirical Analysis
of Enterprises Located in Leader+ Territories of Campania** 281
Riccardo Vecchio

Chapter 1

Impact of Tourism

Álvaro Matias, Peter Nijkamp, and Manuela Sarmento

1.1 Tourists as Contemporary Argonauts

In the ancient history, the Argonauts were symbolizing man's unrestricted desire to seek for something unique, under difficult and unknown circumstances. The Argonauts sailed in their ship, named Argo, through the Bosphorus to the Black Sea. On board were many well-known Greek heroes, amongst others, Heracles, Nestor, Orpheus and Theseus, while the captain in charge was Jason. Their discovery tour led to spectacular adventures, but at the end they managed to fetch the Golden Fleece. This episode of Greek mythology took place several years before the Trojan War, but illustrates clearly the drive of mankind to explore the unknown.

In modern times, we also have our kind of Argonauts; they are now better known as tourists. Their desire to visit unknown places, or at the very least to enjoy unexpected experiences, is well known. The main difference with earlier Argonauts is that tourism has become an emancipated activity, so that almost anyone can be a tourist in one way or another. This emancipation of tourism was part of a maturity process made possible as a major result of economic progress and the combined rise of the welfare-leisure society. Of course, the process was facilitated through the rise of efficient transport technologies, the consequent declining transport costs, as well as the ultimate globalization trends towards a world without borders, together with the emergence and development of ICT systems.

As a consequence, the tourist sector has become one of the most rapidly growing economic sectors, and many countries and regions regard tourism as a strategic vehicle for gaining prosperity. Prestigious tourism development projects are undertaken in many places, in the hope that soon the revenues will outperform the costs.

Á. Matias (✉) • M. Sarmento

School of Economics and Business, Lusíada University, Lisbon, Portugal
e-mail: amatias@lis.ulusiada.pt; manuela.sarmiento@edu.ulusiada.pt

P. Nijkamp

Department of Spatial Economics, VU University Amsterdam, Amsterdam, The Netherlands
e-mail: p.nijkamp@vu.nl

Often such investment plans are based on speculation rather than on hard economic facts. Caveats in assessing the economic importance of tourism are inter alia: the tourist sector is not a uniform sector, but comprises a multitude of actors with significantly different behaviours and spending patterns; tourism creates a variety of negative external effects, such as destruction of a local climate, feelings of crowdedness for the natives, or significant reductions in environmental quality; tourism is a seasonal and fashionable economic activity, – as a consequence of the “floating” character of tourists’ preferences and perceptions – , so that tourism does not easily generate a robust flow of structural income; tourism is also highly dependent on the economic cycle and is often the first sector affected by an economic downturn.

Consequently, the evaluation of tourism policies and activities has to be carefully assessed. Henceforth, there is a clear need to develop solid methodologies through which the socio-economic impacts of tourism can be assessed. The diversity in the tourist sector (visitors, facilities, institutional frameworks) poses a real challenge to economic researchers in designing appropriate methodologies for tourism impact assessment. There are many aspects to be considered: the national balance of payment, the consequences for regional or local development in terms of additional income and employment, the public revenues from the sector, the financial returns of tourist investments (private or public), the seasonal component in tourist revenues, etc. An important role is also played by the organization of the tourist sector, which has shown clear signs of industrial concentration (large hotel chains, international tour operators, international airline alliances). And more recently, we have seen the increasing popularity of e-tourism, through internet information on places of destination, on-line booking systems, local digital tourist information amenities, and so on. Tourism impact assessment – as a systematic approach to the estimation of socio-economic effects of tourism on relevant parts of the economy – has become a timely response to the need for appropriate information for stakeholders, both public and private. The present volume presents recent advances in tourism impact assessment, mainly from an operational perspective.

1.2 Organization of the Book

This volume on tourism impact assessment is systematically organized in five parts. All these parts contain a set of recently developed impact models for the tourist sector. These parts have the following systematic sequence: destination impact analysis, demand impact analysis, growth impact analysis, economic performance analysis, and local impact analysis.

Part A, on *destination impact analysis*, opens with a contribution by Sánchez Cañizarez, López-Guzmán and Reis on the relevance of human capital as a source of competitiveness in tourist places. Human resources are a sine qua non for a high and professional service quality that generates tourist satisfaction. The authors investigate the educational levels of workers in hotels in two tourist areas

(Andalusia and the Algarve) in order to assess the impact of education on overall job satisfaction and organizational commitment of workers. They find that a higher job satisfaction and organizational commitment in Andalusia are found among workers without a university education, while in the Algarve the highest average levels of job satisfaction are related to the possession of diplomas. To explain these differences, the authors then estimate a logit model. They arrive at the conclusion that other background factors, such as existence of work shifts, marital status, work organization, and type of contract offer a more significant explanation. The final conclusion is that human capital is a valuable asset in the tourist sector, as it may generate commitment and offer good services to the clients, provided it is well implemented and managed.

The next contribution to tourism impact analysis is written by Zirulia. The author presents an operational model that addresses the interplay of competition within and between tourist destinations. This study focuses on the relationship between the degree of (exogenous) differentiation between tourist destinations and the (endogenous) degree of competition within the tourist destination. The main result is that an increase in the intensity of competition between destinations induces destination authorities to increase competition within the destination. This implies that an increase in the intensity of competition between destinations redistributes wealth from destination places to origin places through two effects: a direct effect (for a given number of firms in each destination) and an indirect (induced) effect, operating through variation in the number of firms, which reinforces the direct effect. Clearly, various extensions of the model are possible. For example, one could imagine enriching both the description of competition among destinations, and the nature of destination as a system of multiple firms. At the level of competition among destinations, one could also design a dynamic model in which the degree of vertical and horizontal differentiation is endogenous. And finally, at the level of the destination system, it might be interesting to study the behaviour of firms offering different types of goods and services (accommodation, meals, entertainment, etc.). There is clearly still a rich scope for further study on competition among tourist destinations.

The next contribution is written by Zhang, Ebbers and Zhou. These authors try to identify the interwoven impact of international flows of goods, foreign direct investment and tourists, followed by an empirical application to China as a destination country. Their study investigates the long-run equilibrium and causal relations in China between three types of cross-border flows: people, goods and capital. Using time series econometric techniques and data from 1978 to 2005, their study finds that in the long run, these three flows are positively correlated, while in the short run, interactive causal relationships appear to exist between international commodity trade, international tourism and foreign direct investment. Specifically, there are bi-directional causal links between commodity trade, imports and exports, and tourism, and a one-way causal link from foreign direct investment to tourism. The study suggests that globalization is a multifaceted process; the interaction between commodity trade, investment and tourism offers ample chance for further development.

Next, Part B is devoted to *demand impact analysis* and offers various studies that aim to model the behaviour and impact of tourist visitors. The first chapter in this part, written by Brida and Risso, seeks to investigate the main determinants of the German demand for tourism in South Tyrol. The dominant share of Germans in the South-Tyrolean market with more than 80% of the total of international tourism arrivals in the region is an interesting phenomenon. The authors introduce a dynamic data panel model and apply it to a panel data set collected from 116 tourism destinations in South Tyrol. They use annual data (from 1987 to 2007) on per capita GDP of Germany (measuring income), the number of German tourists in each destination (measuring the volume of tourism), the relative prices between Italy and Germany (measuring tourism price) and the price of crude oil (as a proxy of travel costs). Their model results of this study show that the demand for tourism in a previous period has a positive and relevant effect on actual demand, reflecting essentially a general loyalty of German tourists. Furthermore, the study finds that the cost of travel and the relative prices have a negative and significant impact on the tourism demand.

Tourism demand is a volatile phenomenon and may exhibit various types of fluctuations. Daniel and Rodrigues model in a subsequent chapter of this volume the dynamics of tourism demand in Portugal. Their point of departure is that non-stationarity and conditional heteroscedasticity (high and low volatility movements) are two main characteristics of many economic and financial time series, including tourism series. Volatility is considered by many researchers as an unpredictable measure of the intensity of variation. These variations are normally associated with unexpected events typically known as “news shocks”. For instance, factors responsible for changes in tourism are global terrorism, economic changes in the tourism source countries, exchange rate volatility, tourist health and safety in destinations, and unexpected national and international political changes. The authors seek to apply recently developed econometric techniques in order to model and forecast tourism demand volatility in Portugal. They aim to account for factors that may affect tourism demand fluctuations and to model the impacts of those shocks on the tourism industry. It is, therefore, necessary to analyse how demand volatility evolves over time by paying explicit attention to so-called volatility clustering. Their study uses both a symmetric and two asymmetric models. The main advantage of these models is that they consider simultaneously the conditional mean and conditional variance. Finally, the authors address explicitly seasonality in tourism demand.

In recent years, the notion of tourism sustainability has gained increasing importance. This means that socio-economic growth of tourist areas has to be in balance with sustainable development. This interface is addressed by Bimonte and Punzo, who provide an analytical framework of two internally homogeneous populations as a starting point for studying host-guest interaction on the basis of theories on multi-population dynamics and evolutionary game theory. A sufficient condition for sustainable tourism to emerge is that the two populations share a common interest and, thus, are willing to strategically cooperate in the sustainable exploitation of local resources. The public good or common-pool nature of these resources creates

known problems of potential conflict. This may even lead to “perversely” cooperative behaviour with hosts and guests joining forces in overharvesting. The authors employ a simple game setting to show that tourism sustainability may be an equilibrium property associated with a supporting social agreement, and they pinpoint conditions for its emergence. In a more realistic context, one may assume heterogeneity between the two populations as to preference structures and social norms. It is then possible to find the conditions for the emergence of the desired virtuous outcome from an initially conflicting situation. One such necessary condition is the repeated encounter between the two populations, whereby fear of punishment drives an evolutionary process of strategy modification towards cooperative behaviour. As this condition is hardly realized in the tourism sector, alternative policy mechanisms and procedures have to be designed to induce reciprocal adaptation.

In the subsequent Part C of this volume the attention is focused on *growth impact analysis* and opens with a chapter by Gheasi, Nijkamp and Rietveld, who address the question of international tourism and migration as a double causality issue. They study the relationship between VFR trips (visits to friends and relatives) and migration by using panel data from the UK, and aim to find an answer to the question whether (inbound and outbound) tourism is a result of immigration. The model developed in this study demonstrates that there is a strong relationship between the stock of migrants and VFR tourism. Various other variables, such as GDP per capita and distance between country of origin and destination, appear to play a significant role as well.

A next chapter, written by Leon and Eeckels, looks into the income generated by tourism over a longer time period. The authors offer a dynamic correlation approach to the Swiss tourism income. To that end, they apply cross-spectral methods, a dynamic correlation index of co-movements and a VAR model to study the cyclical components of GDP and tourism income in Switzerland on the basis of annual data for the period 1980–2007. They find evidence of four dominant cycles for GDP and an average duration between 9 and 11 years. Tourism income is characterized by more cycles, giving an average cycle of about 8 years. There appears to be also common cycles, both in the typical business cycle and in the longer-run frequency bands. A lead/lag analysis shows that the two cyclical components are roughly synchronized. Finally, simulations with the help of a VAR model show that the maximum effect of a 1% GDP shock on tourism income is higher than the maximum effect of a 1% tourism income shock on GDP. The effects of these shocks last for about 12–14 years, although most of the shocks are absorbed within 5–6 years.

The final chapter in Part C offers a dynamic economic growth model for a small tourism-driven economy. The authors, Schubert and Brida, study the dynamics of economic growth caused by an increase in the growth rate of tourism demand. They develop a simple dynamic model of a small open economy, which is completely specialized in the production of tourism services (an island economy model), populated by a large number of intertemporally optimizing agents, deriving utility from consuming an imported good. Tourism services are produced by means of

a simple technology by using imported capital, its accumulation associated with adjustment costs. Moreover, the economy can lend or borrow at the international financial markets at the given world interest rate. Adjustments in the relative price of tourism services ensure market clearance for tourism services. The long-run growth rate of the economy is tied to the growth rate in tourism demand. An increase in the latter increases thus the economy's long-run balanced growth rate. In contrast to the standard one-good small open-economy endogenous growth model, where the economy is always on its balanced growth path, we show that there are transitional dynamics after an increase in the growth rate of tourism demand. In particular, the short-run growth rate of output rises gradually towards its higher long-run level, and the market price of tourism increases during this transition. Thus, an increase in the growth of tourism demand leads to a boom in the small open economy and increasing terms of trade.

Part D of this volume is devoted to models for *economic performance analysis*. The first chapter in this part is written by Lacagnina and Provenzano, and explores the evolution of the efficiency of a hotel chain and its implications in terms of competitiveness. A gravity model and a data envelopment analysis (DEA) are implemented in a dynamic framework. The former generates the tourism demand towards each hotel of the chain, while DEA Window analysis is used to capture efficiency changes over time. A Malmquist index is used to measure the productivity change and to decompose it into the catching-up and the frontier-shift effect. The authors find that policies implemented according to DEA Window analysis increase the efficiency scores for the hotel chain and its competitiveness.

The dynamics of the tourism sector is one of its challenging research characteristics. In the subsequent chapter, Salish and Rodriguez apply a panel seasonal root test to tourism in Portugal. The authors offer a model that is a generalization of the standard seasonal unit test procedure for heterogeneous panel data. The descriptive statistics and corresponding critical values for the t-bar and F-bar statistics are obtained using Monte Carlo simulations for different deterministic kernels.

With an increasing share of cruise tourism, it is important to assess amongst others the size of onboard sales in the cruise industry. Based on an analysis of Carnival Corporation and Royal Caribbean Cruises' financial statements on 2001–2007, Vogel derives then three stylized facts of cruise line economics: net onboard revenue is outgrowing ticket revenue; ticket prices are barely – or not – cost-covering; and real ticket prices tend to decline. His study then develops a microeconomic cruise line model to explain these stylized facts, and to shed light on the way the cruise line business is changing. The model suggests that high-margin onboard revenue is likely to be the main driver of cruise industry growth by giving cruise lines the possibility to subsidize ticket prices in order to make cruising more affordable. Lower ticket prices attract more customers who, once onboard, fuel this process with their spending. Various strategic implications are discussed as well.

The next and final chapter on economic performance analysis in the tourism industry is offered by Schubert, Matias and Costa. These authors present a model for calculating optimal revenues from casino taxation in Portugal. They develop

a dynamic general equilibrium model of a small open economy, comprising an industrial sector producing an internationally traded good, a tourism sector producing tourism services offered to both foreign tourists and residents, and a casino sector supplying gambling services. Domestic residents derive their utility from consuming the traded good, tourism services, and gambling. The authors analytically derive the effects of a reduction in casino taxation and demonstrate that this is welfare improving.

The final part of this book, Part E, presents interesting examples of models for *local impact analysis* in the tourism industry. Vargas-Sánchez, Porras-Bueno and Ángeles Plaza-Mejía develop a quantitative methodology (using structural equation models) to study the residents' perceptions and their attitudes towards a set of variables such as the connection with tourism, the personal or family benefits obtained or expected from tourism development, its favourable and unfavourable effects in terms of economic, socio-cultural and environmental aspects, etc. At the same time, this research study sets out to identify the variables capable of determining these perceptions, in an attempt to construct an explanatory model of residents attitudes towards additional tourism development. This chapter addresses various gaps in the literature, and focuses attention on the attitudes of the residents of the Spanish province of Huelva and on the factors that may determine and explain their attitudes. The fact that tourism in this "enclave" is a relatively recent phenomenon, that is still in a phase of low or moderate development and, therefore, with a considerable potential for growth, gives this study added value, since that the greater part of previous studies of this type have been conducted in tourist destinations that are well-consolidated, mature or of a high level of development.

It goes without saying that seasonality management in the tourist industry is one of the greatest challenges. This phenomenon has been extensively studied in the literature, but there are relatively few studies that have carefully examined ways of quantifying and comparing empirical patterns. The chapter by De Cantis and Ferrante reviews main seasonality measures, highlights their properties in relation to different research aims, and offers a comparable efficiency measure, viz. the bed places occupancy rate of accommodation establishments (by nationality of guests and by accommodation category) in Sicily, placing particular attention to its seasonality. Seasonal adjustment procedures are used to derive seasonal factors. Through the use of these factors, several seasonality measures are compared, distinguishing between measures for amplitude and measures for pattern. Finally, this study aims to highlight various questions related to the efficiency evaluation of tourism sector in Sicily, and to provide tools for the analysis of seasonality which can be used to compare the efficiency level of tourism activity and to evaluate the efficacy of policies oriented to reduce seasonality.

The final contribution in this volume deals with an increasingly important issue, viz. hospitality management in rural areas. The author, Vecchio, investigates the performance of tourism enterprises in Southern Italy. His study raises critical issues related to the management of hospitality firms located in rural areas of the Campania Region. It is based on 30 in-depth interviews with owners and managers of agritourisms, restaurants, bed-and-breakfasts, and country houses. His findings

suggest that, even though if the potential for the development of rural tourism in Campania is widely recognized, growth in the industry is inhibited by a variety of different issues. Among these, there is certainly a lack of effective marketing strategies developed by the hospitality firms. There is definitely more scope for expanding tourism, provided the supporting policies are put in place.

In retrospect, this volume offers a set of advanced and original contributions to the economics of the tourism industry, in particular to tourism impact assessment. With the increasing importance of global tourism in the years to come, tourism impact assessment will become an important analytical instrument for evaluating the socio-economic importance of tourism, against the background of the paradigm of sustainable tourism.

Part I
Destination Impact Analysis

