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## **BOOK REVIEW**

### *Quantitative Methods in Tourism. A Handbook, 2<sup>nd</sup> edition*

Rodolfo Baggio and Jane Klobas (editors) (Channel View Publications, Aspects of Tourism, Bristol, UK; 2017; 252pp; Hardcover, £89,95; ISBN-13: 978-1-84541-618-8 (pbk))

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Handbook, 2nd edition », Tourism Analysis, forthcoming)

This book is very important in the field of quantitative methods applied to the study of the tourism sector. The second edition contains new chapters and notably one which focuses on the use of big data in the tourism industry. This topic is a growing area with an important potential for application. In this book, the authors focus on the application of the quantitative methods and the technics on various fields (economics, management, geography, sociology, etc.) which are used in interdisciplinary research related to tourism. The presentation is very clearly written, quite educational, and describes very well the latest methods, yet with some technical paragraphs which may be difficult to understand.

This book is particularly recommended for students or researchers with a thorough knowledge of the tourism literature, and a good mastery of mathematical tools but little knowledge of quantitative methods. It will help them to select and use the right method for their research.

However, if the reader has a low level of mathematics and computer programming, some parts may prove too technical. On the other hand, with little knowledge of the tourism literature, a reader might have difficulty understanding which method is best suited for a particular problem. I agree with the choice to present the tools/methods and not the disciplinary topics concerned by the methods, but there is a risk of losing the reader who is just embarking on research in the field of tourism and whose mathematical level is insufficient. .

In general, the book is very well written but the structure could be more balanced. The first section is much more developed than the second. This is due to Chapter 4, which is almost as long as all chapters in Section 2. It would have been preferable to have 3 sections by dividing the first one into two sections: one concerning the preliminary study of the data and the sample and another one on the aspect of the econometric models.

In addition, the technical presentation of methods is supplemented by very useful boxes on examples of applications to tourism. However, there seems to lack references concerning the applications already implemented (for each quantitative method), their objectives, their data and the limits. The *Handbook of Research method in tourism*, edited by N. Seetaram, L. Dwyer and A. Gill. in 2012<sup>1</sup> present many references which use some methods mentioned in this second edition of *Quantitative Methods in Tourism. A Handbook*. If these two books are read together, the reader has a better understanding about the potential application of these empirical methods to the tourism sector.

Chapter 1 is an excellent introduction which allows the reader to take ownership of a database and find out what the main existing data in tourism are. The important educational value of this chapter lies in the end with the presentation of public databases. This basic information is certainly a gold mine for a reader wanting to embark on the search for international data on

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<sup>1</sup> Dwyer, L. Gill. A. and Seetaram, N. (2012). *Handbook of Research method in tourism*, Edward Elgard Publishing, Cheltenham, UK. Northampton, MA, USA.

tourism. However, the end of this chapter would benefit from a more detailed presentation of the data available on the websites mentioned.

Chapter 2 explains well simple methods which are placed in the context of sampling tourist data. However, the authors speak of the p-values according to the applied tests, and in particular the Student test (page 23, table 2.3). It would have been useful to recall why some laws are used rather than others for the tests presented. In addition, the bootstrap sub-chapter seems to have been treated too fast. How can this method be technically implemented? In addition, the table on page 35 could be accompanied by examples of applications (in one line for example, to make it easier to define which test to choose for the reader).

Chapters 3 and 4 appear to be the most interesting chapters in the book but also the longest. The models for the quantitative data and the models for the qualitative data (which can be moved to chapter 6) could have been split. The main problems encountered in econometrics with tourism data are discussed in these chapters and solutions are provided. However, the problem related to panel data are not discussed. Moreover, I have suggestions about chapter 4. First, on page 90, it would have been interesting to give examples of concrete applications for the different specifications (linear, log-linear, etc.). How is the most appropriate specification selected? For example, in the box on page 98, could the problem of forecasting tourism arrivals by forecasting temperatures be solved with a change of specification (e.g. from linear to a log-linear specification)? Second, on page 100, when the author introduces the notions of dummy variables, it would have been useful to provide key elements to interpret the coefficients of these variables (i.e. in comparison with the constant term). Third, the paragraphs on “Path Modelling” are very technical. The authors could have presented some examples of applications for the different tests of the table 4.4.

The two chapters on big data and simulations add a lot of value to the book. These chapters are very original and provide a lot more of information than the current literature proposes. In the

simulation chapter, the example used (“Increasing the attractiveness of a tourism destination”) is clearly innovative. I suggest a second example of an application related to the topics of sustainable tourism. For example, what is the effect of a tourism accommodation localization close to (or far away to) the accommodations of the residents?

The growing literature on DEA (Data Envelopment Analysis) methods and on measuring the performance, efficiency or effectiveness of a destination could also be discussed, since it concerns geographers, economists, marketers, managers, etc. These methods do not suffer from parametric constraints and can be used, above all, by public decision-makers<sup>2</sup>.

In conclusion I intend these remarks to be constructive to improve the future editions of the handbook. I highly recommend the reading of this book to all tourism researchers using quantitative methods. It offers a complete vision of all the methods that can be used, and provides important and extensive information. From a technical point of view, it is the most rigorous and reliable book in this field.

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<sup>2</sup> Some examples :

Anderson, R. I., Fish, M., Xia, Y., & Michello, F. (1999). “Measuring efficiency in the hotel industry: a stochastic frontier approach”. *International Journal of Hospitality Management*, 18(1), 45–57.

Anderson, R. I., Fok, R., & Scott, J. (2000). “Hotel industry efficiency: an advanced linear programming examination”. *American Business Review*, 18(1), 40–48.

Baker, M., & Riley, M. (1994). “New perspectives on productivity in hotels: some advances and new directions”. *International Journal of Hospitality Management*, 13(4), 297–311.

Barros, C.P., Botti, L., Peypoch, N., Robinot, E., Solonandrasana, B. and A.G Assaff (2011), “Performance of French destinations: Tourism attraction perspectives”, *Tourism Management*, 32, 141-146