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Tourist expenditures: the state of the art

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This article explores the spending literature in the field of hospitality and tourism management to achieve a better understanding of the evolution of this stream. The paper uses a bibliometric approach and is based on 124 papers published in seven leading hospitality and tourism journals from 1990 to 2011. The findings have revealed that the weight of spending literature appeared less than expected. The amount of spending research was primarily published in tourism journals, and in particular in the *Journal of Tourism Research*, followed by *Annals of Tourism Research*. In contrast, hospitality journals contributed marginally to the debate. Two fields of analysis emerge as primary research areas: determinants of tourist expenditures and measurement of economic impacts. The former stream contains a large number of research studies. The sample is primarily composed of empirical papers, while theoretical work remains at a consistently low level. Empirical evidences are primarily related to North America.

Keywords: tourist spending; hospitality; tourism; journals; review

Introduction

"In today's competitive business environment, destination marketers are trying to expand their market share by seeking travellers who will spend money, and not just time, on their tourism products" (Mok & Iverson, 2000, p. 299). Sheldon (1993) found that some Organization for Economic Co-operation and Development (OECD) countries showed an increase in arrivals and a decrease in expenditures or vice versa, and concludes: "international tourism expenditures fluctuate to different degrees than do international tourism arrivals" (p. 14). The relevance of money rather than time or number of clients (arrivals or overnights) is reinforced by the problem of sustainability (Koc & Altinay, 2007), which in many destinations occurs especially during the high season (Capó, Riera, & Rosselló, 2007; Manning & Powers, 1984). Given the pressure generated by tourism activities on natural resources (Cuccia & Rizzo, 2011), there is an evident trade-off between an increase in volume and in revenues (Mmopelwa, Kgathi, & Molefhe, 2007).

Most countries collect arrivals but not all collect expenditures, even though the International Monetary Fund and the World Tourism Organization (WTO) have recommended that these data be included in a country's national accounts (Anderson, 2010; WTO, 2000, 2005). This lack of statistical activity is not surprising: in fact "tourism expenditure data are more difficult to measure because the tourism industry consists of so many component sub-industries" (Sheldon, 1993, p. 13).

For this reason, a wide corpus of studies has explored methods, procedures, and indices in order to measure the economic impact generated by tourism activities

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(Borden, Fletcher, & Harris, 1996; Khan, Seng, & Cheong, 1990; Stynes & White, 2006; West & Gamage, 2001) and events (Chhabra, Sills, & Cubbage, 2003; Crompton, Lee, & Shuster, 2001; Daniels, Norman, & Henry, 2004; Getz, 1994; Tyrrell & Johnston, 2001), on the one side, and the determinants of tourist expenditures (Cheung & Law, 2001; Di Matteo & Di Matteo, 1993; Qiu & Zhang, 1995; Zhou, 2000), on the other side.

These two fields of research have been applied at national level (Wilton & Nickerson, 2006), destination level (Johnson & Moore, 1993), or business level (Schwer, Gazel, & Daneshvary, 2000), focusing on different kinds of supply tourism segments, such as cultural (Grado, Strauss, & Lord, 1997; Kim, Prideaux, & Chon, 2010), rural (Long & Perdue, 1990), gambling (Young, Corsun, & Baloglu, 2007), sand and sun (Aguilló & Juaneda, 2000), business (Braun, 1992), cross-border (Kendall & Kreck, 1992), shopping (Bojanic, 2011; Hsieh & Chang, 2006), cruise (Henthorne, 2000), wine (Kolyesnikova & Dodd, 2008), ocean-based (Leeworthy, Wiley, English, & Kriesel, 2001), boating (Lee, 2001), fishing, and hunting (Bilgic, Florkowski, Yoderc, & Schreiner, 2008).

This stream of research is wide (Sheldon, 1990) and has a long tradition: Mathieson and Wall (1982) note studies dating back to 1933 (Ogilvie) and 1953 (Alexander), addressing the economic benefits originated by tourism. The relevance of this field is accurately summed up by Frechtling: "developing techniques to measure the economic benefits and costs of tourism activities assists residents, consumers, businesses, and governments in making efficient and effective marketing and development decisions" (2006, p. 26). In other words, the measurement of tourist expenditure represents a key economic driver, relevant for the main stakeholders involved in the travel and tourism activity.

Studies on tourist expenditures are primarily empirical in nature, with few theoretical articles and reviews (Wilton & Nickerson, 2006). This paper contributes to filling this gap, proposing an extensive analysis of expenditure research published in major hospitality and tourism management journals from 1990 to 2011. The article focuses primarily on expenditure scholarship in terms of volume of publications, research method, and research focal areas. The goals or research questions guiding this historical analysis are primarily two. The first is to analyse and classify the studies, with the main purpose of identifying research streams and the directions developed by the researcher. The second is to explore the trends characterizing both the spending literature as a whole and its main study streams.

Literature review

The spending literature is part of a broader area of enquiry represented by the tourism demand modelling and forecasting research. Song and Li suggest that the first stream (outside the research goal of the present paper) is wider than the second: "the tourist arrivals variable is still the most popular measure of tourism demand over the past few years" while "some studies used tourist expenditure in the destination as a demand variable" (2008, p. 204). However, the empirical analysis conducted by Lim (1997) depicts a very similar number of studies using, respectively, "tourist arrivals and/or departures" or "tourist expenditures and/or receipts". This paper focuses only on tourist expenditures, with the aims to identify inside sub-streams (first research question) and publish trends (second research question).

Concerning the first research question, the field analysis made it possible to identify two study streams. A first, quantitatively smaller approach (29% of total sample) focused on economic impact and multipliers. This corpus of studies aims to measure the value

generated entirely by tourism flows for a specific destination. A second stream of research explores the main determinants of tourist expenditure. The unit of analysis is represented by single tourists and not a destination; the goal is also more focused to identify what determines tourism spending and, in a marketing strategy, how tourists may be influenced to spend more of their budget on tourism-related activities.

These two areas of enquiry are intimately connected and in particular the second stream (determinants of tourist expenditure) is often used as an input in order to measure the value produced by tourism activity for a given destination. Finally, the whole spending literature is analysed in a separate paragraph. After describing the different research streams and identifying the main theoretical frameworks, some hypotheses have been introduced in order to explore the second research question, which aims to focus on researching trends and evolutions inside the spending literature.

For a relatively recent economic activity such as tourism (Burgan & Mules, 1992; Fletcher, 1989) and with a fragmented supply (Henry & Deane, 1997), the measurement of economic value generated becomes a key question (Wilton & Nickerson, 2006; Zhou, Yanagida, Chakravort, & Leung, 1997).

A first stream of research aims therefore to estimate the economic impacts of recreation and tourism activity (Frechtling, 1994; Jang & Ham, 2009). Researchers generally must begin with changes in visitor spending, typically estimated via visitor surveys. Changes in visitor spending can be applied to models of the local economy to convert spending to the associated changes in income, employment, or tax receipts, and estimate multiplier effects (Stynes & White, 2006, p. 8). "Economic impacts do not end with the initial tourist expenditures, and multiplier effects should also be considered" (Chhabra et al., 2003, p. 421). Researchers (Archer & Fletcher, 1996; Borden et al., 1996; Dwyer, Forsyth, & Spurr, 2004; Frechtling & Horvath, 1999) agree in suggesting that there are basically three main models used to estimate economic impacts: (i) input–output model, (ii) multipliers, and (iii) computable general equilibrium.

> The main attraction of the *input-output model* is that it provides a very detailed picture of the structure of the economy at a particular point in time. This is achieved by disaggregating all the productive activities in the economy into industry sectors and documenting all the transactions (purchases and sales) occurring during the time period (usually 1 year) between these sectors. The input-output model is, in essence, a set of regional accounts and thus provides a basis for the detailed analysis of intersectoral relationships within the economy (West & Gamage, 2001, p. 101).

> The *multiplier* relates the total impact of an exogenous change to the initial change that started the process. Such a multiplier is commonly known as a Keynesian multiplier, named after J.M. Keynes, one of the founders of modern macroeconomics. The usual Keynesian multiplier is found by dividing the total impact on GDP [Gross Domestic Product] by the initial exogenous impact. Other multipliers may be defined by altering the definition of either the numerator, the denominator, or both (Burgan & Mules, 1992, p. 702).

> A *computable general equilibrium* model has an input–output model embedded in it; but it also has other markets, and the links between markets, explicitly modelled. These recognise that consumers must choose how to spend their budgets – they do not have unlimited budgets. Resources are limited too, and they are normally allocated by markets (Dwyer, Mellor, Livaic, Edwards, &Kim, 2004, p. 309).

The development of this last technique is an evolution of the input–output model, aiming to remove some unrealistic hypotheses (Briassoulis, 1991; West, 1993). "[Computable General Equilibrium] models are mathematical models based on neoclassical economic principles, which include effects of prices and supply constraints. The latter are often missing from traditional input output models" (Mules, 1998, p. 267). This first research

stream also includes different methods in order to estimate tourism economic value. An important sub-field is Tourism Satellite Account (TSA), i.e. a method of measuring the direct economic contributions of tourism consumption to a national economy (United Nations Statistics Division, 2008; WTO, 2008). No paper was included in the sample fit with TSA; this is not surprising because, as recently suggested by Frechtling:

> [. . .] it is worth noting that the TSA contrasts with the other popular methods of estimating the economic contribution or impact of tourism, such as integrated tourism economic benefit models [. . .], regional travel impact models [. . .], computable general equilibrium models [. . .], and input/output models [. . .] (2010, p. 141).

Concerning the second research question – evolution of both the whole spending literature and its main sub-streams – it is interesting to understand the trends characterizing the articles on economic impact and multipliers. Some authors suggest that this first stream of research represents a focal area and attracts an increasing number of contributions (Archer & Fletcher, 1996; Frechtling & Horvath, 1999; West, 1993; Zhou et al., 1997). Based on this suggestion, a first hypothesis was formulated:

Hypothesis (HP) 1: The number of articles focusing on economic impact and multipliers will increase over time in the allocation of tourism spending studies in major hospitality and tourism journals.

Determinants of tourist expenditures

> One important question is shared by all stakeholders in the tourism industry, whether destination marketers, policy makers or tour operators and others working at the coal face. What determines tourism spending and how may people be influenced to spend more of their budget on tourism related activities? (Dolnicar et al., 2008, p. 44).

This question introduces the second stream of research: the determinants of tourist expenditures. From a research point of view, this second stream is related to the first one:

> several researchers (Burgan & Mules, 1992; Crompton et al., 2001; Gelan, 2003) have maintained that accurate estimates of economic impact are highly dependent upon reasonably accurate measures of visitors attributable to the events and their associated expenditures. Otherwise, the overestimation of direct expenditures will carry through into an input-output model, misleading the economic impact (Lee & Taylor, 2005, p. 600).

The same conclusion is suggested by Burgan and Mules: "it is universally accepted that the economic impacts are expenditure driven" (1992, p. 704). A wide set of studies explored methodological issues related to data collection (Chhabra et al., 2003; Frechtling, 2006; Howard, Lankford & Havitz, 1991; Leeworthy et al., 2001; Wilton & Nickerson, 2006), statistical procedures (Cai, 1998; Kim et al., 2010; Kozak, Gokovali, & Bahar, 2008; Nicolau & Más, 2005; Palmer Pol, Pascual, & Vàsquez, 2006; Sun & Stynes, 2006), and different independent variables able to explain tourist expenditures (Anderson, 2010; Cannon & Ford, 2002; Crouch, 1995; Lim, 1997).

Concerning this last point, empirical studies have found many prominent antecedents. A first group of contributions used per capita real income, relative prices, and relative exchange rates as a determinant (Akal, 2004; Uysal & El Roubi, 1999), while a second wide group used many antecedents, such as purpose of trip (Cang & Hemmington, 2010), transportation mode (Downward & Lumsdon, 2004), various characteristics of the destination(s) in question (Spotts, 1997), accessibility (Roehl, Fesenmaier, & Fesenmaier, 1993), length of stay (Gokovali, Bahar, & Kozak, 2007), repetition level (Godbey & Graefe, 1991), traveller information (Tierney, 1993), travel party size (Thrane & Farstad, 2011),

family life cycle (Lawson, 1991), age (Bojanic, 2011), household income (Mergoupis & Steuer, 2003), gender (Hsieh & Chang, 2006), race (Agarwal & Yochum, 1999), nationality (Hsieh, Lang, & O'Leary, 1997), marital status (Ham, Hwang, & Kim, 2004), education level (Burgess, 1994), and urban environment (Jang, Ham, & Hong, 2007).

Given the range of this stream, Sheldon (1990) – and the contributions of some other authors (Hyde & Laesser, 2009; Lehto, Morrison, & O'Leary, 2001; Thrane & Farstad, 2011) – distinguishes between macro and micro studies. The first stream "is predominantly concerned with constructing aggregate expenditure models of international tourism expenditures using time series macro-economic data". In contrast, "few models use micro data from tourist surveys (collected either by government agencies or by the authors themselves) to better understating why, how and on what the individual tourist spends his money" (Sheldon, 1990, p. 34).

The *macro studies* use secondary data and use three main determinants: exchange rate, income, and prices (Uysal & El Roubi, 1999), Lim (1997) with the addition of transport costs between country of origin and chosen destination.

The *micro studies* use a very wide spectrum of independent variables, as described above. Jang and Ham (2009) propose a segmentation distinguishing between socio-demographic variables (e.g. age, gender, occupation, and marital status) and travel-related variables (e.g. travel companion, travel party size, and number of children). This segmentation is accepted in many other studies (Jang et al., 2007; Upneja, Shafer, Seo, & Yoon, 2001).

Concerning the relationship between tourist expenditure and determinants, Thrane and Farstad suggest that "there appears to be consensus that the former type of variables [trip-related characteristics] explains more of the variance in expenditures than the latter ones [socio-demographic characteristics]" (2011, p. 48).

"A large number of studies in tourism have investigated the determinants of tourism expenditure" (Dolnicar et al., 2008, p. 44). In fact, in the literature review proposed by Lim (1997), focusing on tourism demand models, "tourist expenditure" represents the second research stream, followed by "tourist arrivals and/or departures" – not included in this paper because outside its research subject. The conclusions reached by Li, Song, and Witt are similar, as they affirm: "consistent with previous tourism demand studies, income, relative prices, substitute prices, travel costs, exchange rates, dummies, and deterministic trends were the most frequently considered influencing factors in the reviewed studies" (2005, p. 88). On the basis of these previous studies, it may be concluded that the first research area is represented by contributions focused on tourist expenditure determinants; a second hypothesis was formulated:

HP 2: The number of articles focusing on determinants of tourist expenditures will increase over time in the allocation of contributions on tourism spending in leading hospitality and tourism journals.

Concerning the two sub-streams within the antecedents' studies (macro and micro), some authors suggest that the macro studies have found a strong relationship between the determinants and tourist expenditures (Di Matteo & Di Matteo, 1993; Qiu & Zhang, 1995; Sheldon, 1993; Uysal & El Roubi, 1999), and for this reason the number of published articles is expected to decrease over time. On the contrary, studies at micro level have discovered many relevant determinants, applied to (i) different geographical levels, (ii) different supply tourism segments, and (iii) different tourist segments. For this reason, the number of published articles is expected to be increasing. Based on these results, third and fourth hypotheses were formulated:

HP 3: The number of articles focusing on *macro* determinants of tourist expenditures will decrease over time in the allocation of studies on tourism spending in major hospitality and tourism journals.

HP 4: The number of articles focusing on *micro* determinants of tourist expenditures will increase over time in the allocation of tourism spending studies in major hospitality and tourism journals.

Total field

Focusing on both subfields – economic impact and multipliers on the one hand, determinants of tourist expenditures, on the other – it is possible to suppose a general increase in the number of published articles, as summarized in the following hypothesis. Crouch et al. affirm: "the number of demand studies in general, and analyses of tourism expenditure in particular, is very large" (2007, p. 249). According to a comprehensive review by Li et al. (2005), 420 studies on tourism demand modelling were published during the period 1960–2002, within which tourist expenditure is a key sub-stream. Based on these suggestions, the following hypothesis was formulated.

HP 5: The number of tourist expenditure articles published in major hospitality and tourism journals will increase over time

Lastly, this stream of research is primarily empirical in nature (Sheldon, 1990), while "the discussion related to the collection and uses of expenditure data has not been as prevalent in the literature" (Wilton & Nickerson, 2006, p. 17).

> The vast majority of spending studies [. . .] are applied studies that are not published in formal outlets. Research notes about spending that do appear in journals are frequently spin-offs of applied work rather than studies designed specifically to test particular hypotheses or alternative method (Stynes & White, 2006, p. 8).

Based on these results an additional hypothesis was formulated:

HP 6: The number of articles focusing on *empirical* articles will increase over time in the allocation of tourism spending studies in major hospitality and tourism journals.

Methodology

To identify studies for review, a set of articles published in hospitality and tourism management journals was identified. To ensure reliability, the sample selection is based on key words. Articles were selected according to three criteria:

(1) *Journals*. McKercher, Law, and Lam (2006) adopted a peer assessment method to rank 70 tourism and hospitality journals by 314 tourism and 191 hospitality experts. Seven referred journals received the highest ranks: four of them have a primary focus on hospitality – *Cornell Hotel and Restaurant Administration Quarterly (CHRAQ), International Journal of Hospitality Management (IJHM), Journal of Hospitality and Tourism Research* (JHTR), *International Journal of Contemporary Hospitality Management* (IJCHM) – while three are mainly oriented on tourism – *Annals of Tourism Research* (ATR), *Tourism Management* (TM), *Journal of Travel Research* (JTR). This research design has been used recently by Li (2008).

(2) *Key words*. To select a sample of articles, a research study was carried out at the end of March 2011 based on two key words: spending and expenditure. These words were researched in the abstract, title, and key words in the following databases: Science Direct (ATR, TM, IJHM), Emerald (IJCHM), Sage (CHRAQ, JHTR), and Business Source Elite (JTR). The use of key words is very common in review papers (Sainaghi, 2010).
(3) *Years of publications*. The time horizon embraces 21 years from 1990 to the last issue published in 2011 on which the research was carried out.

A row sample of 190 articles was identified. After an in-depth analysis of each paper, the final sample numbers 124 studies. Although they use the key words applied in this research, the subject of the excluded articles is far removed from the issue of tourist expenditure. Some examples help to understand why some contributions were excluded. In some studies, the word "expenditure" refers to time and not to money (Gustafson, 2002; Kemperman, Borgers, Oppewal, & Timmermans, 2003; Lau & McKercher, 2004), or to marketing (Kulendran & Dwyer, 2009), or again to length of stay (Uysal, Fesenmaier, & O'Leary, 1994), and so on. A complete reference list is available on request from the author. Each article has been classified specifying the following information:

(1) The nature of the study, distinguishing between (i) theoretical or methodological and (ii) empirical papers. "The first category focuses on methodologies used to measure and document spending by tourists" (Sheldon, 1990, p. 28). "Literature reviews … were defined as theoretical studies" (Li, 2008, p. 1015). The second category focuses on the creation of tourism expenditure models including studies measuring economic impact of tourism activities or searching spending determinants.
(2) The level of analysis, segmenting between macro studies and micro studies inside the spending antecedents, as defined in the literature review (Sheldon, 1990, 1993).
(3) The technicalities used to analyse data and to develop models.

Results

Number of published articles

One hundred and twenty-four articles satisfy the research criteria. Table 1 reports the number of studies on tourist spending, distinguishing between hospitality and tourism journals, for the years 1990–2011. The number of published articles varies widely from a low of one article in the CHRAQ to a high of 56 papers in the JTR. This journal also has the highest percentage (6.2%) of tourist expenditure articles for the period analysed. Two journals (ATR, TM) present a value ranging around 2%, while the last three are all hospitality-focused journals (IJHM, IJCHM, CHRAQ) and have marginally contributed to this field, with a percentage below 1%. Analysing the total number of published articles (last column), only 1 year (2001) collects more than 10 articles, while each year includes a minimum of one study.

Hypotheses

In order to test the hypotheses, Table 2 shows the number of published articles in major hospitality and tourism journals distinguishing between studies focusing on (i) economic impact and multipliers (HP 1); (ii) determinants, articulated in total studies (HP 2), macro

Table 1. Expenditure articles published in major hospitality and tourism journals.

Year	JTR	ATR	TM	JHTR	IJHM	IJCHM	CHRAQ	Total
1990	2/44	1/34	/30	/68	/27	/22	/71	3/296
1991	4/40	2/36	/32	/14	/25	/27	/56	6/230
1992	2/41	2/39	/47	/12	/22	/23	/55	4/239
1993	6/41	3/43	/32	/39	/22	/32	/42	9/251
1994	2/33	/43	2/37	/29	/22	/33	/35	4/232
1995	3/37	/49	/59	1/12	/23	/43	1/53	5/276
1996	5/53	3/46	/55	/24	/21	/39	/48	8/286
1997	3/46	3/45	2/48	/10	/21	/39	/44	8/253
1998	4/41	/40	1/47	1/31	/22	/38	/55	6/274
1999	4/36	/39	/48	/21	1/26	/46	/54	5/270
2000	3/44	3/45	1/46	/26	1/23	1/53	/47	9/284
2001	5/42	2/44	2/51	/25	/19	1/45	/53	10/279
2002	2/42	/50	/47	/21	/22	/49	/55	2/286
2003	2/42	1/46	/52	1/27	1/23	/61	/34	5/285
2004	2/42	1/48	3/60	/29	1/30	1/54	/26	8/289
2005	/42	1/51	4/77	/22	/34	/54	/29	5/309
2006	4/48	1/52	2/108	/25	/44	/50	/28	7/355
2007	1/42	1/50	3/124	1/24	/69	/51	/29	6/389
2008	1/44	/47	3/95	/22	/65	/59	/31	4/363
2009	1/40	/29	2/90	1/27	1/70	/56	/43	5/355
2010	/41	/52	/93	/53	1/80	/56	/39	1/414
2011	/18	/14	4/92	/11	/53	/31	/10	4/229
Total	56/899	24/942	29/1370	5/572	6/763	3/961	1/937	124/6444
%	6.2	2.5	2.1	0.9	0.8	0.3	0.1	1.9

Notes: This table reports the number of studies on tourist spending, distinguishing between hospitality and tourism journals for the years 1990–2011. JTR, *Journal of Travel Research*; ATR, *Annals of Tourism Research*; TM, *Tourism Management*; JHTR, *Journal of Hospitality and Tourism Research*; IJHM, *International Journal of Hospitality Management*; IJCHM, *International Journal of Contemporary Hospitality Management*; CHRAQ, *Cornell Hotel and Restaurant Administration Quarterly*.

studies (HP 3), and micro studies (HP 4); and (iii) total articles (HP 5) and total empirical papers (HP 6). All the percentages are calculated considering the total articles published each year.

Focusing on absolute values (column #), 72 articles deal with the issue of determinants, representing 58% of the sample, while the economic impact and multiplier studies account for 36 articles (29%). The remaining papers (13%) – this is the difference between the total (100%), determinants (58%), and economic impact and multiplier studies (29%) – are primarily theoretical studies. Looking at the determinants' sub-field, macro studies account for 14 papers (11%), while the micro studies account for 58 published articles (47%). Empirical papers account for a large part of the sample (95%). In order to quantitatively test the hypotheses, a regression analysis was conducted using the year of publication as a dependent variable. The independent variables include the specific item of each hypothesis (e.g. the number of papers on economic impact and multipliers in the case of HP 1) and the total number of published articles as a control variable. Table 3 reports the results; the analysis was conducted using SPSS software, version 18.

Generally speaking, for all the six models the variance explained by the control variable (see the line "model adjusted R^2 control only") is 39.6% and this is significant. Furthermore, all the regressions present a value of variance inflation factor (VIF) that is

Table 2. Number and type of published articles.

	Economic impact and multipliers (HP 1)		Determinant total (HP 2)		Determinant macro (HP 3)		Determinant micro (HP 4)		Total articles (HP 5)		Total empirical (HP 6)	
Year	#	%[a]	#	%[a]	#	%[a]	#	%[a]	#	%[a]	#	%[a]
1990	2	67	1	33	0	0	1	33	3	100	3	100
1991	1	17	4	67	1	17	3	50	6	100	6	100
1992	2	50	2	50	1	25	1	25	4	100	3	75
1993	5	56	4	44	2	22	2	22	9	100	8	89
1994	2	50	2	50	1	25	1	25	4	100	4	100
1995	1	20	3	60	1	20	2	40	5	100	5	100
1996	2	25	6	75	3	38	3	38	8	100	8	100
1997	4	50	3	38	0	0	3	38	8	100	7	88
1998	4	67	1	17	0	0	1	17	6	100	6	100
1999	1	20	4	80	1	20	3	60	5	100	5	100
2000	3	33	6	67	1	11	5	56	9	100	9	100
2001	4	40	4	40	0	0	4	40	10	100	10	100
2002	1	50	1	50	0	0	1	50	2	100	2	100
2003	1	20	2	40	0	0	2	40	5	100	5	100
2004	1	13	6	75	0	0	6	75	8	100	7	88
2005	1	20	4	80	2	40	2	40	5	100	5	100
2006	0	0	5	71	0	0	5	71	7	100	5	71
2007	1	17	2	33	1	17	1	17	6	100	6	100
2008	0	0	4	100	0	0	4	100	4	100	4	100
2009	0	0	4	80	0	0	4	80	5	100	5	100
2010	0	0	1	100	0	0	1	100	1	100	1	100
2011	0	0	3	75	0	0	3	75	4	100	4	100
Total	36	29	72	58	14	11	58	47	124	100	118	95

Notes: In order to test the hypotheses, this table shows the number of published articles in major hospitality and tourism journals distinguishing between studies focusing on (i) economic impact and multipliers (HP 1); (ii) determinants, articulated in total studies (HP 2), macro studies (HP 3), and micro studies (HP 4); and (iii) total articles (HP 5) and total empirical papers (HP 6). All the percentages (a) are calculated considering the total articles published each year.

always lower than the maximum level of 3 suggested by Hair, Black, Babin, Anderson, and Tatham (2005); the maximum level of condition index is 16.016 (model 1) and also in this case it is lower than the critical value of 30 indicated by Belsley, Kuh, and Welsch (2004). The two indices suggest the absence of multi-collinearity. Heteroscedasticity was controlled by using the White test, verifying the null hypothesis of the homoscedastic sequence. The obtained value is not statistically significant, and so it is possible to affirm the validity of the model (White, 1980).

Focusing attention on the first regression model, the number of published articles in major hospitality and tourism research based on economic impact and multipliers (HP 1) presents a negative coefficient (-0.353) which is intrinsically significant and contradicts the first hypothesis. Models 2, 3, and 4 confirm the estimated signs of relationships – positive for all the determinants articles (HP 2), negative for the macro sub-field (HP 3), and positive for the micro sub-field (HP 3) – but the coefficients are not significant. In any case, the beta values are quite high. Lastly, the last two models show an opposite sign (negative) compared to those forecast (positive). The values of the beta coefficients are somewhat lower (-0.041, HP 5; -0.021, HP 6) and not significant.

Table 3. Regression analysis on number and type of spending articles.

Dependent variable: year of publication	Economic impact (HP 1)		Determinant total (HP 2)		Determinant macro (HP 3)		Determinant micro (HP 4)		Total articles (HP 5)		Total empirical articles (HP 6)	
	Value	Significance	value	Significance	Value	Significance	Value	Significance	Value	Significance	Value	Significance
Independent variable												
Full model counts of spending articles	−0.353	0.065	0.127	0.470	−0.259	0.141	0.266	0.120	−0.041	0.820	−0.021	0.906
Control variable												
Count of all articles	0.484	0.015	0.657	0.001	0.595	0.002	0.633	0.001	0.643	0.002	0.646	0.002
F (full model)	10.330		7.474		9.055		9.311		7.049		7.016	
Model R^2 control only	0.396	0.001	0.396	0.001	0.396	0.001	0.396	0.001	0.396	0.001	0.396	0.001
Full model R^2	0.470	0.001	0.381	0.004	0.434	0.002	0.434	0.002	0.366	0.005	0.364	0.005
Change in R^2 with independent variable	0.074		−0.015		0.038		0.038		−0.030		−0.032	
VIF	1.291		1.002		1.051		1.005		1.040		1.063	
Condition index												
Independent variable	2.643		4.195		2.166		3.735		5.117		4.738	
Control variable	16.016		14.225		13.533		13.840		15.371		15.521	

Notes: Beta (significant level); $p < 0.05$. Generally speaking, for all the six models the variance explained by the control variable (see the line "model R^2 control only") is 39.6% and this is significant. Furthermore, all the regressions present a value of VIF that is always lower than the maximum level of 3 suggested by Hair et al. (2005); the maximum level of condition index is 16.016 (model 1) and also in this case it is lower than the critical value of 30 indicated by Belsley et al. (2004). The two indices suggest the absence of multi-collinearity.

Research method and analytical procedures

Each paper has been analysed by coding some information about information source – distinguishing between primary and secondary data – and the methodology used to analyse empirical information. Concerning the first point (information source), generally speaking, the majority of studies use primary data, which means *ad hoc* information collected precisely to support the analysis. This percentage confirms the intuition of Stynes and White (2006), who suggest that many works in these fields are spin-offs of previous empirical research studies. The wide relevance of primary data could explain why there is an increasing attention to the method used in collecting data, as described before.

Secondary data include a relatively small amount of public information available to researchers, primarily represented by bank records, price information, and exchange rates.

> A number of countries measure foreign-visitor expenditures within their borders by accounting for foreign-exchange purchases by these visitors. The country's central bank attempts to compute the amount of national currency sold to visitors each period through reports from agencies making such currency sales. The validity of this method depends on the system (Frechtling, 2006, p. 31).

Finally, the residual "other" category accounts for the lowest percentage (17%) and includes mainly theoretical papers. Concerning the methodology used to analyse empirical data, the most applied method is multiple regression (35%), followed by input–output, multipliers, and computable general equilibrium (17%), and descriptive statistics (10%). Theoretical papers are included in the "other category". These results suggest (i) the wide choice of analytical procedures that researchers can apply, (ii) the existence of two main structured ways (multiple regression; input–output, multipliers, and computable general equilibrium), and (iii) recourse to specific methods in accordance with the specificity of recorded data.

Geographic focus

Finally, a geographical segmentation was made using the macro area from which the empirical data were collected. The sample includes only the empirical papers (118 articles). Not surprisingly, three main regions (North America, Asia and the Pacific, and Europe) account for 94% of the studies; this percentage overestimates, in part, the world market share generated by Europe, North America, Asia, and the Pacific in arrivals (83.3%) or in receipts (86.4%) (WTO, 2011). What is surprising is the percentage of expenditure articles regarding Europe (17%) and North America (54%) compared with their market share of receipts (48.5% and 14.0%). Despite a considerable weight in world tourism receipts, Europe has marginally contributed to the spending literature; the opposite is true for North America. For Asia and the Pacific, both percentages are very similar. This result, in part, differs from a study carried out by Song and Li who affirm:

> the USA, UK, and France are the most popular researched countries as both destinations and countries of origin. Australia, Spain, Hong Kong, Korea, and Mainland China are frequently researched as tourist destinations, whereas Germany and Japan are generally regarded as key source markets for international tourism. Overall, the USA and Western Europe, as traditional international tourism markets, still attract considerable attention in recent empirical research (2008, p. 204).

Conclusion and implications

Given the increasing competition in the tourism market, many stakeholders involved on the supply side are more interested in attracting their customers' money rather than their time. For this reason, the spending literature was expected to show an upward trend in the

number of published articles in the main tourism and hospitality journals. However, the findings of this study did not support this conclusion. The findings revealed that the weight of spending literature appeared less than expected, only 2% of the total 6,444 published studies. The amount of spending research in the leading hospitality and tourism management journals has been primarily published in tourism journals, and in particular in JTR, the journal with the highest percentage (6.2%). In contrast, hospitality journals have marginally contributed to the debate.

Within the wide field of tourist spending literature, two main segments have been identified: (i) economic impact, multipliers, and computable general equilibrium and (ii) determinants of tourist expenditures. Researchers show a clear main focus on the latter sub-field, which accounts for the majority of published articles and depicts a positive (but not significant) beta coefficient. In contrast, the former sub-stream has a more marginal weight and highlights a negative coefficient. Of 128 published articles in leading journals, 92% are empirical research studies, while theoretical work remains at a consistently low level (8%).

This research fragmentation is certainly related to some distinctive characteristics of tourism sectors, such as the importance of territories and destinations rather than of firms, the presence of many institutions operating in public promotion, and the existence of many demand and supply segments. Together these factors have favoured a strong focus on narrow research questions and purposes of many published papers, which are primarily called to measure the economic impact or the tourist expenditures for a specific destination, demand segment, or supply segment. Not surprisingly, roughly 90% of the sample is composed of empirical papers. Furthermore, given the difficulty (and the costs) in collecting empirical evidences, many papers are based on existing data, reducing the researchers' ability to focus on broader questions.

These conclusions are partially confirmed by some characteristics: (i) research design: a wide use of primary data, (ii) research domain: the predominant weight of micro studies, and (iii) analytic tools: the wide usage of many different methodologies. A first conclusion that powerfully emerges is therefore the high research fragmentation and the impression that "we are getting more pieces of the puzzle, but no picture is emerging" (Li, 2008, p. 1018). On the other hand, there is another interesting interpretation. In a supply side perspective, tourism is essentially a fragmented industry composed of many sub-industries and structured around a wide population of small- and medium-sized firms. Also in a geographic perspective, tourism confirms its fragmented structure, polarized around "crystallization points" (Kaspar, 1995), usually called destinations. In a country–supply perspective, destinations are the "business units" of the national strategy (Bieger, 1998) and they are built around primary or secondary attractors able to create a (more or less stable) relationship with specific targets of clients (Sainaghi, 2006). The tourism phenomenon shows an intrinsic fragmented structure. Furthermore, these territories tend to organize special events (Getz, 1994) in order to attract new targets and manage seasonality (Koenig & Bischoff, 2004).

Starting from this evidence, it is not surprising that researchers in the tourism spending field tend to focus on narrow research questions, designing more micro studies, using primary data and adapting the specific quantitative methodology to the collected data and the particular research purposes. Each study usually presents a strong theoretical background and a sound methodology; therefore, the single "pieces of the mosaic" show a good internal validity. In this context, the development of a unitary body of research is definitely not related to a parallel homogeneity in research questions, context conditions, and research design – which is very difficult to find in a fragmented industry like tourism. Each paper tends to be a unique "piece". What could probably improve the comparisons

between the results of different studies is a stronger and common methodological background.

Finally, two important suggestions for future research. A first remark reflects on geographic scope. At the moment, a large number of published papers in leading tourism and hospitality journals are based on North American evidences while Europe – the largest tourism market – has only marginally contributed to the debate. Given the maturity of the European tourism industry, the application of tourism spending tools could be an important goal for practitioners and, due to the different context (condition), may enrich the body of research for scholars. As depicted in previous literature reviews (Sainaghi, 2010), the context conditions – such as the rate of growth, types of firms (size and ownership), and the relative importance of gross domestic product – create important implications in research styles. A second remark concerns the quantitative tools used by researchers in order to identify relationships among variables. A large number of studies applied linear models, while few studies explored more complex interactions, based on nonlinear interactions. This second stream of research might develop new perspectives and contribute to a better understanding of both the determinants of tourism spending and the measurement of economic impacts.

Two potential limits in this study should be noted. First, the literature review has been analysed primarily using keywords in seven leading tourism and hospitality journals. This research strategy may have excluded some relevant articles that were not identified with the keywords used, while the method may have excluded other relevant articles, not containing these keywords, or published in other journals. Second, this paper uses a bibliometric approach, coding some information primarily related to research streams, year of publication, name and type of journal, research method and analytical procedures, and geographic focus. Regarding the findings, also for reasons of space, the author has not coded: (i) kinds of dependent variables, (ii) used independent variables, (iii) sign of a relationship between independent and dependent variables (positive or negative), and (iv) score of this link. This bias has not made it possible to apply statistical procedure in the analysis of findings. However, the goal of this study is not to make a meta-analysis of the literature regarding performance, but rather to map research streams and to discern state of the art. These two limits could be the topic for further investigation in later studies.

Although this paper does not intend to outline a research agenda, some possible directions, however, emerge as relevant. A first remark suggests favouring a shift between empirical and theoretical papers. At present, this research stream is largely dominated by empirical papers, which usually measure tourist expenditure or tourism value in a specific field of enquiry. Theoretical studies can help in comparing results, by developing shared methodologies and identifying shared sets of independent variables. A second possible direction could be meta-analysis specifically focused on spending literature. In fact, the existing studies are more focused on demand analysis and are, in many cases, older.

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