

## **THE INFOSOURCE SCALE: A MEASURE TO ASSESS THE IMPORTANCE OF EXTERNAL TOURISM INFORMATION SOURCES\***

Cláudia Seabra, Luís Filipe Lages, and José Luís Abrantes\*\*

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\*\* Cláudia Seabra is affiliated with ISCTE - Lisbon and with Instituto Politécnico de Viseu, Escola Superior de Tecnologia, Campus Politécnico de Viseu, 3504-510 Viseu, Portugal. Phone: ++ 351.232.480598, Fax: ++351.232.424651, e-mail: [cseabra@dgest.estv.ipv.pt](mailto:cseabra@dgest.estv.ipv.pt)

Luís Filipe Lages is Assistant Professor of Marketing and International Business at Universidade Nova de Lisboa, Faculdade de Economia, Campus de Campolide, 1099-032 Lisboa, Portugal. Phone: ++ 351.21.3801.600, Fax: ++ 351.21.3886.073, e-mail: [lflages@fe.unl.pt](mailto:lflages@fe.unl.pt), url: [www.fe.unl.pt/~lflages](http://www.fe.unl.pt/~lflages)

José Luís Abrantes is a Visiting Scholar at Universidade Nova de Lisboa, Faculdade de Economia, and Professor of Marketing at Instituto Politécnico de Viseu, Escola Superior de Tecnologia, Campus Politécnico de Viseu, 3504-510 Viseu, Portugal. Phone: ++ 351.232.480590, Fax: ++351.232.424651, e-mail: [jlabrantes@dgest.estv.ipv.pt](mailto:jlabrantes@dgest.estv.ipv.pt)

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## **Abstract**

Information sources have long been considered an important variable in understanding consumer purchasing behaviors. Although research on information sources has been performed in a wide range of social disciplines, this variable has never been operationalized in a services marketing context. In this paper we develop a scale that measures the importance of information sources to the selection of tourism services. Insights from an empirical study of 350 tourists indicates that this multi-dimensional scale incorporates five types of information sources: 1) media, 2) institutional brochures, 3) commercial brochures, 4) travel agents, and 5) internet. Discussion centers on implications of this scale to theory and managerial development of tourism and services strategies. Directions for future research are also presented.

*Subject Areas: Tourism, Information Sources, Services Marketing, Communication.*

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## **Introduction**

Research in the marketing field indicates that consumers search for external information before taking the initiative of acquiring or using a service (Midgley 1983). Within this stream of research several models have been developed to explain how consumers search for information (e.g., Beatty and Smith 1987; Murray 1991; Parasuraman and Zinkhan 2002). From a theoretical perspective, research in consumer behavior becomes essential to decode all the activities used to develop, communicate and sell services. The optimization of services marketing activities depends on a better understanding of which sources consumers use to take their decisions before selecting and using a service. Similarly, from a practitioner perspective, marketers need to identify which information sources are preferred or rejected by consumers. In such way, it will be possible to influence consumers' choices through use of information.

When researching consumer behavior issues in a services context, this becomes a very complex task due to the intrinsic characteristics of services, such as intangibility, inseparability of production and consumption, heterogeneity, and perishability (Zeithaml et al. 1985). Tourism is a services area of extreme importance from both public policy and managerial perspectives. The tourism activity is of extreme importance from the point of view of nations and firms. From the point of view of national governments, tourism activity is crucial because it contributes to the economic development of nations. Additionally, tourism enhances societal prosperity and helps national industries to develop, improve productivity and create new jobs, while shaping public perceptions of national competitiveness and improving the standard of living and

quality of life. At the firm level, tourism provides an opportunity for national firms to become less dependent on the domestic market. By serving foreign customers, firms may also explore economies of scale and achieve lower production costs while serving clients more efficiently. Additionally, the firm may use the experience with international customers to become a stronger competitor at home.

Comprehension of consumer behavior in the tourism arena is particularly complex because the acquisition process has an emotional component. For instance, vacation buying is the culmination of a long process of planning, choice, evaluation and assessment of alternatives. The final decision to purchase and select a tourist service presents unique aspects. The acquisition is generally prepared and planned over a considerable period of time by a large number of the people involved. Moreover, the tourist will make selections without expectations of material and economic return. It is an investment with an intangible index of return where the final selection is exclusively associated with intangible satisfaction (Moutinho 1987). More importantly, in service selection situations, the intangibility of services creates uncertainty and perceived risk in the consumer's mind. Since services are much more difficult to evaluate than goods, it is natural to expect that services consumers acquire more information to risk reduction than when selecting goods (Hugstad et al. 1987; Zeithaml 1981). Consumers will evaluate services in a distinctive way and, necessarily, will need more information about services that have a strong component of complexity, such as tourism (Murray 1991). Tourism uncertainty is even greater as it often takes an individual from a comfortable-known environment to one that is unusual or even unknown. In this situation, consumers are expected to use different types of information sources, in order to reduce uncertainty and reduce the risk of selecting an unfamiliar service (Dodd et al. 1996; Murray 1991).

Within this context, information search becomes essential at two different levels. At the internal level, information is acquired in the subject's memory, which is formed by consumer experiences. At the external level, information is sought in the environmental context (Bettman and Park 1980). The external information search is a conscious and motivated decision to acquire information from the consumer's environment. Despite the number of risks associated with service selection, this information search is limited because consumers select a limited number of information sources (Midgley 1983; Murray 1991).

In the case of tourism services, information search is typically external. Information sources used by tourists are the basis of any trip planning (Snepenger et al. 1990). The information is collected in the consumer's environment involving active processes and a variety of information sources (Moutinho 2000). Previous research investigates external information sources in terms of the number of sources used and the amount of information search in each source (e.g. Beatty and Smith 1987; Srinivasan and Ratchford 1991). However, from both a theoretical and practitioner perspective, recent research suggests that this type of approach might not be the most useful. Research should now focus on assessing the importance of specific information sources to service selection (see: Brucks 1985; Murray 1991; Fodness and Murray 1999). This is the focus of our paper. It is our aim to develop a scale that assesses the importance of information sources to the selection of tourism services. It is expected to understand how far those sources are simultaneously used during the information search process in order to select specific activities, such as, the route to the final destination, selection of accommodation, and selection of activities at the destination.

This article is organized into three sections. First, an overview of the current literature is offered. The conceptual framework is then tested via a survey of 350 tourists, and the

five dimensions of the INFOSOURCE scale are presented. Implications for theory and managerial practice, limitations of the research, and future directions are then considered.

### **The INFOSOURCE scale**

In order to assess the importance of information sources we use five information sources: media, institutional brochures, commercial brochures, travel agents, and internet. These sources are essential when selecting tourism services, such as choosing routes, accommodation, and activities to develop at the destination (Filiatrault and Ritchie 1980; Jenkins 1978; Perdue 1985; Shoemaker 1984).

#### **Information from mass media**

*Media* are an important channel of communication for the service companies, such as tourism firms (e.g. hotels and restaurants). They present publicity and advertising messages emphasizing the immediate benefits that tourists can achieve by selecting a specific service (Zeithmal et al. 1985).

Media information source is considered a formal (Raitz and Dakhil 1989) and impersonal source (Hugstad 1987). The type of information presented by media includes, for example, information presented by consultants and journalists (articles and reports on TV, radio, press and magazines) and advertising. Information provided from impersonal sources, such as media, are especially important in high-risk purchase situations such as tourist services (Hugstad 1987). Consumers are particularly willing to spend time and effort seeking information from print media, because this search provides them with a greater variety of information to reduce risk. This explains why consumers obtaining information from print media will typically spend more time and effort than when obtaining information from other sources (Dodd et al. 1996).

In a recent study about information sources, the authors (Bieger et al. 2000) argued for the importance of media information sources. Media in the form of newspaper articles, travel guides, and books is a valuable basis of information, particularly when planning long trips, regarding groups on package tours and individually organized tours. Gitelson and Crompton (1983) also demonstrated that media information is essential for young people.

### **Information from brochures**

In line with previous studies (Fodness and Murray 1999; Raitz and Dakhil 1989), we make the distinction between institutional and commercial brochures. Although researchers often analyze information provided in brochures from a broad perspective, this distinction is essential because while commercial brochures are controllable by tourism service organizations (e.g. hotels, restaurants), the same does not apply to institutional brochures.

### ***Information from institutional brochures***

When planning their trips, tourists tend to use informative travel brochures as a key source of information. These sources are very informative and reliable due to their institutional nature, namely due to the fact of being provided by the tourism destinations and associated institutions (Nolan 1976). Many authors have included these sources in their studies. For example, Snepenger and colleagues (Snepenger 1987; Snepenger et al. 1990) reported that group tourism travelers use institutional brochures during their information search. This is also confirmed by other studies, which reveal that institutional brochures are considered to be a major source of trip-planning information (Raitz and Dakhil 1989), and tend to be used by travelers with high income (Fodness and Murray 1999).

### ***Information from commercial brochures***

Much of the travel and tourism industry relies on commercial brochures. For example, as early as a decade ago, British commercial operators alone were spending an estimated 200 million pounds on printing approximately 200 million commercial brochures to yield an estimated 15 million bookings per year (Hodgson 1993). Tourism services use brochures as a privileged advertising channel. For example, travel agencies and operators typically use these sources to provide their clients with concrete information about different themes (e.g. hotels, destinations, recreation parks).

Commercial brochures tend to be very effective because the consumer pays nothing for these expensive publications, and they help consumers to avoid risk perception. Just very recently, Bieger et al. (2000) demonstrated that commercial brochures from hotels and tourist operators are regularly used as key information sources to select a tourism destination.

### **Travel agents**

Travel agents are used as a key communication channel with consumers. This occurs because service consumers tend to have a great preference for personal sources of information, especially when acquiring a complex service, such as a touring excursion (Murray 1991). Through its sales force, travel agencies can constitute one of those personal sources. As do other services firms, tourism agencies might use their sales force (i.e. the travel agents) to create a favorable image (see: Zeithaml et al. 1985).

Travel agents add value to the tourism industry in several ways. They are geographically close to the tourist and assist the customer by doing much of the searching on their behalf. They are also able to cater to the individual requirements of each tourist and can customize a holiday to suit each client. As the intermediary closest



to the customer, they are in the best position to build relationships with customers (Wynne et al. 2001).

Previous research suggests that personal sources are preferred because they are more reliable than impersonal information sources (Murray 1991). The tourism activity is a high-risk situation with a strong social component. Within this context, personal information sources might play a major role in clarifying problematic issues, while providing feedback to service customers.

Travel agents have played and will continue to play an important role as information sources (Connolly and Olsen 2001). Indeed, since the early work of Nolan (1976), travel agents have been considered as a source of information examined in several tourism studies. For example, Shoemaker (1984) observed that travel agents were consulted about routes, accommodation and activities at the destination. Travel agents were also shown to be a useful source of information for older travelers (Gitelson and Crompton 1983; Shoemaker 1984) and the most used source for tourism both at the individual and group level (Snepenger 1987). Although there are many pleasure tourists that do their own searching, they tend to habitually use travel agents to do their bookings. Tourists still exhibit a preference for booking through travel agents and appreciate human interaction and personal advice (Ader, LaFleur and Falcone 2000; Morrison and King 2002).

### **Internet**

Nowadays, the internet is assumed to be an important channel for services marketing. The internet is leading to profound changes in the way firms interact with consumers. Consumers now have increased obtained information access to electronic marketplaces and use this information in a sophisticated way to select their services (Parasuraman and Zinkhan 2002). Indeed, the internet was pointed out as being responsible for a

revolution in the services sector. Its potential allows service firms to enlarge their market worldwide (Lovelock et. al. 1999) providing firms with an unprecedented ability to communicate directly and effectively with potential customers. This is due to, among other things, the cost-effectiveness of the Internet and the convenience for customers. Increasing digitalization will make it progressively easier to alter particular aspects of a service and quickly observe how customers respond (Wyner 2000).

In the tourism sector, the internet has become an important source of information to consumers who are more and more demanding, and who become each day more familiarized with this emergent world of information. Tourism has historically been an early adopter of new technology (Bloch 1996; Wynne et al. 2001). As in other service sectors, technological developments are altering the nature of the processes in the tourism sector (see: Connel and Reynolds 1999). With the relatively widespread adoption of the Internet, tourism businesses of all sizes might expand and conquer new customers. The key to the tourist's decision is the existence of relevant information. With the internet such information might be available and in a better way (Buhalis 1998). This type of information will naturally help tourists to plan complex tourist activities, such as the planning of long trips (Bieger et al. 2000).

## **Method**

### **The research setting**

The research setting was in a European country (Portugal) in a tourism service, more specifically, in the hotel services sector. In recent years this country has increased its tourism market exponentially (Miles 1995). There are high expectations for the future, given that Portugal is now one of the leading countries in terms of conditions and

potentialities in the tourism services market, especially for European tourists (Murphy and Murphy 2002).

### **Development of survey instrument**

We developed a scale to capture the importance that tourists give to information sources in their trip planning. In an early stage, we used previously established scales (Furse et al. 1984; Raitz and Dakhil 1989) to develop our survey instrument. The initial scales were then translated into Portuguese and adjusted to tourism services users' reality. These scales were then discussed with people capable of understanding the nature of the concept being measured. All the items were assessed through a seven-point Likert scale (ranging from "1- not important at all" to "7- extremely important"). The questionnaire was initially developed in Portuguese and then translated into English, French, Spanish and German. After revisions, we used a pre-test sample of 30 tourism students in order to test the reliability of the scales (through Cronbach alpha). The pre-test results were used to refine the questionnaire further. In order to avoid translation errors, the questionnaires were back-translated into Portuguese.

### **Data collection**

The final data collection was done between December of 2002 and September of 2003. During this time there were some events that attracted many tourists to Portugal, such as the World Handball Championship and the European Football Championship. Tourists were randomly selected *in loco* across 19 hotels willing to participate in the study. The questionnaires were given at the hotel reception, together with a presentation letter explaining the objective of this study. The tourists filled the questionnaires at the moment they left the hotel. This allowed us to ensure that the data were not biased and that tourists had significant knowledge about the topic being researched. A final sample of 350 questionnaires was obtained.

## **Profile of respondents**

Tourists from many countries participated in the survey. Over 60% of the respondents were Portuguese tourists. The rest of the sample was mostly composed of European tourists from Spain (11%), Germany (10%), France (5%) and the United Kingdom (5%). Respondents less represented in the sample, include tourists from Australia, Austria, Belgium, Bulgaria, Brazil, Denmark, Greenland, Iceland, Ireland, Israel, Italy, the Netherlands, Sweden, Qatar and the USA. Most tourists were single (19%) or married with children (60%). More than 40% of the respondents had university education and almost 40% had completed their high school education. Respondents also indicated how often they took holidays per year. The great majority indicated once (45%) or twice (37%) per year.

## **Data analysis**

### **Confirmatory factor analysis**

In order to assess the validity of the measures, the items were subjected to a confirmatory factor analysis (CFA), using full-information maximum likelihood (FIML) estimation procedures in LISREL 8.3 (Jöreskog and Sörbom 1993). In this model, each item is restricted to load on its pre-specified factor, with the five first-order factors allowed to correlate freely. After CFA purification, the initial list of 15 items was maintained. A full listing of the 15 final items after CFA purification and their scale reliabilities is included in Appendix A.

The chi-square for this model is significant ( $\chi^2=528.61$ , 80df,  $p<.00$ ). Since the chi-square statistic is sensitive to sample size, we also assessed additional fit indices:

Normed Fit Index (NFI), Comparative Fit Index (CFI), the Incremental Fit Index (IFI), and the Tucker-Lewis Fit Index (TLI). The NFI, CFI, IFI and TLI of this model are .90,

.92, .92, and .89, respectively. Appendix A provides an overview of the standardized estimates and t-values of each item on its intended construct. As shown in this Appendix, all five constructs present the desirable levels of composite reliability (Bagozzi 1980). Convergent validity is evidenced by the large and significant standardized loadings of each item on its intended construct (average loading size was .87). Discriminant validity among the constructs is stringently assessed using the Fornell and Larcker (1981) test; all possible pairs of constructs passed this test.

### **Nomological validity**

In order to assess nomological validity, we tested our measures with respect to some other constructs to which our construct is supposed to be theoretically related (cf. Churchill 1995). According to the tourism literature, there are well-grounded theoretical reasons to expect a positive relationship between INFOSOURCE and “fulfilment of expectations”<sup>1</sup>.

Through the use of information sources consumers are in a better position to fulfil their initial expectations (Webster 1991). Since expectations are beliefs about something that will happen in the future, expectations are always associated with a certain degree of uncertainty. To reduce this perceived uncertainty, consumers tend to acquire information from external sources (Spreng and Page 2001). Naturally, when properly informed, consumers are more likely to find a better match between perceived reality and their initial expectations. Hence, in our study, nomological validity would be demonstrated if the scores of all of the five INFOSOURCE components are positively and significantly correlated with the fulfilment of expectations. The correlations

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<sup>1</sup> The scale “fulfilment of expectations” assesses the extent to which the collected information matches the reality with regard to five items: a) access to the city, b) infrastructures (e.g. sport, health centers), c) events, d) monuments, e) local attractions. All items are anchored by 1) much below expectations and 7) much above expectations. The final scale was shown to be reliable ( $\alpha=.85$ ).

between fulfilment of expectations and INFSRC1, INFSRC2, INFSRC3, INFSRC4 and INFSRC5 are .30, .29, .22, .26 and .28, respectively. All the correlation coefficients are significant (at  $p < .01$ ). Since this is a much greater proportion than would be anticipated by chance, we may conclude that INFOSOURCE contributes to fulfilling expectations and, hence, the nomological validity of the 5 proposed measures is supported (cf. Cadogan et al. 1999; Cross and Chaffin 1982).

### **Limitations and directions for future research**

A research instrument was developed in this paper. Instead of treating INFOSOURCE as a unidimensional construct, various measurement units for each of the five constructs were presented. INFOSOURCE is presented as a model with five first-order constructs: Information from mass media (SOURCE1), institutional brochures (SOURCE2), commercial brochures (SOURCE3), travel agents (SOURCE4) and internet (SOURCE5).

There are some limitations of the research to be considered. The first limitation is that the final instrument (i.e. the questionnaire) may have created common method variance that could have inflated construct relationships. This could be particularly threatening if the respondents were aware of the conceptual framework of interest. However, they were not told the specific purpose of the study, and all of the construct items were separated and mixed so that no respondent would be able to detect which items were affecting which factors. Additionally, if common method bias exists, a CFA containing all constructs should produce a single method factor (Podsakoff and Organ 1986). The goodness-of-fit indices of this CFA (NFI=.45; CFI=.46, IFI=.46, TLI=.37) indicate a poor fit, which suggests that biasing from common method variance is unlikely. Hence, the biasing possibilities of common method variance were, it is expected, minimized.

Second, while the reported research investigates sources for a specific service (tourism), care should be taken in extending the study beyond this specific research set. For example, some studies that have tested the SERVQUAL scale in pure service settings (Carman 1990), banking (Spreng and Singh 1993), and different types of retail stores (Finn and Lamb 1991), suggest that the SERVQUAL scale should be modified to different research settings. Hence, although the fit indices suggest a good fit of the model to the data, future research is encouraged to test our instrument across different services settings. To do so, we encourage researchers to add new items and factors applicable to the research setting. Continued refinement of the INFOSOURCE scale proposed and supported in this study is certainly possible based on further qualitative research.

Thirdly, the research context involved tourists in Portugal, which may limit the generalizability of the results to some degree. The INFOSOURCE scale should also be applied to other types of service users across different countries. To establish its generalizability, multiple samples in other market contexts are also suggested. Finally, further research is required when analyzing the antecedents and consequences of INFOSOURCE. Thus, it is suggested to investigate how the information sources construct is associated with other variables, such as type of tourists, credibility of the information sources and services performance.

## **Conclusion**

In this paper we develop a scale that measures the importance of information sources to the selection of tourism services. Typically research investigates external information sources from a different perspective (mostly in terms of the number of sources used and the amount of information search per source). However, by focusing our research on

assessing the importance of specific information sources to service selection this approach presents important implications from both a theoretical and practitioner perspective (Brucks 1985; Murray 1991; Fodness and Murray 1999).

This is an area of particular importance to managers, since information search occurs in the pre-purchase stage, influencing most consumer decisions (Murray 1991). The selection of a strategy for a particular service depends on the information sources they use. It is expected that through the INFOSOURCE scale, tourism firms might have as a basis a framework to develop and implement strategies that might bring value to their services. The INFOSOURCE dimensions might provide some guidance on how to better pursue an information-oriented business strategy. By identifying what sources are really valuable to the final consumer; it becomes possible to make choices regarding which sources to include, guiding managers toward customers' expectations. The INFOSOURCE scale can also be used for competing purposes. The scale might be used to anticipate what customers value and, hence, help service firms to react faster to information changes than competitors. Finally, the scale developed here can be an important basis for the segmentation of a tourist market, because if we identify the means through which the services and the products are communicated to the consumers, we can influence them (see: Furse et al. 1984).

From a theoretical perspective, to our knowledge, a measurement scale to assess information sources has never been operationalized in a services marketing context. Although we cannot claim to have definitively captured the dimensions of information sources, we believe that we come closer to capturing these overall evaluations by extracting the underlying commonality among dimensions. Towards this fact, we expect that the INFOSOURCE scale presented here contributes to both the tourism and the service marketing literatures. In sum, at a time when marketing researchers are



challenged to provide research with practical implications, it is believed that this theoretical framework may be used as a basis to pursue service-oriented business strategies while taking into consideration the sources that customers select.

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## Appendix A: The INFOSOURCE scale- Constructs, scale items and reliabilities

Constructs, Scale Items and Reliabilities		Standardized coefficients	T-values
INFSRC1- Information from mass media ( $\alpha=.89$ ; $\rho_{vc(n)}=.73$ ; $\rho=.89$ )			
V1	Importance of mass media information to route selection.	.86	19.59
V2	Importance of mass media information to accommodation selection.	.91	21.69
V3	Importance of mass media information to activities selection.	.80	17.63
INFSRC2- Information from institutional brochures ( $\alpha=.79$ ; $\rho_{vc(n)}=.62$ ; $\rho=.82$ )			
V4	Importance of institutional brochures to route selection.	.88	20.31
V5	Importance of institutional brochures to accommodation selection.	.88	20.38
V6	Importance of institutional brochures to activities selection.	.55	10.73
INFSRC3- Information from commercial brochures ( $\alpha=.91$ ; $\rho_{vc(n)}=.76$ ; $\rho=.90$ )			
V7	Importance of commercial brochures to route selection.	.78	17.25
V8	Importance of commercial brochures to accommodation selection.	.88	20.79
V9	Importance of commercial brochures to activities selection.	.94	23.17
INFSRC4- Information from travel agents ( $\alpha=.95$ ; $\rho_{vc(n)}=.86$ ; $\rho=.95$ )			
V10	Importance of travel agents to route selection.	.86	19.96
V11	Importance of travel agents to accommodation selection.	.98	25.03
V12	Importance of travel agents to activities selection.	.94	23.54
INFSRC5- Information from internet ( $\alpha=.93$ ; $\rho_{vc(n)}=.81$ ; $\rho=.93$ )			
V13	Importance of internet to route selection.	.81	18.12
V14	Importance of internet to accommodation selection.	.95	23.34
V15	Importance of internet to activities selection.	.94	22.96

Notes:

$\alpha$  = Internal reliability (Cronbach 1951);  $\rho_{vc(n)}$  = Variance extracted (Fornell and Larcker 1981);  $\rho$  = Composite reliability (Bagozzi 1980)  
 All scales are anchored by “1- Not important at all” and “7- Extremely important”.