Global Distribution Systems: A Field Study of Their Use and Advantages in Travel Agencies

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A field study of 33 Canadian and Belgian travel agencies has allowed us to identify various factors determining the use and advantages obtained of global distribution systems (GDS) in the tourism industry. These systems include Galileo (13 agencies), Sabre (12), Worldspan (6) and Amadeus (2). Determinants of the behavior and perception of the travel agencies toward their GDS were found to be the organizational context of GDS implementation, the sophistication of the GDS as an inter-organizational information system, and the sophistication of the firm’s own organizational information system.

For the global business traveler, a travel agency is viewed as a small service enterprise that facilitates the reservation of airplane tickets and hotel rooms. For vacationers, the travel agency is the purveyor of dreams, of escape from the daily routine, in faraway places and exotic climes. Whatever the service rendered, most individuals see the travel agency as a small business that, while useful, is somewhat innocuous in terms of its structure and financial importance.

This reality is quite different for industrial economists, as tourism today represents more than 10% of the gross world product. Whereas there were 284 million tourists that crossed national borders in 1990, 372 million arrivals are forecast for the year 2000 by the World Tourism Organization (OMT, 1993). The World Tourism and Travel Council (WTTC) anticipates an annual growth rate of 5.5% for this sector until 2005. In 1995, the tourism industry generated sales of 3400 billion US$. Thus, it is not without reason that Naisbitt estimated in 1990 that tourism would become the most important and dynamic industrial sector in the world economy and that, along with information technologies and telecommunications, it would be one of the three super-industries of the 21st century. Note that the travel industry is already bigger than the petroleum refining and steel making industries combined (Beck, 1993).

As much as information technologies (IT) have had a considerable impact on the development of the airline industry, they now play a fundamental role in the functioning of travel agencies as well (Schmid, 1994). Not only are ITs present in these firms, but the intra and inter-organizational information systems (IS) that are enabled by these technologies have become essential to the survival and development of the tourism industry (Bennet, 1993; OMT, 1992; Pollock, 1995; Sheldon, 1993; Stipanuk, 1993). There are however few empirical studies on the success factors of travel agency information systems, as if this sector had been almost totally neglected by scientific research (Stafford and Samson, 1989).

The travel industry is information intensive. Indeed, a large part of its work consists of gathering, classifying, compiling and selling information (OMT, 1992). Since travel agencies often act as intermediaries between other firms (e.g. tour operators, airlines) and consumers, their technological choices are critical. As members of supply chains or networks,
they must also contend with the technological choices of their larger, more powerful commercial partners (Webster, 1995). Hence, these firms must manage information and information technology effectively and efficiently if they wish to survive the threat of competition. Also, from an international business point of view, IT has the potential to change the travel agency industry structure (Deans and Ricks, 1993). For instance, will universal access to the Internet allow customers to completely bypass travel agencies? What will be the effect of emerging strategic alliances between the major providers of global travel information systems? Will agencies world-wide be required to adapt or integrate their internal systems to an international software standard for travel transactions?

Given the growing importance of service organizations in the growth of the world economy (Beck, 1993), and in a context of global competition that affects even the smallest businesses, the subject of this research is the inter-organizational information systems that travel agencies use most often to provide tourism services to their clients, namely global distribution systems (GDS). More precisely, we are interested in identifying the factors that allow travel agencies to obtain the most advantages from these systems. The research question can thus be stated in the following manner: What are the factors associated to the effectiveness of a GDS in a travel agency?

The Tourism Industry as Research Context

Activities in the tourism industry are diverse, including air transportation, lodging, car rental, and various forms of leisure and other services.

A large number of economic actors come into play, often attempting to bypass intermediaries in their quest for greater profits. In the air transportation industry for instance, one finds five types of actors: airlines, consolidators, wholesale firms, retail firms (the travel agencies), and consumers. As shown in Figure 1, the consumer can buy services from any intermediary and directly from airlines. The intermediaries can transact with anyone upstream or downstream in the distribution chain. Under these conditions, information is a critical resource for the survival of each economic unit.

Research on the tourism industry generally lacks conceptual frameworks and measurement instruments that would help in structuring empirical investigations (Stafford and Samson, 1989). Baker, Hozier and Rogers (1994) report that tourism studies are often plagued with problems of validity, both in terms of methodology and data analysis. Also, research on the impact of information systems in the travel industry suffers from using mostly secondary as opposed to primary sources of data (Archdale, 1993; Balfet, 1993; Bennett, 1993; Hitchins, 1991; Sheldon, 1993). This research is basically oriented toward the development, use and evaluation of large airline information systems (e.g. American Airlines’ Sabre) from the system originator’s perspective, or from a global industry perspective. As far as travel agencies are concerned, there are few empirical studies that directly address the critical role of information resources management. Given that travel agencies must now adapt to drastic changes in their industry, characterized in particular by the rapid growth of “mega-agencies” (Glab, 1995), information technologies and the information systems they enable have become competitive weapons that can “level the playing field” for the smaller firms.

Information Systems in the Tourism Industry

In tourism and information systems research, the literature refers to various types of information systems such as CRS, GDS, HRS and DIS. The World Tourism Organization defines these terms as follows. A computer reservation systems (CRS) originally meant the central reservation system of an airline. It is now used to describe the giant inter-airline reservation systems such as Sabre, by which the products of many hundreds of different organizations are sold (OMT,
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