In the book *Information Technology and Tourism: A Challenging Relationship*, Werthner and Klein portray the travel and tourism industry as a powerful example of how the digital economy—enhanced by network enabling technology—is transforming the structure of economic activity. Throughout the book, there are two common threads. First, on the demand side, the World Wide Web provides consumers with inexpensive, high-quality information about travel, destination, and tour product alternatives. The consequence is that a better informed tourist is forcing dramatic changes in the supply chain. Second, on the supply side, advanced information technologies are reducing transaction costs significantly, changing the dynamics of competition, and providing an inviting environment for new entrants. To make their case, the authors identify the fit between tourism and information technology, the industry’s structural changes and challenges caused by the technological revolution, and a broad set of tools for managers and researchers to confront these challenges.

Werthner and Klein are interested in the industry that serves *travel and tourism* simultaneously, hence the label ‘travel and tourism industry’. Excluded from their analysis is travel that involves a usual environment, a length of stay beyond one year, or activities
remunerated at the place visited. Included, among others, are trips to visit friends and relatives or travel for leisure, holidays, business, and health treatment. The relevance of this definition is that the novelty of travel to a new destination for an unusual purpose demands special information and service requirements from the consumer and related technological needs from the suppliers.

Tourism and Information Technology

The book starts with a compelling account of tourism as a network and information business. The industry acts as a network where different suppliers (e.g. hotels, airlines, restaurants) and intermediaries (i.e. travel agencies and tour operators) compete and cooperate to offer a final product.

On the other hand, since tourism services are perishable, the supply chain provides value based on time-sensitive information. The authors define tourism as a ‘confidence good’ because product choice is generally made prior to its consumption, resembling what Shapiro and Varian (1999) refer to as an ‘experience good’. Thus, the geographical and temporal distance between decision making and consumption can only be partially eliminated through timely information to the traveler. In addition, bundling of services (e.g. air travel, accommodation, ground transportation, tour) to offer a tourist package is dependent on interorganizational information flows within the supply chain. A large number of suppliers in the industry interact to integrate complementary components, creating countless product and service configurations. For example, the purchase of a holiday package to Hawaii involves both a priori and ad hoc communication, negotiations, and transaction processing between airlines, hotels, and ground transportation operators.

The authors suggest that these characteristics make the travel and tourism industry especially fit to capitalize on the technological revolution. This claim is supported with evidence that travel and tourism rank first in worldwide Internet transactions by industry sector.
Industry Transformation

The close fit between information technology and the travel and tourism industry is causing a redefinition of its structure. Table 1 summarizes the book’s depiction of structural changes and challenges brought about by the new rules of the digital economy. (See Table 1.)

(INSERT TABLE 1 RIGHT ABOUT HERE)

The authors pay particular attention to the opportunity for intermediation of the new cybermediaries and the risk of disintermediation of traditional travel agencies. Chircu and Kauffman (2000) report analogous findings in the corporate travel industry and propose an intermediation-disintermediation-reintermediation framework to analyze this and other industries. Intermediation is usually done by electronic intermediaries, and the travel and tourism industry shows this trend. Intermediation puts pressure on the traditional intermediaries, putting them at risk of disintermediation and forcing a shift in strategy to survive. Likewise, travel agencies and tour operators experience this risk of disintermediation. Consequently, they are transforming their business strategies. On the other hand, since the book was published, suppliers in the travel and tourism industry have begun to focus more on reintermediation, using co-specialized assets and economies of scale to penetrate the Internet channel. For example, several major North American airlines recently launched Orbitz.com (www.orbitz.com) and a number of major European airlines are planning to launch Opodo (www.opodo.com) in the near future.

Dai and Kauffman (2002) propose a framework to conceptualize how business-to-business electronic markets shape online transactions. In this framework, the functions of electronic markets, support mechanisms for management’s needs, and technological adaptation services are identified as key to their success. The core market functions are information
aggregation, matching of buyers and sellers, and transaction facilitation. Werthner and Klein illustrate these functions of electronic markets in the travel and tourism industry, focusing on cases where decreases in search costs allow travelers to participate in the aggregation and matching process electronically, and decreases in supplier transaction costs enhance facilitation.

**Tools for Managers and Researchers**

The authors provide a toolbox of ideas, concepts, theories, and trends borrowed from research on tourism, information technology, and business strategy. They offer a set of knowledge that managers can use to evaluate their business strategies and a thorough literature review to support research efforts. However, the authors do not link the different tools under a cohesive framework. Thus, readers are left with individual pieces of knowledge to craft conclusions, strategies, and research ideas on their own.

The toolbox is comprehensive, yet it is missing the key concept of network externalities, a phenomenon that is common in network economies. As mentioned earlier, within the industry boundaries defined by the authors, travel and tourism are both required to provide a full spectrum of services. In this context, given that travel and tourism are composed of information-based products that are complementary, consumers and suppliers benefit from belonging to a large network (Economides, 1996). Therefore, it is likely that network externality forces are present. For example, tourists that join a French-speaking tour via the Internet enjoy the benefits of network externalities. They may have traveled from scattered origins and stayed at different hotels, but they can ‘bundle themselves’ to justify the cost and presence of a French-speaking tour guide. Table 2 provides examples of cases presented in the book that can be explored in the context of network externalities.

*(INSERT TABLE 2 RIGHT ABOUT HERE)*
In summary, this book makes two important contributions. First, it provides a deep perspective on the technologically-driven transformation of the travel and tourism industry. With this contribution, Werthner and Klein not only offer insights on the travel and tourism industry but on other industries that are experiencing similar changes and challenges. Second, the book provides a comprehensive set of research themes and literature review to be used by managers and researchers. The authors lay a solid foundation for further exploration and research of the travel and tourism industry.

References List


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<tr>
<th>Participant</th>
<th>Developments</th>
<th>Challenges</th>
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| Consumers   | • Lower information search costs.  
               • Internet enables the consumer to participate in the product design. | • Find the product with the highest value among thousands of online alternatives. |
| Intermediaries (travel agents, tour operators) | • Strategies are being reevaluated due to their diminished role as information brokers.  
                                             • Risk of disintermediation.  
                                             • New technology enables flexible product configurations. | • Use technology to reformulate a competitive position and product strategy.  
                                             • Expand horizontally or vertically.  
                                             • Get access to consumer demand information for product design. |
| Suppliers (airlines, hotels, restaurants, others) | • Taking advantage of electronic markets for direct marketing.  
                                                   Opportunity for reintermediation.  
                                                   • Airlines and hotels are repositioning computer reservation systems in electronic markets. | • Take advantage of online customer data to design and market products.  
                                                   • Expand reach of electronic systems to maintain their role as the industry’s transaction backbone. |
| New entrants | • Cybermediaries with new business models have appeared (e.g. Priceline.com)  
                   • IT firms are entering the travel business through alliance or acquisition (e.g. Microsoft-Expedia). | • Formulate survival strategies as suppliers reintermediate.  
                                                   • Continue developing a solid position in the industry while succeeding in their core businesses. |
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<thead>
<tr>
<th>Area of Research</th>
<th>Examples</th>
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<tbody>
<tr>
<td>Tourism</td>
<td>Destination Management Organizations (DMO’s) are non-profit organizations that promote tourist destinations. Through web-based aggregation of destination specific information, some DMO’s are growing in Europe to become increasingly influential the production process.</td>
</tr>
<tr>
<td>Information Technology</td>
<td>Large electronic markets such as airline and hotel reservation systems are combining and integrating vertically.</td>
</tr>
<tr>
<td>Business strategy</td>
<td>Travel agencies are developing large electronic networks (e.g. a new project called Genesis) to reduce the risk of disintermediation.</td>
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