Obstacles to proliferation of electronic commerce – analysis of Finnish travel industry

Pirjo Järvelä^a & Jyri Loikkanen^b & Markku Tinnilä^c & Virpi Kristiina Tuunainen^d

jarvela@hkkk.fi^a & loikkane@hkkk.fi^a & tinnila@hkkk.fi^c & tuunaine@hkkk.fi^d

Helsinki School of Economics and Business Administration Electronic Commerce Institute

Abstract

This paper focuses on the slowness of diffusion of electronic commerce (EC), particularly in the business-to-consumer side. The theme is approached by analysing emerging Web-services in the travel services industry. We report on a field study of Web-sites of 294 travel agencies, tour operators and transportation services companies. By surveying and evaluating the current services we hope to shed new light on the reasons behind the slow proliferation of consumer oriented EC.

The results show that, in spite of high rate of Internet connections, the services offered by Finnish travel industry companies still lag behind their American counterparts. The major reasons are related to incompleteness of electronic services provided. In most cases, consumers find the traditional systems more convenient to use than the emerging Internet-based services still requiring additional contacts to branch offices and based on traditional ways of offering travel services. Other obstacles are related to lack of trust in payment systems and inadequately used capabilities of the Web.

Keywords: Electronic Commerce, Travel Services Industry

BRT Keywords: BA, HB

Introduction

The travel industry has been going through profound changes during the last years (Lewis, 1998). The changes for travel agencies (companies selling products of transportation and hotel and hospitality industries and tour operators) and tour operators (i.e. companies producing and selling package tours) are due to several reasons. First, cuts in commissions by producers (airlines, ship, bus and train companies), second, increase in direct sales, and, third, the changing role of the travel agencies as the customers can make their bookings through the Internet (e.g. Woellert & Zellner, 1999).

The economic growth in Finland during the last few years has also lead to higher sales for travel agencies. The statistics for 1998 clearly show a growth in general travel

agency sales during 1997. The sales of tour operators remained at the level of previous year. However, profitability was decreased by 19 % as compared to previous year, with a sales margin of 1,1 billion FIM (Statistics Finland, 1998). The gross sales of travel agents was five billion FIM and tour operators 2 billion FIM.

The use of Internet is at high level in Finland, with 66 Internet connections for every 1000 citizens. This rate is the highest in the world; the comparative figure in the USA is 42/1000 and that of Sweden is 32/1000 (European Commission, 1997). The share of information within WWW (World Wide Web, or the Web) is 55% of all information on the Internet. The rest consists of equal shares of electronic mail, FTP and other protocols. The share of WWW is growing rapidly and by the year 2000 as many as 75% are believed to use World Wide Web –system (European Commission, 1997). In addition to PC-based systems, mobile technologies are being developed at rapid pace.

Despite the state-of-the-art infrastructure and wide usage of the Internet by consumers, electronic commerce has not yet gained serious momentum in Finland, as compared to USA. By analysing one industry, the travel services industry, we hope to shed light on the reasons behind this slow proliferation.

Research objectives

The main objective of this research is to help in understanding the slow proliferation of consumer oriented Internet based electronic commerce, particularly in Finland. This goal is achieved by analysing the magnitude and level of Internet services offered in the travel services industry. The point of view is that of a consumer. The specific research questions addressed are two-folded:

- 1. What type of travel related services are available for the consumers in the Web?
- 2. Why is the proliferation of these services so slow?

This report focuses on travel agencies and tour operators offering services for travelling abroad. The service providers offering only domestic travel services, as well as hotel chains are excluded from this study. By focusing on travel agencies, tour operators and transport service providers for travelling abroad, we have a focused target group for comparison of the available services.

EC Services framework

The data in the field study was analysed using EC services framework (Kuusela et al., 1999a and 1999b). This framework is based on the European Union (Databank Consulting, 1997) classification of Internet services, and has two dimensions; the existence of different services and the development of services towards more sophisticated and integrated processes between the customers' actions and the suppliers' IT systems. The framework was refined to better match the features of travel services industry. Different services include the categories of *Dissemination of information*, *Communication*, *Order*, *Payment*, and *Delivery*; and the technology support is divided into *Traditional processes*, *Services on the Internet, Internet services integrated with operative IS*, and *Personalised or customised Internet services* (see Table 1). The purpose of this framework was to classify the services based on the types of services offered to the customers on one hand, and their technical advancement on the other. The

classification used is not linear in the sense that integrated services would be considered more advanced than personalised services. The more refined classification enables a deeper understanding of the different types of services available in the Internet.

Travel services on the Internet

Internet and its possibilities are being increasingly utilised in all steps of the value chain in travel services industry. The present value chains include travel agencies, tour operators, transportation industry, database service providers. In addition to these traditional members there have recently emerged new players outside the industry, such as software companies and finance companies providing new travel-related portal services.

Travel agencies and tour operators have traditionally had the largest share of sales to end customers. The recent developments show, however, that other players are willing and able to take increasing piece of that share. New players are getting into electronic trading of products and services, and existing ones - including the travel agencies and tour operators - are hastily developing their Internet services.

Players in the transportation industry, such as airlines, cruisers, railways and car rental companies, have recognised an opportunity to by-pass the intermediaries and sell their basic products directly to customers through WWW-services. The database service providers, such as computer reservation systems Amadeus and Sabre, act as an intermediary between transportation service providers and travel agencies. They are developing their businesses, and for instance Amadeus has begun to offer its reservation system past travel agencies directly to business customers (Amadeus, 1998).

Various types of portals serve as new sales channel among travel agencies, tour operators and transportation service operators. Typically these portals, for example the WWW.mtv3/matkalla.fi –pages owned by a media company, provide a full service online travel agency, with a products ranging from regular flights, hotels, package tours and ship tours to customised package tours. The available travel services can be reserved through links in different travel agencies, tour operators or shipping line companies. The consumers are also offered associated services such as travel insurance, credit arrangements and information on other travel connected services. For the consumer, however, the portal represents a typical present stage service by remaining a versatile list of links, with difficult comparison of services. The comparison is possible only by visiting the WWW-sites of individual companies. In addition the links in the WWW.mtv3/matkalla.fi –service are available only to companies with an agreement with the page service.

Empirical Study

Field study

The main source of data for the travel agencies, tour operators and transport service providers studied has been Yritys-Suomi ("Enterprise Finland") CD 2/1998 –database. The database has 496 travel agencies, 78 tour operators and 96 transport service providers. These figures, however, do not quite cover the entire field. First, companies

operating in several locations are catalogued several times, in spite of being a single company. Second, several companies are travel agencies, tour operators and transport service providers at the same time and therefore can be found several times in the database. When these duplications were deleted, there remained 289 travel agencies and tour operators as well as 56 transport service providers. During the study the providers of only local service were excluded. This provided us with a more consistent group for service comparison analysis. The final group consists of 238 travel agents and tour operators and 56 transport service providers.

There is no register for WWW-pages within the travel industry, forcing us to find the WWW-pages by using the most frequently used search agents in the Web . The search was executed between 22.10.-29.10.1998 and resulted in 86 web sites (appendix 1). These WWW-pages were visited and the table for analysis based on the EC Services framework was filled between 29.10.-13.11.1998. Two researchers worked on the evaluation and each site was visited at least once. In uncertain cases the two researchers analysed the site together. Variables in the table of analysis were grouped according to the framework in table 1. Each binary variable denotes whether the company offers a particular service or a specific part of it.

Results of the study

Most (67%) of the travel agencies and tour operators operate on a local basis. Some 22 % operate on regional basis, with only 5 companies having country-wide services. A travel agent operating only in the Internet has no physical location. This condition is partially filled by the Travelnet-service of Wiitamatkat, which operates only in the Internet. While Travelnet service has no physical location, the enquiries and orders are made with an HTML-form in the WWW-pages or by phone with the Helsinki branch office of the mother company.

The most advanced WWW-pages can be found in companies operating locally or regionally. The companies aim at competitive advantage through country-wide provision of internet-based travel services, as compared to locally limited traditional services.

The physical presence of travel agents providing services through the Internet is of no importance to customer, when the tickets and other travel documents can be delivered by mail and paid e.g. through the Internet or postal or money transfer. The comparison of the stage of development of services to the operating modes of companies, suggests that no integrated reservation services, including order and payment through the Internet, is available.

In their customer service segmentation the companies were divided into three categories: companies providing services to private customers, business customers and to groups and other special segments. A company is included in a category if the services in the WWW-pages are clearly focused to any of these three groups.

Some 57 % of travel agencies and tour operators do not focus their services to any particular customer segment and part of the companies do in fact offer services to all the customer segments. On the other hand, 31% of the WWW-pages of travel agencies and tour operators are of homepage-type, indicating that they provide only opening times of branch offices and contact information. An important observation is that travel agents provide integrated possibility for reservation of flights, hotel rooms and car rentals only to consumers. Some WWW-pages do, however, mention that a similar on-line-

reservation service for business customers is under development.

Services offered

This chapter provides a detailed analysis of the empirical findings based on the EC services framework (table 1).

Dissemination of information

Dissemination of information can be considered to be the minimum level of service for a Web-service of a commercial organisation. Of all the explored Web-sites, 31 per cent were "home pages" offering little more than contact information. Some had limited amount of product information and a few links to various interest groups. At some sites the information was clearly outdated, displaying for instance phone numbers with old area codes or special offers for the past season.

62 per cent of the companies reviewed had product information on air flights, hotels, car rental companies, package tours and special offers on the Web-site. The information was typically displayed in form of a list or a catalogue, and they were updated according to activeness of the company.

Customers could search information on flight timetables in the 14 % of Websites. These sites had an interface to CRS (computer reservation systems) such as Amadeus, Sabre or TISS. The customer keys in the needed information (departure and return dates and cities, number of passengers, preferred airline, etc.) after which the database displays information on availability and price of the flight. This is service is limited to air flights. None of the studied travel agencies or tour operators offers real time availability information on their Web-site.

Communication

In the Internet communication between people is based on e-mail. This was possible in three-quarters of the surveyed sites, while a quarter of them did not offer any method of electronic communication. Communication through e-mail is not, however, particularly fast as it can take even a number of days before customer's e-mail message is reacted and replied to (Poisalo, 1998). Electronic bulletin boards are still a fairly rare service, maintained only by four travel agencies and tour operators.

One company had integrated communication services with its operative IS. As a customer makes a reservation through TISS database she can add a free text message to the travel agent. Customisation of communication services was not possible in any surveyed sites.

Order

Ordering flight tickets or package tours was made possible in the Web-sites of 42 per cent of the companies. In most cases (19 out of 21 companies) ordering was based on sending e-mail or filling in and sending an HTML-form. After receiving of order message, an employee makes the preliminary reservation to the company's database. When she finds an alternative that fits the customers choice, she contacts the customer either by traditional means (telephone or fax) or electronically (e-mail) and confirms the reservation. If the order of the customer cannot be fulfilled, for example when the flight is full, new requirements have to be asked from the customer, which at worst can take days. Aside from flight tickets, possibility to order other travel related services is still

fairly uncommon.

Only three companies offered a service on the Internet for making the final reservation for a flight. After searching and selecting flight from Amadeus, Sabre or TISS, the customer can also make the final reservation, which is immediately registered to the reservation database. Usually the customer also gets a confirmation through e-mail. None of the tour operators had an integrated service for making reservations for package tours, and no customised ordering services were extended to private consumers.

Payment

Customarily the payment is made by traditional methods; cash, credit card, or bank transfer. Only the three companies providing the integrated flight reservation option, accept payment on the Web with a credit card. The site of the one tour operator providing a possibility to make preliminary reservation for a package tour, provides a link to a bank's electronic payment system: however, this does not seem to be a particularly preferred method by the company.

Based on the analysis of the Web sites it seems that payment services based on credit cards were not integrated with the companies' internal IS, in addition, no customisation of payment methods was possible for private consumers.

Delivery

Products of travel agencies and tour operators are services, but their usability is based on physical artefacts such as travel tickets and participation certificates. With consumers sales the products are delivered by mail or the customer collects them from the company's office or from travel terminal. Electronic provision of travel documents is complicated by validation requirements. The recipient needs to have specific software and appropriate blank travel ticket forms to be able to receive and print the documents. Large corporate customers and travel agencies could have processes integrated in this manner, but it is not a feasible solution for consumers. However, e-tickets may change the requirements by allowing a reservation number to be validated e.g. in the airport gate.

Internet services in the travel services industry

Based on the empirical study the travel service industry can be illustrated by Table 1. Darkly shaded areas describe services that were not provided by any of the Web sites. Lightly shaded areas represent services that were relatively rare (offered by less than 10 % of the companies). Services in the white area were more common in the explored WWW sites.

	Dissemination of Information	Communication	Ordering	Payment	Delivery
Traditional means	Store or outlet of the company Traditional media: radio, TV, newspapers,	Store or outlet of the company Telephone, fax, mail	At the store or outlet of the company, by phone, fax or mail order	Cash, credit and debit cards, part payment, customer account, C.O.D.	From the store or outlet of company or other delivery point, by mail or delivery service

Table 1. l	EC in the	travel	services	industry
------------	-----------	--------	----------	----------

Web services	outdoor advertisement, etc. Company information and/or product information on the Web site	Communica- tion on the Internet, e.g. e-mail, chat, electronic bulletin boards	Ordering with e-mail or HTML- form	Electronic payment methods, e.g. e-cash, SET, bank transfer	Electronic delivery on the Internet
Web services integrated with operational IS	Web- catalogue integrated with operational IS	Method of communica- tion on the Internet integrated with operational IS	Internet ordering system integrated with operational IS	Electronic payment method integrated with operational IS	Electronic delivery on the Internet integrated with operational IS
Personalised or customised Web services	Personalised or customised information, e.g. on products	Personalised or customised communica- tion methods	Personalised or customised ordering methods	Personalised or customised Payment methods	Personalised or customised Delivery methods

From Table 1 we can make the observations that, firstly, electronic marketplaces are still fairly rare: the customers can acquire product information, ask for additional details and make preliminary reservations, but payment and delivery are conducted in traditional means. Secondly, integration of Web services with companies' operational IS as well as personalised or customised services are very uncommon or non-existent.

Comparison of the Finnish travel services on the Web to services in the USA

We will next describe the Web-services of three large US travel agencies (American Express Travel, Rosenbluth International and Carlson Wagonlit Travel) and compare them with the Finnish ones.

American Express Travel is the world's largest travel agency group that has also made a co-operation contract with Microsoft. From the Web-site of American Express Travel consumers can make reservations and payments in real time for air travel, hotel rooms, and rental cars through Microsoft's Expedia link. Also information on cruises, package tours, special offers and other travel services is displayed, but the reservation must be phoned to the company's office. Corporate customers can make reservations and transactions through American Express Travel site.

Rosenbluth International is the world's second largest travel agency group operating 25 countries around the world. Rosenbluth offers travel related Web services both to consumers and corporate customers. Consumers find information on special offers for which the reservation need then to be made by phoning to the travel agency. In addition customers can make e-mail enquiries about availability and prices for flights, hotel rooms and car rentals. Registered corporate customers can also make reservations and payments on the Web-site.

With its 141 offices Carlson Wagonlit Travel is one of the world's largest travel service groups specialised in business travel. In their Web site Carlson only has information on the company and its services to corporate customers, and a possibility to send e-mail to Carlson.

As a summary we next go through some similarities and differences between the Finnish and US services. As the American comparison base consists of only three companies and their Web-sites that could not be tested (services were not available from Finland), far reaching conclusions cannot be drawn. The purpose of the comparisons is therefore to illustrate the state of development in the two countries.

Similarities between Finnish and American WWW services:

The services available on Web sites of travel agencies and tour operators are most typically related to making reservations and payments for air travel tickets, hotel rooms and rental cars. Discount flights cannot be reserved real time in any of the explored sites. Only information on special offers is displayed, while only preliminary reservations are possible through e-mail and final reservations by phoning the agency. The development stage of personalised or customised services for consumers is the same both at Finnish and American sites; consumers can receive special offers by e-mail based on information given in the customer profile.

Differences between Finnish and American WWW services:

In the American sites the corporate customers are treated more clearly as a separate customer segment than in the Finnish Web pages. The American companies are, for example, offered an opportunity to make final travel reservations through the Web service, where as this is not possible in any Finnish site. In the American sites the customers have to register and create an user profile already before making enquiries, while in Finland the registration is typically not required before making reservations.

In the USA there are travel related virtual communities (see e.g. Hagel & Armstrong, 1997) providing consumers with a possibility to purchase several types of travel services.

Basic types of electronic services

In this study we surveyed and analysed the Web sites and current services of the travel agencies, tour operators and transportation services companies operating in Finland offering outbound travel services. Out of the 294 companies 86 (29 %) offer services on the Internet. Of travel agencies and tour operators only every fifth has any services on the Web, meaning that electronic commerce has not diffused in the industry quite as widely as has been expected. A similar study in Australia concluded that 24% of travel agencies had WWW-services (Standing et al, 1998).

One outcome of the analysis of travel agencies' and tour operators' Web services is the identification of three basic types of electronic services. These basic types are displayed in Table 2 where the ovals illustrate the focus of services in each group. However, we do not maintain that all companies follow the development order of the presented basic types.

	Dissemination of Information	Communication	Ordering	Payment	Delivery
Traditional means	Store or outlet of the company Traditional media: radio, TV, newspapers, outdoor adv	Store or outlet of the company Telephone, fax, mail	At the store or outlet of the company, by phone, fax or mail order	Cash, credit and debit cards, part payment, customer account, C.O.D.	From the store or outlet of company or other delivery point, by mail or delivery service
Web services	I n=16 31 % (7%)	n=19	n=3	III (1.3%)	lectronic livery on the iternet
Web services integrated with operational IS	Web- catalogue integrated with operational IS	Method of communica- tion on the Internet integrated with operational IS	system integrated with operational IS	onic rayment method integrated with operational IS	Electronic delivery on the Internet integrated with operational IS
Personalised or customised Web services	Personalised or customised information, e.g. on products	Personalised or customised communica- tion methods	Personalised or customised ordering methods	Personalised or customised payment methods	Personalised or customised Delivery methods

Table 2: Basic types of Web services in Finnish travel services industry

In the table 2 the figures displayed in the ovals represent the number of companies belonging to the group; the first percentage relates to the sample (i.e. the studied companies), and the second to the population (i.e. all Finnish travel agencies and tour operators).

Basic type I: Home Page

Home pages represent the most modest basic type of WWW-services. In a homepage the company provides only some pages, with contact information, a limited amount of product information and some links to other information providers. Obviously the frequency of updating the information contents of the pages depends on the interest of the company, and in some cases the priority seems to be very low. Poorly updated home pages can present a negative image of the company's operations and therefore some consideration should be given to the effects of a "poor" homepage.

This basic type consists of 16 companies, presenting 31% of all WWW-pages of travel agencies and tour operators studied and 7% of the companies in the whole travel industry.

Basic type II: Electronic Booking Service

Travel agent and tour operator provides information about travels and other attached services as well as, an opportunity to order by electronic mail or by HTML-form in its pages. In many cases the customer needs to find the information by traditional methods, such as by reading the travel brochure (the brochure can often by order by electronic mail, but it is rarely published in the net). Instead of electronic ordering the customer is encouraged to order by traditional means (for example, by calling a toll-free service phone). This may be a better solution to the customer; service personnel can provide the consumer with up-to-date information about reservations and simultaneously, the reservation can be fulfilled completely. When reserving a tour by means of electronic mail, the customer is still compelled to wait for the contact of service personnel to complete the reservation.

These kind of services are provided by 19 companies in their WWW-pages, consisting of seven travel agents, nine tour operators and three companies being combination of both. This group presents some 37% of all the studied WWW-service providers and some 8% of the whole travel industry.

Base type III: Electronic Marketplace

Through Electronic marketplace the consumer can reserve and pay travel tickets. Three companies provide this kind of service. The reservation system is based on an integrated link to flight information database operator. In addition to acquiring a flight ticket, the consumer is also able to reserve other travel services, such as hotel rooms and car rental in the destination. The amount and type of additional information in this basic type shows no significant deviations from other WWW-service providers within the industry. When analysing the position of electronic marketplace in the industry, it is remarkable that none of these travel agents belong to the four biggest business travel agents in the market, and none of them is a tour operator (although one company has some tour production of its own). Two of the companies are local and one of them can be classified as regional, according to our definition.

Of the WWW-services studied, the share of electronic marketplace is 6% and out of the whole industry (238 companies) 1,3%.

Many of the electronic market places are based on traditional modes of operation. The core of the operations is the reservation system with connection to Internet-services. Instead of the office personnel, the customer uses the reservation system directly by searching product and service information and making reservations based on the information found.

Discussion

The present travel industry services suffer from many limitations and partially executed services.

Similar to all of electronic commerce, the payment systems remain a challenge also in the Web-based travel related services. Traditional operational modes still provide the consumers with more flexible and multiple payment systems. The traditional reservation from the branch office gives the customer several choices for paying, as well as, longer time. No such flexibility is available in the Internet services and reservation requires

immediate payment by credit card.

The possibility to cancel a purchase is possible only in the traditional operations. A reservation made by the integrated system cannot be cancelled in the Internet, but requires a call or visit to the branch office. It would considerable increase the trust between the consumer and service provider, if the general rules of trade and company specific conditions would be more clearly presented in the WWW-pages. This will, in the near future, be required by EU regulations.

Comparison of product information between companies is cumbersome, as the consumer has no wide range marketplace of travel services available. The comparison of information and services provided by different travel agents, tour operators or transport services, is not possible in the same WWW-page. It is not feasible to expect the consumer to have knowledge of the companies offering travel services, to find the pertinent WWW-addresses, to acquainting oneself separately to all WWW-pages, before being allowed to compare the services. This search for information requires time and effort from the part of consumer, similar to that of traditional operations (e.g. calling the travel agents).

Finally, the decentralised structure of the Internet hampers the gathering of relevant information. Despite the availability of multitude of travel and destination connected information available in the Internet, such as travel regulations, weather conditions and similar, there is scarce additional information available in the WWW-pages of travel agents. The number of links connecting information sources is small, the accuracy of information contents is not checked, the operation of links is uncertain and often enough little attention is paid to consumer needs in their planning. The product information of tour operators is most often presented in the same format as in print, and the many possibilities of WWW in presenting travel information are not used. Pictures, voice, video, customer interaction and the ability to quickly disseminate information are just examples of the many possibilities provided by WWW.

Summary and Conclusions

In this study we have looked into the electronic services of travel service companies in Finland. The current stage was analysed through a field study in which Web sites of 238 travel agents and tour operators and 56 transport service provides were evaluated and analysed. The result show that, the customers can acquire product information, ask for additional details and make preliminary reservations of travel services, but payment and delivery are still conducted by traditional means. The integration of Web services with companies' operational IS, as well as personalised or customised services are very uncommon or non-existent. The study also identifies three basic types of electronic services in the travel industry. So far, the most common types of services available are of home page or electronic booking service-type. The more advanced electronic marketplace can be identified, but is still feasible only in provision of the most standard travel services, such as normal-priced airline tickets.

The magnitude and level of services on the Internet is constantly increasing in practically all industries. But as shown by the results of this study, these services are still largely underdeveloped. The consumers have found Internet useful in searching and gathering information on different types of travel services. But, as long as using EC means combining electronic means with some traditional ones, it means extra effort for the consumer instead of increased convenience. As long as the traditional way of

conducting transactions is both more convenient and cheap, the travel industry cannot expect large volumes of business through the electronic channel.

The current problems in the supplier side relate largely not so much to technology, but rather to reliance on old infrastructure and business practices not designed and developed for trading in electronic environment (Tuunainen, 1999). This is evident also in the travel services industry, in which those engaged in EC have based their electronic storefronts on traditional business models. Special possibilities and capabilities of the Web are not fully utilised when processes and practices are simply transferred from physical to digital world. For instance, an important advertising channel in the travel industry, typically biannual glossy catalogues delivered to mailbox of every home have basically been copied to the Web portraying information in the same format as in a paper catalogue.

Another problem with EC of many products and services is the delivery of the purchases to the customer. Logistics related to EC of such products as groceries (Heikkilä et al, 1998) have shown to be particularly problematic. Logistics is not expected to have any relevance in the area of services and digital products. However, this is not the case in the travel industry, which is still based on the traveler needing a physical travel ticket or other travel related documents. These problems are partly due to current business practices, but also because of national laws ranging from consumer protection to marketing regulations. The introduction of e-ticket may facilitate bypassing the present delivery structure of physical branch offices and allow a more streamlined order-delivery system.

Lack of suitable and secure payment methods has been touted as the biggest problem of electronic commerce since the early days of Internet's commercialization. Whether these problems are real or perceived, they have to be resolved before the average consumer is willing to trust the Internet as a buying channel. Inflexible payment methods also make certain processes easily taken care in the traditional world more complicated. Cancellation of travel reservations in the Web is a good example: traditionally the customer first makes a reservation, which can be cancelled at any point of time before the final confirmation and payment typically a week or two after the initial reservation. The electronic services of travel agencies and tour operators require immediate payment after the reservation. This makes canceling a purchase considerably more complicated and difficult.

Consequently, despite the state-of-the-art infrastructure and wide usage of the Internet by consumers, electronic commerce has not yet gained serious momentum in Finland. As shown by this study, this is largely due to reliance on traditional business models and partially implemented electronic services. To make EC desirable for customers and profitable for suppliers requires new business models and complete services.

Acknowledgements

This paper is based on earlier report (Järvelä & Loikkanen, 1999) which is part of E-logs II project of Electronic Commerce Institute, LTT Research Ltd, financed by Tekes Technology Development Centre and 19 corporate partners.

References

Amadeuksen uudet linjat; matkojenhallinta yritykselle strateginen päätös. (New directions for Amadeus: managing business travel strategic decision) (in Finnish) Amadeus Finland Oy:n tiedotuslehti 1/98. 9-11.

European Commission 1997. Evolution of The Internet and the WWW in Europe. 10-13, 85-86.

Hagel, J. & Armstrong, A. 1997. Net Gain. Harvard Business School Press, Boston.

- Heikkilä, J., Kallio, J., Saarinen, T. & Tuunainen, V.K. 1998, Analysis of Expectations of Electronic Grocery Shopping for Potential Customer Segments, Australian Journal of Information Systems, Special Issue, 1998, pp. 56-69.
- Järvelä, P. & Loikkanen, J. 1999, Matkatoimistojen, matkanjärjestäjien sekä kuljetuspavelujen järjestäjien WWW-palveluiden nykytila-analyysi (Analysis of current state of WWWservices – Travel agencies, tour operators and traportation services companies) (in Finnish), Elektronisen kaupan instituutti, LTT-Tutkimus Oy.
- Kuusela, S., Maisala, C. & Saarinen, L. 1999a. Elektronisen kaupankäynnin palveluindeksi viitekehys ja tutkimusmenetelmä (Electronic commerce service index – framework and methodology) (in Finnish). Working paper. LTT-Tutkimus Oy, Elektronisen Kaupan Instituutti, Helsinki.
- Kuusela, Maisala, Saarinen, Tinnilä,1999b, EC Service Index, Twelfth International Bled Electronic Commerce Conference, Bled, Slovenia, June 7 - 9, 1999
- Lewis, I. 1998. The Impact of Information Technology on Travel Agents, Transportation Journal, Summer 1998, Vol: 37, Iss: 4, pp. 20-25.
- Standing C, et al, 1998, Re-engineering Travel Agencies with The World Wide Web, Electronic Markets, Vol, 8, No, 4., pages 40-43.
- Statistics Finland 1998. Financial reports of travel agencies in 1997. Helsinki.
- Poisalo, T. 1998. WWW.lomalle.com ärsyttää matkanjärjestäjiä. (www.lomalle.com irritates tour operators) (in Finnish) Tietoviikko 11/98, 30-33.
- Tuunainen, V.K. 1999, Different Models of Electronic Commerce Integration of Value Chains and Business Processes, Helsinki School of Economics and Business Administration, A-153, 1999.
- Woellert, L. & Zellner, W. 1999. Travel services prognosis 1999, BusinessWeek, Jan. 11, 1999.
- Yritys-Suomi CD 2/1998. Helsinki Media Company Oy, Helsinki.

Appendix 1

Spies

Study Tours

Tjäreborg

Top Club

TR-Kielimatkat

TT-Matkat Oy

VL-Matkat

Wiitamatkat & Travelnet

Matkatoimistot ja matkanjärjestäjät Aktiv-Resor Oy 194.159.177.1/T&T/tourops/othertop/finaktiv.htm EF Finland www.ef.com/ Eimiko Oy dlc.fi/~eimiko/eimiko.htm Etelä-Suomen matkatoimisto Oy www.phnet.fi/elinkeino/ph-yrittajat/yrittajat/es-matkatoimisto.html www.finnmatkat.fi Finnmatkat Finnsov-tours www.finnsov.fi/ Funtours-matkatoimisto www.mtv3.fi/matkalla/funtours/ Hassen matkat Oy www.inet.fi/hasse/ Helin Matkat www.helinmatkat.fi Helsingin Laatumatkat Oy Quality Tours Ltd www.laatumatkat.fi Helsinki Expert/ Helsingin Matkailuyhdistys Rwww.helsinkiexpert.fi Ikaalisten matkatoimisto www.kolumbus.fi/~ikaalist/intro.html Jakob Tours www.primdata.com/fi/jakob-tours Kilroy Travels www.kilroytravels.com/index.html Kohdematkat www.kohdematkat.fi Lloyd Tours www.lloydtours.com Lomamatkat Oy www.lomamatkat.fi/ Marco Polo Travel www.marcopolo.fi Matka Forum Ov www.clinet.fi/~salmela/ Matka Galleria Oy Matkacity Ky Travelcity www.sci.fi/~matkacit MatkaKaleva Oy www.matkakaleva.fi Matkakiva www.tfnet.fi/matkakiva/index.htm Matkapörssi www.lomalle.com/porssi/ Matka-Rami oy www.matka-rami.lohja.fi/index.htm Matka-Rasila Oy www.matka-rasila.fi/ Matkatoimisto Area www.area.fi Matkatoimisto Detur Finland Oy www.matkaboomi.fi/detur/ Matkatoimisto FinnHeves www.sci.fi/~finheves/ Matkatoimisto ja infopiste t:mi Tuula Torvi Matkatoimisto Lomalinja www.länsilinjat.fi Matkatoimisto Matka Mäkelä Oy www.netti.fi/makela/index.htm Matkatoimisto Matkaboomi www.matkaboomi.fi/

www.vskol.uusikaupunki.fi/~datat/matkagalleria/mgindex.html 193.184.122.25/matkailu/matkailu.htm#ylos Matkatoimisto Mr.Travel www.mrtravel.fi Olympia Lentomatkatoimisto www.olympia.fi/ Oy Aurinkomatkat-Suntours Ltd www.aurinkomatkat.fi Perhonjokilaakson matkatoimisto Oy www.veteli.fi/matka/info.htm PeterPanMaailma www.lomalle.com/ Pohjolan Matkatoimisto www.matkalinkki.fi Porin Matkatoimisto Oy www.porinmatkatoimisto.fi/ www.spies.fi STS-Kielimatkat www.sts.se/sprak/finland/ www.clinet.fi/~study/ Suomen Matkatoimisto www.smt.fi www.tjareborg.fi/ www.infopiste.fi/golf/matkailu/topclub/topclub.html www.dlc.fi/travelbo/ www.xgw.fi/biz/ttmatkat/ Töölön Matkatoimisto www.toolonmatkatoimisto.fi

www.travelnet.fi

www.vihdinliikenne.fi/