

What do Tour Operators do? Internet and the economics of intermediation in the tourism industry

Aleix Calveras¹

Universitat de les Illes Balears

April 14th, 2006.

Abstract

In this paper we discuss the present and future role of tour operators (and intermediation in general) after the advent of internet and other information and communication technologies (ICTs). We adopt the transaction costs economics framework so as to be able to analyse the role that tour operators play in the tourist vertical chain, and the impact that internet will likely have on its role as intermediaries. In the traditional (pre-internet) framework, tour operators diminish transaction costs by: (i) facilitating tight coordination among the several components of the package tour; (ii) reducing search costs of potential tourists; and (iii) by providing credible information on the true quality of the tourist product. The advent of internet has reduced the need for intermediation by a TO because internet facilitates direct coordination by potential tourists themselves, and reduces their searching costs. However, to our view, the need for intermediation by a TO still remains because quality uncertainty between buyers and sellers is still an issue in the era of internet. Thus, the main role of a TO lies in providing credible information on the quality of the tourist product to the potential tourist. The TO can do so by means of building a reputation and a brand name for providing good quality packages.

Keywords: Internet, intermediation, transaction costs, asymmetric information, reputation.

¹ Department of Business Economics, Universitat de les Illes Balears; Cra. Valldemossa km 7, 07122 Palma de Mallorca (Spain). Email: aleix.calveras@uib.es.

1 Introduction

What is the future of tour operators after the advent of internet? Does the tourist vertical chain move towards des-intermediation, whereby consumers will access directly final suppliers, getting cheaper prices in a very comfortable way? Or, rather, usage of internet will simply change some of the practices in the industry while maintaining others, among which there is intermediation? The aim of this paper is precisely to provide a tentative answer to these questions on the future of the tour operator industry, by means of laying out its economic foundations.

To do so, our aim is to understand which has been the traditional role of tour operators in the intermediation of the tourist vertical chain and, then, we should be capable of foreseeing which of its functions, if any, will remain with internet (and other ICTS), and which others will disappear due to a new organization of the value chain of the tourist product.²

The analysis to provide tentative answers to these questions uses economics and the theory of the firm. Coase (1937) studied the existence of firms at a time when economic theory emphasized in its analysis the well functioning of markets. If markets are so efficient, then why do firms exist, Coase wondered. That is, why do some transactions take place within a firm rather than in the market. Its answer, further developed by Williamson (1975, 1985), views the market and the firm as alternative means to organize economic transactions. Each alternative mean of organising a transaction implies some ‘transaction costs’ and, thus, in defining a firm’s boundaries, the key issue is which transactions are more efficiently (at a lower cost) conducted in a firm than in the market.

A tour operator (TO) negotiates with hotels, transportation companies, and other suppliers, and combines these vacation components into a package tour, sold to the final consumer (Sheldon, 1986). Thus, following the transaction cost theory of the firm, a tour operator is an alternative organization to direct market exchange between final suppliers (hotels, airplane companies, etc) and final consumers (tourists). Thus, the presence of a TO (that internalises one, or many, market transactions) is justified to the extent that the transaction is done more efficiently than if it were conducted directly between firms and tourists.

We review in section 2 why transaction costs in the tourist vertical chain have (apparently) often been lower with a TO, at least previous to the advent of internet. Summarising our exposition, TOs enhance and facilitate tight coordination thus reducing the costs of broken coordination in a market exchange. Also, TOs facilitate the search for information to tourists, regarding the characteristics of the several services that compose the package tour (flight, accommodation, etc). TOs do so by avoiding duplication of search effort by tourists and also by filtering information. Finally, intermediation by a TO arises also because the tourist product is an ‘experience good’ rather than a ‘search good’ (Nelson, 1970). An ‘experience good’ (as opposed to a ‘search good’) is that whose quality can only be known by consumers after or during consumption. The tourist product is clearly an

² Our focus throughout the paper are tour operators, even though intermediation in the tourist sector is also undertaken by travel agencies. In our analysis, we subsume travel agencies within tour operators role, considering them as a single intermediary. As it will become clearer below, it doesn’t affect the main message of our paper since travel agencies are much more likely than tour operators to be des-intermediated by internet (see, for instance, O’Connor and Frew, 2002).

experience good, and thus a tourist is uncertain, until vacation takes place, about the quality of the hotel where it stays; about the punctuality of flight, etc. Hence, one of the roles of a TO lies in providing credible information to the potential tourist on the quality of the tourist product. The TO can do so by means of building a reputation and a brand name for providing good quality packages.

Once we have identified the (traditional, pre-internet) rationale for the existence of tour operators according to the transaction cost theory of the firm, we should be able to analyse the impact of the advent of internet in the industry. Even though it has been long since the tourist vertical chain has incorporated several ICTs systems (such as computer reservation systems, CRS, and global distribution systems, GDS) to organise relationship among several agents (travel agents, airplane companies), internet has implied a major change because it allows a direct access of the final consumers to final suppliers (Buhalis and Licata, 2002). As a consequence, many practitioners and academics have forecasted the future des-intermediation of many vertical chains whereby final consumers will be able to bypass previous retailers, thus getting bargains because of lower prices that occur due to intensified competition. As a matter of fact, there is some evidence that some des-intermediation has already taken place (The Economist, 2004), and it is likely that some des-intermediation will continue to take place in the future. Such des-intermediation can be explained within the transaction cost theory of the firm because of the fact that internet greatly reduces both the search costs of potential tourists, and the costs of coordination between the tourist and final sellers, thus reducing the need for intermediation by a TO.

However, we believe that TOs still have a major role to play in the tourist vertical chain, specifically in the resolution of the quality uncertainty between buyers and final sellers. In spite of its tremendous possibilities in the exchange of information, quality uncertainty in internet does not disappear, and thus the need for an intermediary such as a TO remains. Thus, to our view, in the era of internet, the main rationale for a TO intermediation will be the provision of credible information on the true quality of the tourist product.

Intuitively, however, the need for intermediation to solve the problem of asymmetric information between buyers and final sellers should be lower for large final sellers such as large hotel chains or established airplane companies (they themselves are capable of building a reputation for providing high quality services, and thus need not rely on the reputation of a TO); for final sellers that have a large proportion of repeat customers (repeat customers suffer to a lesser extent the problems of asymmetric information); and for low quality sellers (that have no need of an intermediary to signal their low quality).

Related literature. This paper is not the first to provide an analysis of tour operators (for instance, Sheldon, 1986, makes an analysis of tour operators, sketching some of the functions of tour operators that we provide in this paper). However, ours is the first one to approach theoretically (within the economic framework of the transaction cost theory) the issue of the impact of internet on the role of TOs in the tourism industry.

Notice that our paper states that intermediation by a TO in the tourist vertical chain will remain in the era of internet (maybe though to a smaller extent); however, we do not address the issue of which type of intermediary there will be. That is, traditional tour operators (e.g. TUI) will continue to dominate the market, or new eMediators will take their place in the intermediation of the tourist product? This is addressed, e.g., by Buhalis and Licata, 2002.

Finally, it is also important to stress that the purpose of this paper is not to undertake an industrial organisation analysis of the tour operator industry. That is, we do not deal in here with issues regarding the competitive interaction among different tour operators,

profitability of the industry, segmentation strategies or vertical integration of a TO upwards or downwards (see, eg., Baum and Budambi, 1994; Renshaw, 1994; Aguiló et al., 2003).

The paper is organised as follows. In section 2 we lay-out the basic framework of the transaction cost theory in order to, in section 3, analyse the impact that internet and other ICTs are likely to have on the intermediation by TOs in the tourist industry. In section 4 we conclude and discuss some final issues.

2 Transaction cost theory and the tour operator

A tour operator is a company which negotiates with hotels, transportation companies, and other suppliers, and combines these vacation components into a package tour. This package tour (the combination of components of a vacation, such as accommodation, transportation, entertainment, meals,...) is then sold to the final consumer as a single product and at a single price (Sheldon, 1986). The tour operator thus intermediates between the suppliers of the several products and services that by definition form the tourist product, and the final consumer - the tourist.³

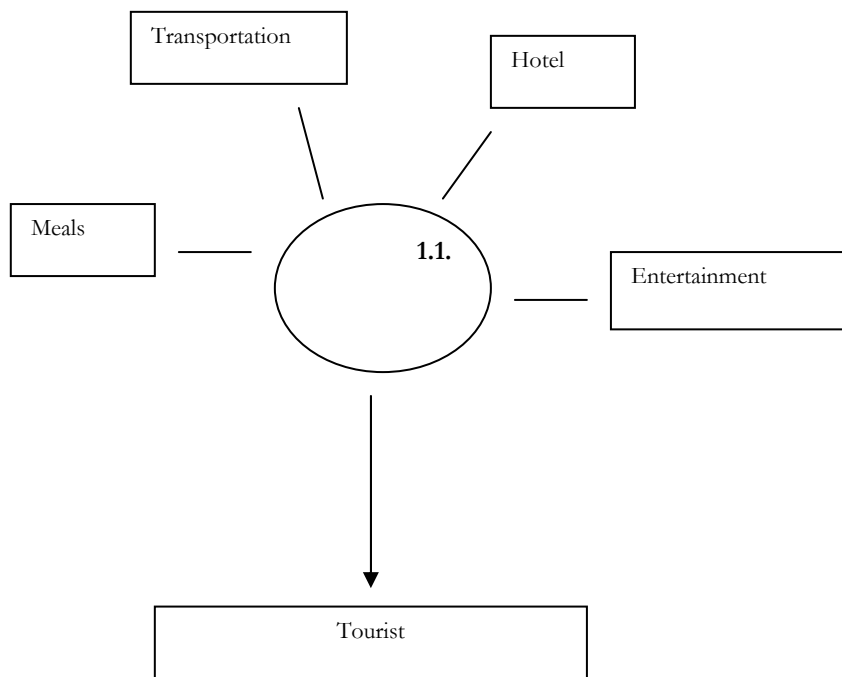


Figure 1. The tour operator as an intermediary

The basic question that we address in this paper is why there is intermediation by TOs in the tourist vertical chain, rather than consumers (tourists) purchasing all and each of the components of the tourist product (accommodation, flight, etc) directly to final sellers. The rationale behind intermediation in the tourist vertical chain will provide us with insights on

³ As we pointed in the introduction, we abstract from travel agencies by basically subsuming them in tour operators.

the essence of TOs, and thus will allow us to study the impact of ICTs, and specifically internet, on the vertical organisation of the tourist industry. For the moment we abstract from internet and analyse intermediation in the tourist chain, focusing on the pre-internet traditional vertical organisation with TOs. Then, in section 3 we do discuss the impact that internet and other ICTs have already had and will likely have on the sector.

We address the role and the existence of TOs by means of the transaction cost (TC) theory that addresses and studies the boundaries of firms (Coase, 1937; Williamson, 1975). The basic point of TC theory of the firm is to ask why there are firms rather than simply markets. That is, why some transactions (such as, for instance, some input supply) are organised within firms, while others take place through the market exchange.⁴ The theory's answer lies in the acknowledgement that both firm and market transactions involve some transaction costs. These transaction costs are the costs of *coordinating* the activities required for the transaction to take place, the costs of *motivating* people and organizations involved, the cost of *contracting* and renegotiating, the costs of delivery of the good in exchange, etc. Furthermore, as the difficulty of the transaction increases (for instance, as we will see below, because of increasing asymmetric information between the parties), transaction costs increase and, thus, social surplus of the transaction decreases.

Then, TC theory predicts that any given transaction will be organized within a firm whenever it is efficient, that is, whenever the costs of internalising the transaction are lower than the costs of organising the transaction through the market (and vice versa); or, in other words, whenever the social surplus of internalising the transaction is larger than that of using the market. Furthermore, TC theory then proposes that for *difficult* transactions, transacting costs are lower when they occur within firm's boundaries rather than through the market; that is, the social surplus of transacting within firm's boundaries rather than through the market is higher when the difficulty of the transaction increases. In the figure 2 (Gibbons, 2000) we illustrate this idea.

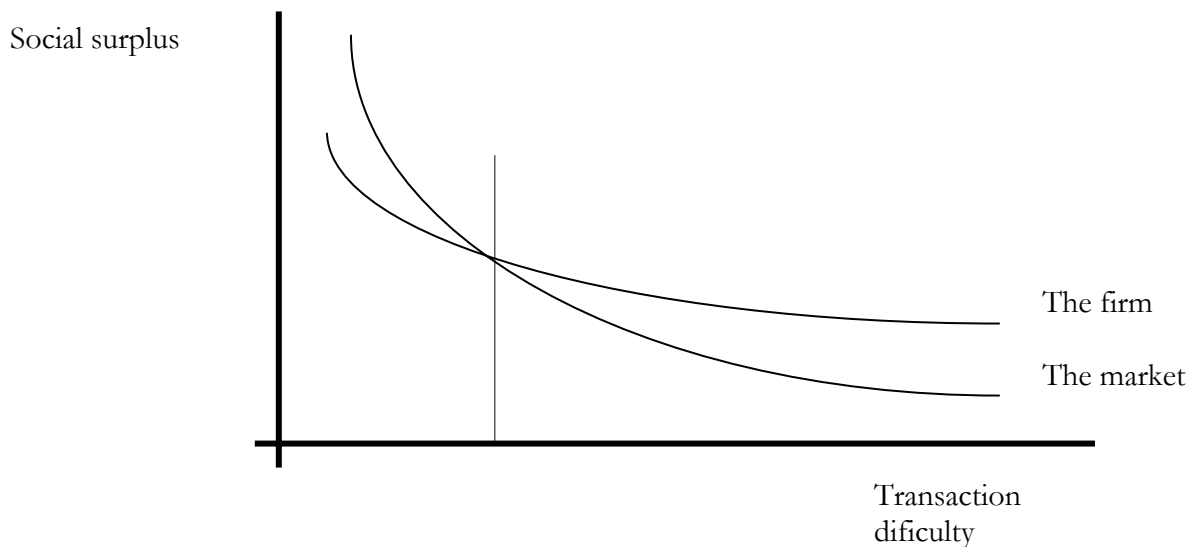


Figure 2: *The firm versus the market*

⁴ As a matter of fact, there is a wide array of intermediate governance modes in between the market and the firm, such as joint-ventures, long-term contracts, etc. Its analysis within the tourism industry lies outside the scope of this paper.

Applying the TC framework to the analysis of the vertical organisation of the tourism industry, we need to compare the transaction costs that arise when a tourist deals directly through the market with final suppliers (hotel, airplane companies, entertainments, transport from and to the airport, etc.), versus all transaction costs that arise when a tour operator intermediates and thereby packages all goods and services that compose the package tour and sells it to tourists (the final consumers). TC theory asserts that shopping will take place through a tour operator whenever it is more efficient (it has lower transaction costs) than having the consumer herself directly purchasing the tourist product to the multiple final suppliers.

When analysing the tourist vertical chain, we observe that the costs of organising transactions through arm's length (direct exchange between tourists and final suppliers) consist of⁵:

- search costs,
- coordination costs,
- costs of quality uncertainty.

In the rest of the paper, we analyse transactions between a consumer (a tourist) and either a TO (when there is intermediation) or final suppliers (absent TO intermediation), and discuss in which ways and to what extent transaction costs are important. We are then able to discuss and support a rationale for intermediation in the tourist sector (intermediation by TOs reduces searching, coordination and informational costs), and discuss to what extent such a rationale is affected by the advent of internet and other ICTs. Before that, we must discuss an important assumption in TC theory, which is that of incomplete contracts.

Incomplete contracts

In any exchange of a good or a service among two or more parties, a contract is agreed upon, whether explicit or implicit. A contract specifies the conditions of exchange, including price, quality of the good, time of delivery, etc. The objective of the contract (which may be tailor made to the transaction, standard; detailed or vague, etc.) is to protect each party from a possible opportunistic behaviour from the other party and, thus, to induce as much as possible social surplus from the exchange.

A complete contract would effectively avoid opportunistic behaviour from each party and, as a consequence, would allow social surplus to be maximum. A complete contract would specify all possible future scenarios in a precise manner, and then would describe without any ambiguity each parties obligation in each scenario; furthermore, and of the utmost importance, a complete contract would be enforceable. It should be clear, however, that these requirements for complete contracting are very demanding; as a matter of fact, contracts in real world are incomplete (Tirole, 1999). It is difficult (too costly in general) to foresee and specify all future relevant contingencies; contracts leave many things unconsidered, and are open to ambiguity in interpretation; thus, contracts are not the perfect tools capable of precisely managing the development of a transaction. And this is precisely why the organisation of the tourist vertical chain is important. That organisation that minimises opportunistic behaviour and transaction costs of whatever kind, will be the organisation that we should expect to obtain.

⁵ In this paper we leave aside some issues that, even though important in TC theory, to our view are not crucial in the analysis of the role that TOs play in the tourism industry (such as, e.g., asset specificity and the possibility of hold up).

2.1 The tour operator as a coordinator

The tourist product consists of a series of services and goods whose consumption requires tight coordination among them. As stated by Inbound Holiday packages for the Gold Coast: “services include the *coordination* of all ground arrangements including hotels, motels, executive apartments, farm stay, airport transfers with meet & greet services, coach charter, stretch limousines, restaurants, golf, tours, car rental, cruises, interpreters, tour guides, educational tours for overseas students and conventions.”. All these (and possibly other) services and goods conform the tourist product, and for the tourist product to provide high utility (satisfaction) to the consumer, there must be tight coordination of all these services and goods along a series of dimensions, specially synchronically. Any miss-coordination along these lines implies a serious break-up and a serious loss of utility for the tourist. Furthermore, in case of a break-up in the coordination, it should be quickly fixed in order to control for the damage and to be able to enjoy a reasonable vacation.

Which is the efficient way to coordinate all (or some of) these components of the tourist product? One possibility is for the tourist herself to contract with all final suppliers (hotels, etc) and ensure coordination by means of contracting the required characteristics and conditions of each of the goods and services. However, since contracts are incomplete such mechanism of coordination will be imperfect and open to error.

As a matter of fact, the coordination of the several components (goods and services) of the tourist product are what Milgrom and Roberts (1992) call ‘design attributes’: “coordination problems in which there is a priori information about how the parts of the decision must fit together and in which small failures of fit are very costly are said to have *design attributes*.” Then, according to Milgrom and Roberts, a “centralized setting of design variables tends to reduce both the cost of errors and the amount of communication and search necessary to identify an optimal decision” (Milgrom and Roberts, 1992, pp 117).

In our framework, this implies that centralised coordination by the tour operator ensures a more efficient outcome, including a better solution of possible errors and miss-coordination that might occur during the vacation. Thus, intermediation by a TO probably solves in a more efficient way the coordination requirements of the tourist product, rather than relying on the final consumer shopping around trying to coordinate by herself all the parts of the tourist product by means of a bunch of contract agreements.

2.2 The tour operator and tourists’ search for information

So as to obtain information about the prices, qualities and characteristics of the tourist products, consumers (tourists) must undertake an expensive search process.⁶ The cost of search comprises the money, time and effort that potential buyers incur in obtaining the price, the characteristics and quality information for accommodation, flight schedules, etc. Examples of such costly information gathering are visits to travel agencies, which involve transportation and time costs, telephone calls, buying newspapers, etc. (We focus on web searches and browsing and its impact on the search process in section 3).

As we see in figure 3 below (obtained from Whinston, Stahl and Choi, 1997), individual search by each consumer will generate much duplication of search effort and search cost. Each potential tourist must visit or call each final supplier (hotel, bus company) and incur in the cost (e.g. in time) of searching and gathering information. Such duplication of effort

⁶ In here we focus on the organisation of the searching process, and not on the consequences (in terms of, e.g., prices) of such searching costs (see Carlson and McAfee, 1983 for an analysis of the consequence of these search costs in the pricing behaviour of firms).

might be minimised using intermediaries such as tour operators and travel agencies who collect, process and store all relevant information.

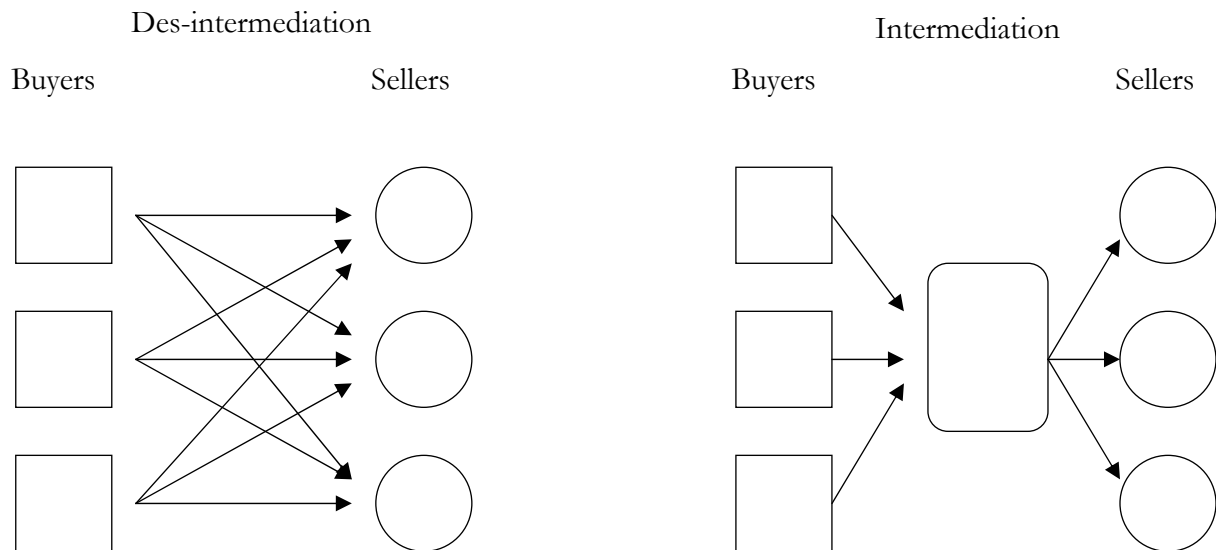


Figure 3: Intermediation or des-intermediation in the search for information

The efficiency enhancing of intermediation by TOs and travel agencies in the search for information results simply from providing a centralized outlet for all sellers. Furthermore, this centralisation does not require that the same content be stored in both sellers' and the intermediaries storage information, which would be a wasteful duplication. That is, TOs need not provide all same information that hotels and flight companies make available. Instead, the tourist product information available at the intermediary will have only the necessary information for potential buyers to make their purchase decisions. This way, tour operators and travel agencies also filter information, which further increases the efficiency of the search process.

However, no matter how much information consumers receive from sellers prior to purchase, they still have to trust what the sellers say about their products. Often sellers (hotels, airplane companies) may not provide enough information for consumers to fully evaluate their products or services, or the information may be inadequate to judge whether sellers are reputable companies or fly-by-night operators. In light of this, a TO's role in a search market extends beyond being an information depositary and distribution centre. This is the issue that we analyse in the following subsection.

2.3 The tour operator and quality uncertainty

Economic theory distinguishes between 'experience goods' and 'search goods' (Nelson, 1970). Search goods are those goods whose quality may be learned prior to consumption and, thus, prior to purchase. For experience goods instead, their quality is learned only from experience, during or after actual consumption of the good. It is immediate to notice that the tourist product, like most (if not all) services, is an experience good. The quality of the service in a hotel can only be ascertained during stay; quality of a flight (punctuality in the time of departure, etc.) is only known during the flight itself; the quality of meals is

another example of experience good; and the same for all other goods and services that compose the tourist product.

Thus, a crucial issue is the uncertainty that the tourist faces about the true quality of the tourist product prior to consumption, that is, prior to the vacation itself. In a rather more technical language, there exists asymmetry of information between the seller (hotel, airplane company) and the buyer of the tourist service, since the seller has better information than the buyer (the tourist) concerning the precise characteristics and quality of whatever tourist good or service in exchange.

Box 1. The 'market for lemons' (Akerlof, 1970), applied to the tourist sector.

Suppose Alice, from Germany, is willing to go on vacation to the Balearic Islands. There are a priori two different types of hotel accommodation available. Type H with a high quality service, which she values in (for which she is willing to pay) 1000 €, and a type L with a low quality service which she values in (for which she is willing to pay) 500 €.

There are a priori in the market a 50% of hotels offering the high quality service, and a 50% offering the low quality one. The cost of offering the high quality service is 800 €, whereas the cost of the low quality service is 400 €.

Alice does not know which hotel offers high quality or low quality service, this is private information of each hotel. There is thus a problem of asymmetric information: when booking some accommodation, she does not know whether the hotel offers high quality or low quality service. What she knows though is that there is a 50% chance that it is a type H hotel, and a 50% chance that it is a type L hotel.

As a consequence, her expected valuation of the stay is $\frac{1}{2} \cdot 1000 \text{ €} + \frac{1}{2} \cdot 500 \text{ €} = 750 \text{ €}$. This means that at most she is willing to pay a price of up to 750 € for the accommodation. Otherwise, she would be paying more than what she values it in expected terms.

The problem is that at a price lower than 750 € no type H hotel is willing to supply accommodation, since the cost of accommodation with high quality service is 800 €.

As a consequence, knowing this, Alice infers that the only hotels offering accommodation are type L with low quality service, which implies that she is only willing to pay a price up to 500 €.

Thus, it is immediate to see that the only Nash equilibrium is a price higher than 400 € and lower than 500 €, at which only type L hotels offer their service (type H hotels would abandon the market), and at which Alice goes on vacation.

This is exactly what it means that 'bad products drive-out good products', and is the case of the 'market for lemons' that Akerlof first presented in his paper in the Quarterly Journal of Economics.

It is well known in the economics literature that a consequence of such informational asymmetries may be a market failure: a transaction that would be a priori beneficial, value enhancing for all parts, might not take place.⁷ This is what might happen in a situation of *adverse selection* (defined as that in which the seller has superior information than the buyer prior to signing of the contract), and was first described by Akerlof (1970).⁸ Akerlof showed that in markets with asymmetric information between sellers and buyers (e.g. in used car markets), adverse selection might lead bad products to drive-out good products from the market. Because the buyer is uncertain about the quality of the good, it fears that it is one of low quality and thus it is only willing to pay a low price. This, in turn, makes

⁷ Again, incomplete contracts are crucial. In a framework where a complete contract was available, no problem would arise. However, it is not difficult to see that quality cannot be perfectly and unambiguously described and, as a consequence, contracts are not capable of perfectly solving the problems related to the existence of asymmetric information.

⁸ Moral hazard, instead, exists when there is asymmetric information after signing the contract (Holmstrom, 1979).

that firms with good products are not willing to sell. As a consequence, only a market for low quality products may exist, and potentially efficient, value enhancing exchanges, may not take place.⁹ Box 1 provides a numerical example of adverse selection in the accommodation sector.

Given the existence of informational asymmetry between the seller (or sellers) and the buyer, and the resulting potential market failure, the issue is what can be done about it. The obvious remedy is that sellers of the tourist product inform – and convince – potential buyers about the true quality of the product, thereby eliminating informational asymmetry. There are several possible mechanisms to do this, among which we can find: (i) advertising (Nelson, 1974); (ii) establishment of quality standards by either industry groups or by the government; (iii) using price as a signal for quality (Wolinsky, 1983); and (iv) using *intermediaries* as a channel to provide credible information.

Each and all of these mechanisms play some role in the resolution of the quality uncertainty among final sellers (e.g. hotels) and tourists in the industry. However, we focus on what we believe is the main mechanism providing a solution to the potential market failure due to informational asymmetries: the role played by a TO (an intermediary). Any of the above mechanisms is costly – that is, transaction costs are increased because of the informational asymmetry between sellers and buyers, and because of the need to provide a solution. Our claim though is that intermediation by a TO can be efficient since it can provide a low cost solution to the asymmetry of information problem between hoteliers (and other sellers) and tourists, rather than simply relying on direct market arrangements without any intermediation.

A TO (an intermediary, in general) improves market efficiency by providing third party *credible* information about product quality. This way, it eliminates the possibility of a market failure due to quality uncertainty, and it does so at a lower transaction cost than the alternative organisational arrangements whereby the tourist deals directly with all sellers.

The role of an intermediary might be of two types. An intermediary might be an *expert*, whereby it has acquired the appropriate knowledge and skills to evaluate the quality of the good or service in question (Biglaiser, 1993). This type of intermediation is specially important in settings where usage and consumption is not fully sufficient to assess the quality of a good; for instance, some retailers that evaluate the quality of a DVD player. Some of this role as experts is played by TOs in the tourist industry; for instance, some TOs evaluate and keep track of the environmental friendliness of hotel establishments.¹⁰

However, probably the main role of TOs arises because of the TO's ability to build a brand name and reputation signalling the package of high quality tours. In this case, intermediation can enhance market efficiency even when intermediaries do not have superior knowledge and skills to evaluate quality (are not 'experts'). TOs are a source of quality information simply by credibly building a reputation for providing high quality products. We see how this works in the following subsection.

2.3.1 Reputation and repeat purchases

A conventional method to counter the quality uncertainty is to build brand name and a seller-specific reputation. The key issue to building a reputation for providing high quality

⁹ An excellent introduction to the Economics of Information is Macho and Perez (2001).

¹⁰ With the underlying assumption that consumers care about the environmental behaviour of hotel establishments, some examples of tour operators that have programs on environmental quality are Orizzonti (an Italian TO), Japan Travel Bureau, Scandinavian Leisure Group and TUI.

products is that the firm be a long run player or that the product is purchased repeatedly. While in a one shot interaction the firm has large incentives to misreport quality to the potential buyer, in a framework with repeated interaction the firm may have an interest in maintaining a sound reputation so as to ensure future business (Kreps and Wilson, 1982).

The same incentive to build a sound reputation may appear in case the firm interacts repeatedly with different buyers – in that case the reputation is passed along consumers. For products or services which are used only once, the reputation is built over a firm rather than a product so that firm specific reputation becomes the brand name by which the firm may transfer consumers' trust from product to product. Furthermore, a basic requirement for any system of reputation is that each side (both the seller and the buyer) should be able to evaluate quality correctly after purchase, that is, evaluate the past behaviour of the other side. In box 2 we provide a numerical example in which a hotel establishment is able to build a reputation for providing high quality goods or services.

Box 2. Reputation for quality.

Consider one hotel that can provide two types of accommodation services: high quality and low quality service. A high quality service has a cost of 80 € per night of accommodation, whereas low quality service costs 40 €.

Anne is planning to spend a night in the hotel, and she values it by (her willingness to pay is) 100 € in case the service is high quality, and by 50 € in case the service is low quality.

The price per night of accommodation is 90 €. This implies that in case the service is high quality, Anne will have a utility of $u=100\text{ €} - 90\text{ €} = 10\text{ €}$; whereas if the service is low quality she will have a utility of $u = 40\text{ €} - 90\text{ €} = -50\text{ €}$. This implies that if Anne expects a low quality service she'd better not stay in the hotel.

In case Anne stays in for the night, the hotel has two options: either offer a high quality service or a low quality service. The hotel's profits per night with a high quality service is $90\text{ €} - 80\text{ €} = 10\text{ €}$; whereas with a low quality service, the profit per night is $90\text{ €} - 40\text{ €} = 50\text{ €}$.

If the 'game' is played only once, that is, if Anne in any case will only stay one night at the hotel, the only Nash equilibrium is that Anne chooses not to stay in the hotel and, in case Anne stayed in, the hotel would offer low quality service. This is a clear cut result: the hotel is better off offering low quality service since its profit is then 50 €, rather than 10 € offering high quality service. In that case, foreseeing such behaviour, Anne will choose not to visit.

However, when the 'game' is played indefinitely (repeated infinite times), then the hotel may have an incentive to offer high quality service. Consider that Anne gives a bow of confidence to the hotel and chooses to visit, and then repeat if and only if the quality of the service was high.

Then, the hotel must choose between two options. On one side, offering low quality service and gaining 50 € one night, and then never again accommodating Anne and thus having zero profit in the future. And on the other side, offering high quality service and thus keep hosting Anne repeatedly. This implies that the hotel's profits are (since they must be discounted, which we do at the daily interest rate r)

$$10\text{€} + \frac{10\text{€}}{1+r} + \frac{10\text{€}}{(1+r)^2} + \dots = 10\text{€} + \frac{10\text{€}}{r}.$$

As a consequence, the hotel will choose to offer a high quality service whenever $r < \frac{1}{4}$. Then, in such a

case, supplying high quality service and Anne staying in the hotel as long as quality is high is a Nash equilibrium. We see then that the hotel has an incentive to build a reputation of providing high quality service since this ensures future business.

Thus, when interaction between the seller and the buyer is not frequent or, when it is difficult for an outsider to the transaction to ascertain the quality of the good that has been exchanged, building a reputation is difficult or impossible. And this is quite exactly the case for the tourist industry in a direct exchange between final sellers (e.g. hotels) and tourists.

Consider the way in which, for instance a hotel company, could build a reputation for providing high quality service. Many times, interaction between a tourist and a hotel establishment occurs only once, since tourists switch destination or place of accommodation quite often. Which is then the incentive for a hotel company to maintain, to provide a high quality of the service? Since the tourist will most likely not repeat anyway, and since for outsiders (potential future tourists) it is difficult to know whether quality has been high or low, the incentive to save by providing low quality is high. Thus, each final seller in the tourist industry would not have much incentive to provide high quality.

Thus, intermediation by a TO provides a solution to these the lack of incentives of final sellers in the tourist industry to acquire and maintain a reputation and a brand name to signal high quality. A TO has a double incentive to maintain a good reputation. First, with the tourist. Since the TO is going to supply a package tour consisting of many different products, in different places and to many consumers who are potential repeaters, a TO has the right incentives to ensure that quality of the package is as promised; otherwise, the unsatisfied tourist will not repeat purchase to the same TO of the (same or another) package tour. And second, with the final seller (hotel establishment, car rental company). Since the TO is a repeat buyer of the final seller's product, this final seller has also an incentive to maintain an appropriate quality. Otherwise, in case quality is not good enough, the TO will stop distributing that firm's product so as to keep its reputation with the consumers.

Three caveats to the previous analysis on the role of tour operators apply to large firms, to firms (of a destination) with a high rate of repeat visitors, and to low quality firms. Large sellers (for instance, large hotel chains such as Hilton) might themselves have powerful incentives to build a reputation and a brand name for quality: since a tourist has the option to accommodate in an establishment of the chain in many different locations, the likelihood that a buyer will repeat is high (or that someone known to the tourist might accommodate in the same chain). As a consequence, a large chain does have an incentive to maintain a reputation for high quality.¹¹ The same caveat on reputation building can apply to (small) firms of a tourist destination where tourists have a high rate of repetition. When tourist repetition is high, even a small firm may show high levels of quality if it expects that a high proportion of present tourists are likely to come back in a near future. And finally, and intuitively, low quality firms have no need of a tour operator to certify its quality as being low. As we explained above in the market for lemons example, the exchange of low quality goods is not impeded by the existence of asymmetric information.

3 Internet and intermediation in the tourist sector

In the previous section, we have laid down the economics of intermediation in the tourist vertical chain. As Shapiro and Varian write in their 1999 book *Information rules*: "Technology changes. Economic laws do not". Thus, with the framework laid down above, we should be capable to discuss the impact of internet and other ICTs on the vertical organisation of the tourist industry. Up to now, we have undertaken our analysis abstracting from the existence of internet and other ICTs; rather, in a sense, we have assumed we were in a scenario previous to the emergence of internet. Even though it has been long since the tourist vertical chain has incorporated several ICTs systems such as CRS (computer

¹¹ However, in spite of the increasing importance of large hotel chains, many hotel establishment through-out the world are stand-alones or belong to a small chain, just like many other final sellers in the tourist industry (such as car rental companies, restaurants, etc.).

reservation systems) and GDS (global distribution systems) to organise relationship among several agents (travel agents, airplane companies), internet implies a major change because of the direct role, the direct access of the final consumers to final suppliers (Buhalis and Licata, 2002). As a consequence, many practitioners and academics have forecasted the future des-intermediation of many vertical chains whereby final consumers will be able to bypass previous retailers, thus getting bargains because of lower prices that occur due to intensified competition (Buhalis and Licata, 2002; Evans and Wurster, 2000; O'Connor and Frew, 2002). As a matter of fact, there is quite some evidence on the importance of such des-intermediation: Garau (2005), for instance, shows that the use of package tour on the trips to Mallorca (one of the largest Mediterranean tourist destinations) has decreased in a large manner, dropping from an 80% to a barely 50% in just a few years. (See also The Economist, 2004, its survey on E-commerce).

Our approach here is to review to what extent the role of a TO (and other intermediaries) in reducing search costs, in increasing the efficiency of coordination among the several components of the package tour, and in providing truthful and credible information on the quality of the several components of the tourist product, is affected by the apparition of internet. Following the transaction cost framework laid down above, we assess to what extent transaction costs of either organisational alternative (direct market exchange or intermediation by a TO) are affected by internet and, thus, in which way the optimal organisational architecture is affected.

3.1 The tour operator as a coordinator

According to Davidow and Malone (1992), internet and ICTs have given rise to the *virtual enterprise*, in which each activity of the value chain is undertaken by a separate enterprise; it is thus a des-integrated firm, connected through arm's length relationships. Such organisation would be possible because internet and the other ICTs have made coordination through arm's length contracts among separate entities much easier.

Analogously, in our framework, the tourist industry, internet has made easier the direct coordination by the same consumer of the several composites of the tourist product. Thus, the consumer herself may coordinate the flight schedule with the accommodation in the destination, the appropriate car rental dates, buying tickets for a show in the city of vacation, or the transportation from the destination airport to the hotel. Thus, tight coordination has become easier (though not costless), and thus the need for intermediation by a TO to coordinate has been reduced significantly.

3.2 Tour operator and the consumer search for information

Online search offers a tremendous advantage over physical search. To begin with, by using computer technologies such as search engines, consumers may be able to search the whole information space at a very low cost in terms of time and transportation.¹² Furthermore, online search allows consumers (potential tourists) to process a wide arrange of information other than price – e.g., location and name of vendors, terms of sales, quality and performance variables, and other product characteristics. Besides these lowered costs,

¹² Even more, in some cases one may wonder whether search costs are always positive: there are consumers who seem to enjoy searches instead of costing them something, specially so in the planning and design of a vacation.

internet based search also allows consumers to remember and compare information gathered from many virtual web stores.¹³

As a consequence, and according to some, consumers will not need search intermediaries and there will be a des-intermediation whereby TOs role in the search process will disappear. However, in spite of the importance of internet in reducing the search costs, there are still at least two reasons that may justify, at least partially, the existence of intermediaries in the search process. One is that the duplication of traffic of information as discussed above (see figure 2) still persists, and intermediation by a TO still makes sense since an intermediated search market dramatically reduces duplicated traffic and enhances network efficiency. The other is that in internet, the disadvantage of physical limitation is replaced with a difficult problem of locating and processing the relevant information, not because of the lack of such information but because of the very *abundance* of it. In this case, a tour operator (an intermediary) may still play a role in the filtering of information, so that the searcher/consumer accesses only the relevant information.

3.3 The tour operator and quality uncertainty

A search involves a much more complex process of information selection and access than merely getting price quotes or product characteristics. Simply put, the efficiency of the search will depend on how much product information is provided by sellers, and how truthful and reliable the provided information is. That is, what is the impact of internet direct distribution in the problem of quality uncertainty in the tourist industry? It is our view that, in spite of the wealth of information and the low costs of searching (surfing and browsing), the problem of asymmetry of information between sellers and buyers in the tourist industry is still present in the era of internet.

With internet, it is still difficult for a buyer to fully evaluate the products or services that it acquires, and the information received may still be inadequate to judge whether the sellers are reputable companies or fly-by-night operators. Furthermore, without some guarantee about the information and remedies available in case there is a dispute over the quality of the service, face-to-face sales must still be carried out on the basis of the seller's reputation.¹⁴

As a consequence, and to our opinion, the role for a TO in providing truthful and credible information concerning the quality of the tourist products remains. As we have shown above, a TO is able to credibly build a brand name that provides a signal of quality to tourists, increasing this way informational efficiency, both in quality and content, because of its role as a reputation provider. Thus, in the era of internet, the TO's main role in the tourist vertical chain, its core function, ought to be the transmission of credible and reliable information.

¹³ An alternative to consumer search is online advertising by final sellers. However, it is not yet clear its effectiveness as compared to consumer search.

¹⁴ Huston and Spencer (2002) show that the problem of quality uncertainty due to asymmetric information still remains when the exchange takes place in the internet. Further evidence on this line lies, for instance, in the increasing literature dealing with internet auctions and the value of sellers' reputation: sellers' reputation would not be important unless there was some kind of asymmetric information between buyers and sellers (e.g. Melnik and Alm, 2002, 2005). On the contrary, though, some authors, e.g. Zhenhua (2000), claim that internet is capable, to a large extent, of providing a solution to the asymmetry of information because of its great capacity to distribute and provide information on the product directly to the final user (e.g. by means of video reproductions of the facility).

4 Concluding remarks

Internet has already had, and will likely continue to have, an impact on the intermediation role of TOs in the tourist vertical chain. To the extent that it facilitates, to the tourist himself, direct coordination of the several components of the tourist product, and easier and cheaper (in terms of time, etc) direct search of information, the economic rationale of TOs diminishes. Thus, when comparing the alternative organisational architecture of the tourist chain – either intermediation or direct access by the final consumer, tour operators lower their importance and might continue to do so in the near future.

However, there still is, to our view, a major role for TOs in the provision of credible and reputable information regarding the quality of final suppliers of the tourist sector. Even though major tourist companies might effectively manage to des-intermediate their access to final buyers because of its ability to build a good reputation, small and medium companies without a global presence should still rely on TOs to assure tourists of their quality service. Thus, as a consequence, TOs should still remain an important actor with an efficiency enhancing function in the tourist vertical chain.

Clearly though, this says nothing about the type of intermediaries that will exist in the era of internet. The Economist (2005) provides evidence on the increasing role of internet in the booking of travel services in the US. However, a very large proportion is done through on-line travel agents or intermediaries, which clearly fits well within our theoretical predictions. The Economist (2005) also shows that many large travel suppliers are also selling a big part of their capacity directly through internet. This evidence also goes hand in hand with our analysis: intermediaries' role will be smaller for larger travel suppliers since these companies are capable themselves of building a sound reputation and, thus, need not rely on TOs. This implies, for instance, that the analysis undertaken by O'Connor and Frew (2002) on the prospects of hotel electronic distribution on the basis of top hotel chains is likely to be biased because of its focus on large hotel chains.

The two other caveats we provided in the analysis to the continuing roles of TOs are that intermediation by TOs should be less important when repeat tourists are a large proportion of the sales of the travel supplier; and for lower quality firms that have no need of a tour operator to certify its quality as being low.

Finally, with the increasing prevalence of internet, we should also see a smaller (though still significant) weight of the package tour in the business of tour operators. To the extent that the rationale for the package tour is the coordination of the several components of the tourist product, internet (and its consequent reduction in coordination costs) has reduced the necessity for a package tour. Nonetheless its smaller importance, the package tour will still continue to exist. To begin with, because coordination costs have been reduced, but have not disappeared. And also, because a package tour may have rationales other than the reduction in coordination costs; for instance, through the bundling of several products in the package tour, the tour operator may be capable of implementing a better pricing policy.

5 References

- Aguilo, E., Alegre, J., and Sard, M., (2003): "Examining the Market Structure of the German and UK Tour Operating Industries through an Analysis of Package Holiday Prices"; *Tourism Economics*, September v. 9, iss. 3, pp. 255-78.
- Akerlof, George A, 1970. "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," *The Quarterly Journal of Economics*, vol. 84(3).

- Baum, T. and Budambi, R. (1994): "A Ricardian analysis of the fully inclusive tour industry", *Service Industries Journal*, vol. 14, no1, pp 85-93.
- Biglaiser, G. (1993): "Middlemen as Experts", *Rand Journal of Economics*, 1993, 24 (2), pp.212-23.
- Buhalis, D., and Licata, C., (2002): "The future of eTourism intermediaries"; *Tourism Management*, Vol.23(3), pp.207-220.
- Carlson, J. A. and McAfee, R. P.; "Discrete Equilibrium Price Dispersion"; *The Journal of Political Economy* 91; 1983; 480-493.
- Coase, R. (1937): "The nature of the firm"; *Economica*.
- Cooper, R. and Ross, T. (1984): "Prices, product quality and asymmetric information: the competitive case"; *Review of Economic Studies* 51.
- Dahlby, B. and West, D. S. (1986); "Price Dispersion in an Automobile Insurance Market"; *The Journal of Political Economy*, 94, 418-438.
- Davidow, W.H. and Malone, M.S., (1992), *The Virtual Corporation*, (Harper Collins Publishers, New York).
- Evans, P., & Wurster, T. S. (2000). *Blown to Bits - How the New Economics of Information Transforms Strategy*. Boston, MA: Harvard Business School.
- Garau, J. (2005): *Uso de internet en al comercialización de la oferta de alojamiento turístico de Baleares*, CAEB.
- Gibbons, R. (2000): "Why Organizations Are Such a Mess (and What an Economist Might do About It)"; chapter 1 of *Organizational Economics (a text in progress)*.
- Holmstrom, B. 1979. "Moral Hazard and Observability." *Bell Journal of Economics* 10:74-91.
- Huston, John H.; Spencer, Roger W. (2002): "Quality, Uncertainty and the Internet: The Market for Cyber Lemons"; *American Economist*, Spring 2002, v. 46, iss. 1.
- Kreps, D. and R. Wilson (1982): "Reputation and Imperfect Information," *Journal of Economic Theory*, 50: 253-79
- Macho, I. and Perez, D. (2001): *An Introduction to the Economics of Information: Incentives and Contracts*. Oxford University Press, second edition
- Melnik, Mikhail I.; Alm, James (2002): "Does a Seller's Ecommerce Reputation Matter? Evidence from eBay Auctions"; *Journal of Industrial Economics*, September, v. 50, iss. 3, pp. 337-49
- Melnik, Mikhail I.; Alm, James (2005): " Seller Reputation, Information Signals, and Prices for Heterogeneous Coins on eBay"; *Southern Economic Journal*, October, v. 72, iss. 2, pp. 305-28.
- Milgrom, P. and Roberts J. (1992): *Economics, organization and management*. Prentice Hall, Inc.
- Nelson, P. (1970): "Information and consumer behaviour"; *Journal of Political Economy* 78: 311-329.
- Nelson, P. (1974): "Advertising as information"; *Journal of Political Economy* 81.
- O'Connor, P. and Frew, A.J., (2002): "The Future of Hotel Electronic Distribution: Expert and Industry Perspectives"; *Cornell Hotel and Restaurant Administration Quarterly* 43: 33-45.
- Poon, Auliana (1993): *Tourism, technology and competitive strategies*; Wallingford : C.A.B. International.
- Renshaw, MB (1994): "Consequences of integration in UK tour operating"; *Tourism Management* 15 (4).

- Sheldon, Pauline J. (1986): "The Tour Operator Industry: An Analysis", *Annals of Tourism Research*. Vol. 13, July.
- Sinclair and Stabler (1997): *The economics of tourism*; Routledge, London and New York.
- The Economist (2004): "Click to fly", *Survey on E-Commerce*, May 13th.
- The Economist (2005): "Flying from the computer"; September 29th.
- Tirole, J. (1988): *The theory of industrial organisation*. The MIT Press, Cambridge.
- Tirole, J. (1999), "Incomplete Contracts: Where do we Stand?," *Econometrica* 67, 741-81.
- Shapiro, C. & Varian, H. 1999. *Information Rules*. Cambridge MA: Harvard University Press.
- Wöber, Karl W.; Frew, Andrex J.; Hitz, Martin (Eds.)(2002): *Information and Communication Technologies in Tourism; Proceedings of the International Conference in Innsbruck, Austria*.
- Whinston Andrew, Choi Soon, Stahl Dale, (1997): *The economics of electronic commerce*; Macmillian Technical Publishing.
- Williamson, O. (1975): *Markets and hierarchies, analysis and antitrust implications: A study in the economics of internal organization*. Free Press (New York)
- Williamson, O. E. (1985): *The Economic Institutions of Capitalism*, New York et al.
- Wolinski, A. (1983): "Prices as signals of product quality", *Review of Economic Studies* 50.
- Zhenhua Liu (2000): "Advantages of the Internet as a Marketing Tool Main Applications of the Internet in Tourism Marketing", *Hotel Online. Ideas and trends; Fourth International Conference "Tourism in Southeast Asia & Indo-China: Development, Marketing and Sustainability"*.