

Developing countries and the tourist industry in the internet age: The Namibian case

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Abstract²

UNCTAD proclaims that the development of tourism appears to be one of the most valuable avenues for reducing the marginalisation of LDCs in the global economy, and that internet technology (ICT) and E-commerce represent an opportunity for developing countries to improve their relative position.

Through a case study of the Namibian tourist industry, this article analyses to what extent the use of ICT in the tourist industry facilitates growth in tourism services from developing countries. The article seeks to outline the conditions under which the local industry might bypass intermediaries such as overseas travel agents and tour operators. By eliminating intermediaries like the travel agent, transaction costs (commissions for instance) may be reduced and Namibia may secure a higher market share and a higher added value.

Intermediaries play two important roles that have to be secured: they enjoy an information advantage and may therefore offer the consumer a bundle of different goods. Secondly, they certify the tourist goods. Without fulfilling these functions, I argue, it is unlikely that the producers in the tourist value chain in Namibia will be able to bypass the intermediaries without reducing the value of the product.

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1 Introduction

For low and middle income countries, tourism represents almost 8% of the merchandise trade. Around one third of international tourism is captured by developing countries, and tourism is the only major sector in international service trade where developing countries consistently have had surpluses.³ Worldwide, travel services constitute 32% of the service exports, but in Africa travel services constitute 56%.⁴ One may claim that these high shares of service exports reflect the low level of the other service sectors rather than a high level of tourism. This is only partly correct. International tourism has shown significantly growth rates and were 50% higher in developing countries compared to developed countries between 1980-1996. From 1995 to 1999 the annual tourism in African countries increased with 6.9% compared to 2.9% world average (WTO, 2000a). In the past, high growth rates have led to an upsurge in the importance of tourism, a process that seems to continue. UNCTAD (2001) proclaims that there is an additional tourism potential for developing countries. In fact, tourism development appears to be one of the most valuable avenues for reducing the marginalisation of LDCs from the global economy.⁵

The tourist industry represents an interesting avenue for poverty reduction and economic development (ODI, 1999; Sinclair, 1998). Tourism is labour intensive. There are potential links to other industries such as construction, agriculture and transport, and the poor may have access to tourist assets such as natural resources and culture. At the same time, tourism may lead to de-industrialisation when prices of non-tradeables increasing (Copeland, 1991).⁶

My point of departure is, that tourism is an information intensive bundle of goods. As such, the tourism sector is intertwined with the development of

³ 38% of tourist arrivals and 31% of tourism receipts are accruing to low and middle income countries of which China, Thailand, Mexico, Malaysia, Singapore and Indonesia are the most important tourist destinations (WDI, 2003:354).

⁴ Travel services include the goods and services consumed by travellers, including meals, accommodation and domestic transport.

⁵ The participation of LDCs are small and uneven. Tanzania, Maldives, Cambodia, Nepal and Uganda account for half of tourist receipt of LDCs.

⁶ As argued elsewhere, in the case of Namibia, this is not really a problem since manufacturing already plays a minor role, partly due to high labour costs (Brits and Wiig, 1998).

information technology (ICT), a factor which is hardly mentioned in the literature referred to above.

Information and communication technology (ICT) already play a significant role in tourism. Tourism is one of the most important sectors that apply ICT, and one would expect that changes in ICT, particularly the arrival of internet, would influence the structure of this industry. UNCTAD (2000) proclaims that E-commerce and ICT represent an opportunity for developing countries to improve their relative position because of a significant reduction in transaction costs. E-commerce permits development through productivity gains in supply chain management, and is expected to represent about 20% of worldwide business to business and retail transactions in 2006 (UNCTAD 2002a). Internet and E-commerce represent promising avenues for further development of the tourist industry in developing countries, and challenge the traditional role played by 'brick and mortar' intermediaries. Yet, one cannot be too optimistic. The 'new economy' is not so new, in the sense that fundamental economic principles also apply under the 'new economy'. We do not know yet the faith of the traditional intermediaries and whether there is a room for new agents, for example from developing countries. Traditional agents may as well exploit the new opportunities created by the ICT revolution, and adapt existing business activities to the new circumstances.

This article analyses how the use of ICT in the tourist industry influences the structure of the supply chain, potential impacts on market share and revenue. For most developing countries, the retention of tourism revenue is currently as low as 30% (WTO,1998). Most analyses focus on import leakage (part of the tourist consumption is imported goods) and factor income leakage (air companies, hotels, lodges and car rental firms are in many cases owned by foreigners). My focus is on savings in transactions costs. I will distinguish between three different consequences of ICT. Internet may lead to a reduction in distribution costs. Particular attention is devoted to whether the internet makes it possible for a service provider to reach the customer directly through marketing. Normally, consumers buy their tourist product through a travel agent in their respective home country. These agents receive a significant commission from the suppliers, but the commission varies between products. Through direct marketing the service provider saves distribution costs which in term may increase the market share and the retention of revenue. The second mechanism analysed is internet's impact on

competition. Under this heading, the question I raise is whether internet increases competition between intermediaries. My focus is on competition across global distribution systems (GDS). Increased competition may reduce connection fees, and make it more likely for an individual service provider to connect and thereby reach a larger market. The third mechanism is through internet's possibilities of marketing a common destination. The main question addressed is how co-operation between service providers can reduce distribution costs and exploit network externalities by creating destination portals.

While we know that online travel constitutes about 10% of the market in developed countries, we hardly know anything about the extent of ICT/E-commerce or the importance of intermediaries in developing countries.⁷ Statistical data is important in order to design strategies for tourism development, and I will illustrate the three questions raised with data from the Namibian tourist industry.

This paper is organised as follows. As a background for the analysis, section 2 elaborates on the information intensive character of the tourist product and discusses spillovers. Section 3 analyses the three mechanisms in which ICT may influence the supply chain in the tourist industry described above. Section 3.1 analyses conditions under which the service provider may substitute the travel agent. A particular emphasis has been devoted to the travel agent's role as a 'certifier' and a 'bundler' of goods. The two following sub-sections analyse the impact of ICT on competition between distributors and on co-operation among service providers respectively. Based on the critical variable defined in section 3, section 4 presents results from a survey among stakeholders in the tourist industry in Namibia. Section 5 concludes.

⁷ UNCTAD 2002b:7 provides an overview of available statistics, but no references are given to data from developing countries.

2 Tourism – an information intensive product

The following section elaborates on the characteristics of the tourist product as an information intensive bundle of goods. Then, I will proceed with a macro-perspective with a particular emphasis on spillovers on other sectors such as telecommunication, financial market and factor markets (skill formation) underlining the importance of complementary goods and services. In order to analyse the impact of ICT on the supply chain in the tourist industry, corresponding changes in complementary assets must be analysed.

2.1 Characteristics of the tourist product

Tourism is a composite service good geographically segmented across destinations. It includes accommodation, transport facilities (air transport and vehicles), activities (what tourists do during their stay), attractions and ancillary services (banking, telecommunications, hospitals). Factors such as the destination's security level, confidence and trust between the main actors and cultural identification (through bandwagon effects) are also important factors influencing the value of the tourist product. Of particular relevance in a Namibian context is wildlife and spectacular wilderness (Ashley, 1998; Brits and Wiig 1998).

Consumers do not value individual elements of the composite goods separately. There are for instance complementarities between some pair of individual goods. Scenery or wilderness and site-specific assets increase the value. Similarly, ancillary services and trust make it more attractive to be a tourist in a particular place. The consumer's choice of a particular tourist product is determined by the composite price of the bundle – not the price of the individual components. Tourists neither choose a particular destination because of its hotel facilities nor its site-specific assets such as its attractions, but rather because the combination of the bundle is attractive.

Tourism is an information intensive industry, particularly during the booking phase (UNCTAD 2001b) and when new tourist destinations are introduced. Producers and intermediaries try to earn the confidence of their customers through quality information. On delivery, tourism is labour and nature intensive. But also at

this stage, provision of information about local history and culture, influences the value of the product. Through tourism, people are exposed to different cultures, and informed tourism may change images of stereotypes (which to some extent also are information goods) which have impeded travel activities, trade and direct foreign investments.

To reach international tourists, suppliers need intermediaries such as travel agents and tour operators in order to obtain information and bundles of goods. Travel agents have traditionally taken care of these tasks by applying different computer reservation systems (CRS). During the 1980s, air companies' computer reservation systems became global distribution systems (GDS).

The travel agents and tour operators are also important certifiers of goods, which is of particular importance for new tourist destinations where consumers have no prior experience. In addition, there is a legal aspect that must be considered. Consumers may sue travel agents if they sell products that do not fulfil expected quality. It is more difficult to sue individual service suppliers in remote areas that lack a sound legal system. Inclusive tour charter is therefore a common way to travel to new tourist destinations.

The main mode of supply is movement of consumers – not producers which is more common for other service products. Similar to other service industries, foreign direct investments also play a significant role.

2.2 Spillovers

Tourism generates much employment worldwide. One of ten is employed by the tourist industry, and tourism is a significant sector for small and medium scale enterprises. Countries in the World Tourist Organisation are in the process of creating satellite accounts for the tourist sector. Such accounts make it possible to analyse the importance of tourism in a particular country and indirect impact on other sectors (indirect multipliers). Satellite accounts are generally not available for developing countries.

In Namibia, tourism plays an important role both in terms of employment and in terms of export, particularly for small and medium size enterprises (SMEs) located in remote areas of the country where diversification is needed. More than 20 000 are employed directly or indirectly in the tourist industry (see GON, 1997). The indirect multiplier is estimated to 0.7 although no input-output matrix is available.

From visitors surveys, it is estimated that airfare and accommodation constitute around 70% of the total package costs and that the local carrier Air Namibia serves half the travellers to Namibia. A similar pattern is found in developed countries.⁸

In addition to generating employment, tourism may also enhance a country's social capital through skill-formation. A positive service attitude, fluency in the language spoken by the tourists and a rating system of service providers may increase the quality of the product. Certain labour and quality standards are necessary in order to compete internationally. Such standards upgrade the quality of the staff and services provided not only in tourism but also in other sectors.

The composite character of tourism may also lead to more co-operation. Ashley (1998) found that tourism in communal areas stimulated co-operation between community members as well as co-operation across communities.

Many developing countries market tourism as scenery- or wildlife intensive, making it of utmost importance to preserve the wildlife. With a proper regulation regime, income from tourism may facilitate the conservation and investment in wildlife and habitat and sustain culture (Ashley, 1998 and 2000). Namibia for instance, is marketing its product as a 'wildlife product' and without a proper conservation policy, tourism would not be sustainable. The focus of this article, however, is that tourism is a complementary good with information and communication (ICT) technology and financial services. These services have spillover impact on the local communities as well as on the national level and may lead to economic growth. In OECD countries, Roller and Waverman (2001) found that ICT development stimulated economic growth through an increase in the total factor productivity. This result is disputed in a developing country context (see for instance Aochamub, Motinga and Stork 2002).⁹

A well developed telecommunication sector is a prerequisite for international communication and supply chain management, including the development of E-commerce. Without internet access, it is impossible to create web pages and effective dialogues with partners or customers. Customers will be faced with high search costs looking for tourist services in remote areas. With internet, they can be

⁸For instance, in Norway passenger transport service (bought in Norway) constitutes nearly one third of the total tourist consumption expenditure or 50% of the total tourism consumption of tourism product. But here food and beverage – not accommodation are the second most important expenditures constituting 20%.
(see http://www.ssb.no/english/subjects/09/01/turismesat_en/tab-2002-08-29-02-en.html)

only a click away. Also financial services (online banking facilitates or similar services) are needed to encourage E-commerce.

The tourist sector plays an important role in the demand of ICT services. Tourism is generally an ICT intensive industry both in terms of registered homepages, visitors and in terms of online trade. In fact, tourism (travel, transport and hotel reservation) is the single most important product bought online, and constitutes 38% of all online trade (UNCTAD, 2002). Tourism represents the product with the highest growth rate (40%) in e-transactions.¹⁰ According to the consultancy firm Forrester, more than 60 million households in the United States booked travel online during 2002, spending approximately 20 billion USD, constituting around 10% of the travel market. As measured by the total number of composite visitors, online travel agents and air companies were the third most important web-sites visited (after Yahoo, and AOL) in 2001¹¹ In addition to visiting homepages of online agents and air companies, there are more visitors to information resources such as Lonely Planet and MilesSource than visitors to hotels and rental cars.

⁹ Confer Andersen 2002 and Jacobsen 2002.

¹⁰ See <http://www.emarketer.com/news/article.php?1001794>

¹¹ http://www.top9.com/top99s/top99_web_sites.html. The last available figures are from March 2001.

3 The Internet and industry structure

Lower transaction and distribution costs through the internet may change the way the supply chain is managed, particularly the role played by intermediaries. In section 3.1, I will focus on how the Internet makes it possible to provide information services directly to the customers and thereby reduce the role of travel agents. In that section it is assumed that the number of GDS (or networks) and the number of firms connected to a network is given. Section 3.2 extends the analysis to discussions on how internet may influence competition between networks and the individual service providers' incentives to participate in these networks. Section 3.3 focuses on how service providers may co-operate by creating a particular type of network, the so called destination marketing portal.

3.1 Internet reduces the importance of the travel agent

The traditional structure of the supply chain in the tourist industry consists of consumers, travel agents, CRS suppliers and service providers. In addition, local and overseas tour operators operate as merchants. Consumers undertake private or business travel, which are two distinct market segments. Our focus is on the private tourist market. Customers differ according to their willingness to pay for the tourist bundle, their attitudes to risk and their computer skills. These are all factors assumed to influence the demand of tourist services and the choice of distribution channel. Consumers may either buy the tourist bundle directly through individual service providers or through intermediaries. Most interactions in the travel market are currently completed through intermediaries.

Travel agents and tour operators are both intermediaries who through their services facilitate the exchange of tourist services.¹² Traditionally, the travel agent is seen as a retailer and the tour operator a wholesaler. But this is only partly correct. To some extent, the tour operator and the traditional retailer play similar roles- both assume ownership of the product. Operators are remunerated through residual surplus (the difference between buying and selling prices). The travel agent on the other hand, is a broker and does not own the product, and is not faced with the risk

of perishable products. The travel agent is remunerated by commission. Both agents provide information services about the supply and demand structure for a bundle of individual products compromising the composite good of tourism. In addition to bundling, these intermediaries also serve as certifiers (guaranteeing quality and payment).¹³ In the following, I will restrict the analysis to the travel agents since they as brokers are expected to be challenged the most by the new technology.

Consumers do not have direct access to a network of information services, while travel agents do through their connections to CRS or GDS. Travel agents can use many GDS, but normally use only one or two. Since each system requires a specific technology and the travel agents normally get a discount after a certain volume of reservations, agents prefer to apply only a few GDS. Travel agents make requests regarding connections, availability of seats, hotels etc through their network of information services, e.g. through a CRS or GDS. For an individual service supplier to be selected, the supplier needs either to have a direct contact with the travel agent, some system of electronic data interchange (EDI) or to be connected to a GDS.

Figure 1 reflects how orders are placed and money transactions made in the traditional industry structure. While the travel agent is the customer of a GDS and pays for its services, the travel agent gets commissions from the individual service suppliers. Individual service providers normally pay two part tariffs to GDS (a connection fee and a fee per segment or transaction).

**>>>>Figure 1: The traditional pattern of the travel industry.
(to be placed here, see attached file)**

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The internet has introduced new distribution channels. Services may be offered directly to the customers either by the individual service provider on a home page or

¹² See Spulber (1996) for an overview of the theory of intermediaries.

¹³ Intermediaries also provide insurance and liquidity, and facilitate logistic management (Brousseau, 2002; Spulber 1999).

by 'virtual travel agencies' providing information through the network.¹⁴ Consumers may access information by searching the internet and respond interactively, if full-fledged E-commerce solutions are available. The travel agent is therefore challenged both by direct contact between the consumer and the service supplier, and by virtual travel agencies. The increased pressure from suppliers is illustrated by air companies' recent moves to reduce the commissions paid to travel agents.

In figure 2, below, I have sketched the supply chain (without the travel agent) including electronic intermediaries. In the figure, a distinction is made between four types of virtual agencies. These are portals connected to existing GDS, other virtual travel agents, travel portals of a group of individual service providers (air companies) and national portals created at particular destinations. In this section, I will focus on the first category only, emphasising a situation where competition between existing electronic intermediaries is unchanged, but services can be offered through the internet. The alternative online option is direct marketing (which may be termed the fragmented solution). In the following section, I will discuss competition across networks.

The internet has made it possible to make global distribution networks accessible for customers on the internet, as SABRE has done by establishing Travelocity. Whether electronic intermediaries will take over the role played by traditional travel agents, depends on whether electronic intermediaries are able to provide the same services at competitive prices, in terms of information, bundling and trust. The cost of providing information is low, since the only difference is that information which was previously provided by GDS systems is now made available on the internet by the same agents. A likely implication is thus that virtual travel agencies are able to provide information efficiently. Information goods have low marginal costs, the cost of bundling is low, and virtual agencies are able to exploit this (confer section 3.2 for an elaboration). Regarding trust, GDS already has a reputation in the market which they exploit through the creation of virtual agencies.

It is less likely that the possibility of direct contact between consumers and service suppliers will have an equally large effect on the industry. The customer is then faced with prohibitive search costs, ineffective bundling and trust deficiency. This is particularly true when it comes to small individual service suppliers in

¹⁴ Travel agencies have also developed online booking systems, but these are still connected to GDS. Travel agents are also using internet for information seeking (and thereby bypassing GDS). There are

developing countries- not for large reputable air companies. The importance of trust generally increases with distance, particularly for differentiated goods.¹⁵ Small service providers do not have a trustful reputation and will still need some type of intermediaries.¹⁶ The fragmented organisation of the supply chain is most likely to benefit a particular market segment, rather than spur an overall growth in the market. Service providers will reach risk-loving, high skilled (computer literate) but low income backpackers with low search costs. High skilled free independent travellers with higher income and search costs also represent an increasing market potential although this market constitute a tiny share of the overall tourist market.

More generally, online travel markets may be expected to have the greatest prospects in markets where:

- consumers have credible information about the quality of service providers, some system of warranties is provided and consumers are not too risk averse.
- money transactions are secure
- consumers and suppliers are computer literate
- distribution costs are high
- technology is convenient (e-tickets can be applied) and facilitates bundling of goods. For the supplier bundling reduces price competition, but for the consumer bundling increases variety. As far as consumers have preferences for bundling, they can trade off a higher price for a better match.

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Figure 2 Internet access may facilitate disintermediation in the travel industry.
(to be placed around here, see attached file)

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also developed WEB based specific searching engines of the lowest priced fares.

¹⁵ Sandelien 2003 provides an overview of the literature on the relationship between distance, trust and trade.

¹⁶ See for instance Goldstein and O'Connor (2000).

In both cases of online travel discussed above, however, the role of travel agents will be reduced. The potential exclusion of traditional intermediaries may reduce transaction costs, and if so, service suppliers may acquire a higher share of the value added. Being a small provider of tourist services, it is unlikely that Namibia will benefit greatly from this (although individuals with an established reputation may benefit). The importance of building trust and confidence could be even more important for information intensive goods, partly since marketing on internet has a low cost, making it less likely to separate firms. Goldstein and Connor (2000:28) claim that branding is important in order to develop E-Commerce.

The effect of internet might be greater if competition between virtual agencies reduce the cost of being connected to a network and individual service providers co-operate. These are discussed in the subsequent sub-sections.

3.2The internet may increase service providers' participation in networks

In this section, I will analyse competition between GDS. A GDS may offer a wider range of products than a CRS as it subsumes different CRS. There are currently four major world-wide GDSs: Sabre, Amadeus, Galileo, and Wordspan. Sabre is the largest, particularly in the United States. In Europe, Amadeus is the largest, with a market share of approximately 60%.¹⁷

My main point of departure is that these distribution systems have market power and price their services in a prohibitive way from the perspective of an individual service provider in developing countries. Tourist suppliers in developing countries are therefore generally not connected to such systems. Connecting a network is crucial for reaching a larger market. The question I raise is whether internet may change competition between GDS and thereby induce participation from firms in developing countries. There are at least three mechanisms at work. First, competition will increase from firms that sell their products online (confer section 3.1 above). There are two main groups of such firms. No-frills carriers such as Ryanair sell their services outside existing GDS only. In addition, many reputable service providers are both selling through GDS and directly to customers. The pressure from individual service providers may drive down booking fees.¹⁸ If not, GDS will not be able to exploit their network externalities. A network externality is characterised by a situation where the value of participation of one user is increased when other users join and enlarge the network. If important service providers disconnect, GDS will face negative externalities. Second, competition will increase due to lower switching costs across GDS. Switching costs arise when an agent is locked-in to a particular technology and it is costly to change to a new system, say GDS. Internet makes it less costly for consumers to change to a new system. Third, one may at the same time risk that the pressure on GDS from important vendors undertaking direct marketing may be passed on to service providers that do not have similar outside options (say small service providers in developing countries). GDS

¹⁷ Galileo is the second most important with a market share of 22% as measured in terms of number of travel agencies having access to the system (see Buhalis, 1998; WTO, 1998:8).

¹⁸ At a recent international travel conference in May 2003, representatives of GDS have acknowledged that fees will be reduced. <http://www.travelmole.com/cgi-bin/item.cgi?id=97802&d=101&h=303&f=304&dateformat=%o-%B>

are facing financial problems because airlines try to save distribution costs by circumventing their services, leading to exit mechanism of small GDS.¹⁹ Without diversifying GDS services, one may risk that some service providers will face higher fees. Individual service providers may also face tougher price competition due to internet. In the following I will focus on the two first mechanisms, and my point of departure is the literature on network externalities and switching costs. (Katz and Shapiro, 1985; 1994; Farrell and Saloner, 1985; Shapiro and Varian 1999, Economides 1996).

With network externalities, consumers willingness to pay increase with the total number of units sold. A traditional GDS is characterised by three types of network externalities:

- i) *Economies of scope*. The GDS system enhances the possibilities of exploiting the complementarities between goods and saving distribution costs. The technical booking system is applicable to more than one good. The aggregate costs of providing a number of different goods are therefore lower than the sum of individual components. GDS provide a number of different information goods such as information of prices of air tickets, hotels, cars etc each of which have low marginal costs. Bundling is an appropriate way of exploiting economics of scope due to technological complementarities in production, distribution or consumption (Bakos and Brynjolfsson, 2000).
- ii) *Matching*. As more service providers are connected, more goods are available, facilitating the match of a given number of consumers with service providers. As more service providers are connected, more customers will use the network.
- iii) *Economies of scale*. The more service providers connected, the lower the fixed cost per unit (average costs). The network is characterised by high fixed costs and low variable costs. To some extent fees reflect this cost structure. Service providers pay a (variable) fee per segment/ticket/booking. In addition there is a fixed fee for being connected to the network. Higher participation may lower fees and thereby induce entry.

¹⁹ Wordspan was just recently sold because of financial problems.

Markets with network externalities are generally characterised by imperfect competition. This has also traditionally been the case with GDS as revealed by the *geographically segmentation of the markets and concentration indices* (see Box 1 for an overview of the anticompetitive mechanism applied by the GDS owning firms). GDS has a significantly higher market share in the country where the founder airlines operate than in other countries, and a few GDS dominates the market (see above).²⁰

▲ ----- Box 1. GDS and competition

The airline industry was among the earliest industries to explore the use of ICT through a privately-owned network of services. Electronic data interchange allowed the network participants to control, promote and sell their product globally. The network was called a computer reservation system (CRS) and refers to computerized systems containing information about carriers' schedules, availability, fares and fare rules, from which reservations can be made and tickets issued (WTO, 1998:4). Pemberton et al. (2001) distinguish between three phases in the development of the CRS and claim that the owning (airline) firms have kept their competitive advantage during all phases.

Initially only the big airlines developed *internal seat inventory* systems. Smaller air companies contracted out their seat inventory and reservation functions to carriers having CRS. At this stage, owning carriers had a competitive advantage because of effective operational management of internal activities. During the second phase, CRS owners allowed other airlines to display information on their systems. For the owners, investments in CRS was sunk while non-owning companies were charged booking fees. In addition to lower rates, owners also had a competitive advantage by restricting fares and inventory from competing CRS. One way of restricting fares was through the so called *screen display bias*. When searching, systems were calibrated in such a way that parent company flights appeared before those of the competitor. Screen display bias was later prohibited by regulations, although some countries have made MFN exemptions for CRSs (see WTO, 1998:10). The third phase of CRS development took place in the 1990s, when different CRS were linked to each other through strategic alliances and partnerships and created global distribution systems (GDS). Tour operators, travel agents, car companies, hotels and accommodation were also linked to these GDS, making it easier for owners to control the whole value chain. During the third phase "control, dissemination and manipulation of CRS data played a vital role in sustaining competitive advantage for CRS-owning companies" (Pemberton et al. 2001).

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²⁰ For Amadeus, the three founder airlines Air France, Iberia and Lufhansa control 60% of the shares while Amadeus' market share in its founder countries is nearly 90%.

The internet represents a new phase in the development of GDS, allowing consumers direct access through the internet to a CRS or GDS. GDSs are adapting to this new reality by applying multi channel distribution strategies. Sabre has introduced Travelocity. Galileo has acquired Trip Com. Amadeus takes stake in Opodo and E-travel. In addition to previous actors adapting their strategies, new actors with a background in communication services have entered the scene. Microsoft has, for instance, created Expedia, an online booking facility. Expedia and Travelocity are the largest online travel agents covering more than 50% of the online trading market.

The new virtual agents mentioned above use existing platforms of GDS (as Expedia is connected to the Wordspan system and Travelocity is connected to the Sabre system). For instance, Travelocity only provide information about service providers connected to the SABRE system. These ‘agents’ therefore continue the role of the traditional travel agents, rather than substituting GDS. They are not only dependent on the services provided by GDS, but also on the services provided by the traditional travel agents. So far, they need travel agents to issue tickets and in many cases to take care of financial arrangements. Virtual travel agencies are therefore national in scope. More generally, the provision of travel agency services online is not very different from the provision of travel agency services by traditional ‘brick and mortar’ travel agencies. From the demand side, customer may easily switch between virtual and traditional travel agencies. From the supply side, traditional travel agencies are able to switch to virtual agencies and vice versa.²¹ Regarding GDS, they may easily switch to virtual trade agencies.

To some extent, the close relationship between air companies and GDS is challenged, and the capital structure is changing. Sabre was separated from American Airlines in 2000 and Galileo was acquired in 2001 by Cendant Corporation, a vertical integrated multinational providing all types of travel services.²² GDSs become public, and discriminate less against non-owning carriers. Yet, GDS has not become less concentrated.

GDS has been accused of being discriminatory. The large virtual travel providers have met the same accusation. The market is characterised by vertical

²¹ The competitive assessment applied in this paragraph is in line with the approach taken by the European Community. See for instance The Commission of the European Communities. Case No COMP/M.2794-Amadeus/ggl/jv 21.05 2002:3

²² Avis is for instance owned by Cendant.

restraints such as exclusive dealing, for instance American provided Web-only fares to Travelocity, and not to Expedia, who did not agree to cut fees. Expedia on their side stopped selling Northwest Airlines for some weeks because the airline wanted lower fees. According to Forrester Research, Expedia tends to favour carriers with which it has marketing arrangement.²³

Virtual travel agencies and traditional GDS have the same type of *network externalities*. The same service providers are connected, the same bundling possibilities are available, but operational cost may be lower for virtual travel agencies. These network externalities are all mechanisms that have been available in the pre-internet era, and it is an open question whether the above discussed virtual networks will influence them in any way. The main difference is that the consumer to some extent substitutes the travel agent and bundles and matches the product himself. To enhance consumers' trust in all types of online travel (confer section 2.1), improved legislation is a prerequisite.

Individual service providers try to bypass GDS by creating their own portals that are not connected to a GDS. Four American air companies have for instance introduced Orbitz, and SAS has introduced online booking facilities which are not connected to any particular GDS. By creating Orbitz, the American air companies could bypass traditional GDS without being subject to mandatory participation in other distribution systems.²⁴

For these new actors to be viable, bundling possibilities and trust seem essential. During the current internet phase, consumers mainly bundle online on the web page of a virtual travel agency (build-your-own package) or combine individual homepages (say SAS and AVIS).

Individual service suppliers with a customer base and brand name represent a serious threat to GDS, particularly when customers have low bundling costs or low bundling preferences (as independent travellers). In addition, internet has probably reduced the costs of running a GDS or virtual network. More important, internet has

²³ Quoted from Michael Shapiro, The sum of all fares. Washington Post, July 28, 2002.

²⁴ Galileo claims that Orbitz discriminates.

http://www.cendant.com/media/pr/press_release.cgi/Travel+Distribution+Services/10982.

In United States, 'mandatory participation' has been required up to now. This means that air companies owning a CRS also should participate in other CRS. Through this participation, it is expected that air companies' make competitive offers at any CRS.

a greater potential impact on the switching costs between systems. Internet has increased the compatibility between different online systems. Customers may switch from one online network to another with just a click, reducing the lock-in mechanisms characterised by previous GDS systems. The entry of new virtual travel agencies, particularly agents which are not connected to traditional GDS, increase competition not because of a reduction in network externalities, but due to a reduction in switching costs. Each GDS has its own individual technological platform that requires specific investments in skill and capital (for instance in accounting and booking systems), and subsequently high switching costs for the travel agents. Internet provides a more general technological platform and may therefore stimulate competition among the GDS and between GDS and individual service providers. If so, connection prices will decrease and the incentives to participate in networks increase.

At the same time, the main new market players are actually not new. As shown above, reputable firms are behind the new type of networks and GDS suppliers still control the market for electronic intermediaries. In markets with network externalities such reputation can be self-perpetuating leading to increased concentration. The extent of vertical restraints also indicate that competition could be stiffer. In spite of these problems, it is reasonable to expect that the cost of connecting a network will decrease and that will lead to increased participation both in traditional and new virtual distribution systems. Connection to a network is of utmost importance to reach a larger market and to exploit complementarities between goods. Saying this, apart from reaching a larger market, one needs to bear in mind that consumers may gain through a reduction in prices due to lower distribution costs while individual service providers are faced with stiffer competition.

3.3 Destination marketing

UNCTAD devotes particular attention to one 'virtual' network and suggests that developing countries should create destination marketing organisation co-ordinating individual initiatives.²⁵ However, UNCTAD hardly discusses requirements that need to be fulfilled if these organisations could substitute the role of the travel agent, and whether governments should play a role. Proper standard settings, co-operation between individual service providers and the government are elements in such a strategy. Let me finalise this section with some comments on destination marketing in light of the discussions in the previous sections. To facilitate a destination marketing portal, there are at least three reasons for government intervention:

- Direct network externalities. A portal has the same type of network externalities as described in section 3.2 (economics of scope, matching and economics of scale), but may be controlled by the individual service providers rather than by GDS or their virtual substitutes. These externalities lead to co-ordination failures. An agent does not take into account that his connection to a network increases the value of the network.
- Public goods and information failures. The branding of a tourist destination, infrastructure and 'wildlife' are to some extent public goods and need government support. The same apply to the concept of trust, at least the type of trust which can be influenced by the government. I have in section 3.1 discussed the importance of trust. Without trust, people will not book online. Tourists do not have accurate information (confer section 2.1). The government should therefore control or guarantee the information provided through for example proper standard settings, dispute resolution mechanisms and secure financial transaction systems.. Otherwise one risks that 'lemons' skim the cream of the marketing milk of a particular destination.
- Complementarities and spillovers between pairs of tourist goods or across services (roads and air transport increase the value of accommodation). ICT investment facilitates communication and financial services facilitate online trading (confer section 2.2). Developing a booking system also requires the development of a telecommunication sector for communication and a financial sector for providing online trading. Tourism policy needs to

develop in unison complementary assets such as telecommunication, financial intermediation, trust and bundling facilities.

These market imperfections have led to market failures in the supply chain, and represent challenges for governments at any particular destination. Some parts of the tourist industry (particularly downstream towards CRS) is rather concentrated (see section 3.2).

As discussed in section 3.1, the travel agent is of particular importance in order to provide information and to bundle goods (facilitate ‘one stop shopping’). When the number of potential products are reduced (e.g., a few service providers from one country), it is easier to establish independent portals competing with the traditional intermediaries. As argued in section 3.1, small individual service providers will generally not succeed with individual web-based solutions only, due to high search costs and low reputation. Co-operation between firms through a network or portal is an alternative strategy. The establishment of a common portal for graded tourist resorts may reduce consumers’ search costs and may lead to increased revenue for individual service providers. But the other side of the coin is that a new destination portal does not have existing customers and needs to build up a new clientel.

A new portal needs a booking engine for the individual service providers connected, links to information sites (to provide information), links to air companies (facilitate bundling), some sort of arrangements for financial transactions, including mechanisms for dispute settlements and electronic signatures. A portal needs to signal that its services are trustful. Such a portal needs, furthermore, to connect to a number of search engines, otherwise consumers will not be connected.

²⁵ See also WTO 1999

4 Tourism in Namibia

The following section provides an overview of the tourist industry in Namibia based on secondary data and data from field trips to Namibia (in June and November 2001). Based on the theoretical approach in section 3, the main purpose of this section is to illustrate some main challenges faced by the tourist industry in one particular developing country, Namibia, due to the rising importance of ICT. Namibia is of particularly interest since the tourism potential is great. In addition, Namibia is a middle-income country with a well developed telecommunication and financial sector, making it easier to exploit the opportunities created by internet than in many other developing countries without these complementary assets. To some extent therefore it serves as a test case for whether ‘the new economy’ makes a difference for tourism in developing countries.

I conducted 15 structured interviews with some of the main stakeholders in the tourist industry such as lodges, hotels and air companies,²⁶ tour operators, traditional travel agents and new ‘virtual’ agents. In addition, I interviewed representatives from the Government and from the ICT industry. The interviews were not representative in terms of the population. The selection of firms is biased. I preferred to interview the largest tour operators and the largest hotels because I expected them to use ICT (through WEB pages, E-commerce or booking system) more intensively than other agents in the sector and thereby could more easily create direct links to the customers. As a comparison, I interviewed some local community-based organisations which served as network organisations for small tourist firms. I was particularly interested in responses on questions along the same dimensions as analysed in section 3.

- The current importance of the travel agents and the structure of the supply chain. What roles are currently played by the intermediaries, including the size of the market and incentive structures between the actors involved?
- Do the firms face any problems with their access to GDS and how have firms adopted ICT in general and as a marketing device in particular. Have firms developed

²⁶ Air Namibia was the only air company willing to respond to my questionnaire

E-commerce solutions and if not, the type of bottlenecks have the agents experienced?

How are service providers communicating trust to their customers?

- Private and public initiatives taken toward co-operation, e.g. common platforms and the creation of a destination-marketing organisation.

Primary data will be presented in sections 4.1-4.3 emphasising the importance of intermediaries, agents' adoption of ICT and the government's role in tourism and ICT policy. First, however, I will present some background material.

Tourism is the third most important sector in Namibia and its contribution to GDP is around 7%. It is by far the most important commercial service exporter (92% of Namibia's commercial services are in tourism). Namibia had 861 000 tourist arrivals in 2001 with a tourism expenditure of approximately USD 300 millions (in 1998).²⁷

Namibia participates in the World Tourism Organization and in regional tourist organisations such as RETOSA (part of SADC). As a member of SADC, Namibia allows free establishment for SADC registered companies in Namibia. During the GATS negotiation, Namibia is in fact the only SADC country without any limitations on foreign suppliers of tourism services.

Namibia's market share in Africa is one tenth of South Africa's, the largest tourist destination in Africa. Tunisia and Morocco also have significantly higher market shares in Africa than Namibia.²⁸ But Namibia scores higher than Tanzania (the most important tourist destinations among LDCs). On average Namibia has experienced a 12% annual growth rate in tourism from 1995 to 1998 (WTOa, 2000). Although Namibia is a significant tourist destination in Africa, Africa accounts for only 4% of the tourist arrivals or 2.3% of the international tourism receipt (WTO, 2000b).

There are several explanations for Namibia's growth. Increased consumer income in developed countries and an increased awareness of and preferences for new and (exotic) tourist destinations are relevant factors.²⁹ Increased knowledge of foreign destinations and political stability in Namibia have spurred this growth.³⁰ The tourist industry is characterised by product cycles where new tourist

²⁷ WTO 2001; World Bank 2003:353

²⁸ For an overview of Tourism in Africa, see Christie and Cromton (2001).

²⁹ According to Denstadlie and Hjorthol (2002:73), overseas travel significantly increase with income, education and age (up to 66 years). Long haul travelling has therefore increased during recent years. Other countries have similar findings (for instance Germany see WTOb 2000:1699).

destinations regularly substitute traditional destinations. We see that destinations in developing countries have started to compete with traditional tourist resorts located in the Mediterranean such as Turkey, particularly if these new destinations are perceived to be safer than traditional tourist destination such as Turkey and Egypt. Namibia is an example of this. The growth is also a result of the globalisation process where service trade increases. Globalisation leads to an increase in business travel, which in turn leads to the expansion of leisure and personal tourism which may feed back on trade and investment. An increase in service trade increases tourism, particularly for sectors where the movement of individuals represents the main mode of supply. This is of particular importance for intra-regional tourist e.g. business people from South Africa delivering services to Namibia.

The market is segmented between three different categories of international tourist. Visitors from South Africa (39.1%), Angola (30.3%) and Germany (10.5%) are the most important (in terms of tourist arrivals). Tourist arrivals from countries outside Africa increased annually by approximately 20% during the 1990s which is higher than the overall growth rate (12%). The growth rate has been highest for the richest income groups. The relative importance of intra-regional tourism is similar in South Africa and Namibia, and more important than in Kenya where inter-regional tourism plays a more significant role. The travel pattern and the reasons for travelling differ between these categories. Four out of five tourists travel for leisure, but the share of business travel is higher for African residents.

According to WTO (2000a), by 2020 more people will visit Namibia than the size of its population. WTO claims that the tourism growth in Namibia will be higher than in the rest of Africa if Namibia maintains its conservation programmes.

4.1 Travel agents

For the big Namibian hotels, the tour operators located in Namibia and for Namibia Wildlife resorts (covering all accommodation in national parks in Namibia), between 60-80% of bookings currently go through intermediaries, mainly located in the importing countries. For Air Namibia, the share is even higher. The commission rate varies between 9% for the local air carrier and 35-40% for the largest hotels and packages provided by local tour operators. These figures only relate to commission. Adding marketing costs, and the costs of being connected to a GDS, the distribution

³⁰ Terrorist attacks, war and SARS have changed this, particularly for countries in Northern Africa

costs are quite high. For the local air carrier it constitutes an additional 10%. The distribution costs for the local service providers therefore vary between 20-50% of the consumer price.

4.2 GDS, adaption of ICT and E-commerce

Apart from Air Namibia, the biggest tour operators and hotels, other service providers, were not connected to a GDS (Galileo and Amadeus in particular), mainly because their market base was too low to cover the fixed costs. Instead, operators had connections to agents overseas. So far, the establishment of virtual travel suppliers has not influenced the individual firm's incentive (at least not in Namibia) to participate in networks whether it is a GDS or an online global travel network. Generally, suppliers do not participate..

Apart from community-based tourist resorts located in remote areas without access to telecommunication facilities, and National Resorts in national parks, most firms interviewed had created their own homepages. Out of registered domain names (in Namibia under the .na name), around 20% relate to tourism, but we do not know how many tourist sites are registered under the .com and under the .de (Germany) domain name. Many businesses put up web pages to protect their trademarks. Web hosting is cheap (less than USD 100 a month).³¹

Yet, few had online booking facilities and none had an E-commerce solution. E-commerce is a prerequisite for bypassing the intermediaries. The combination of online (through e-mail) booking and payment confirmation by fax was widely used. The most important bottleneck for E-commerce was found to be insecure financial transactions. Although the same banks operate in Namibia and South Africa and E-commerce solutions are available in South Africa, such is not yet the case in Namibia. The financial sector is, however, implementing systems which may facilitate the development of E-commerce. Meanwhile, financial transactions are completed through intermediaries located in South Africa or by fax. It was also claimed that the country has not yet approved privacy laws and copyright protection which are essential in order to secure trust for individuals searching on the homepages of individual firms. In fact, firms could misuse their information by tracking individuals who have visited their homepages.

and Asia.

³¹ I thank Ben Fuller for providing me with this information

Namibia has not yet an approved ICT strategy or tourism policy (only draft policy documents). It is noteworthy that the current tourism policy does not address how ICT technology may facilitate an increase in the retention of revenue. When discussing the retention issue, the Government rather focuses on ownership and leakage issues. Electronic signatures, infrastructure security, privacy and data protection laws and online dispute resolution (e.g. online handling of financial claims or complaints) are important bottlenecks for the development of E-commerce and the saving of distribution costs in tourism. Still, the question of increased confidence, security and trust through laws or regulations are hardly discussed in the tourism policy.

4.3 Portals and tourist policy

Few initiatives had been taken to create portals for the whole industry. At the time of my visit, the Government had not implemented any measures to create a marketing destination organisation. A booking system for national parks has recently been created (<http://www.namibiareervations.com/namibiawildliferesorts.html>). Some had, however, been connected to new private travel portals such as <http://www.travelinnamibia.com/>.

As few government initiatives had been taken towards an ICT policy, such was also the case for Namibia's tourism policy. Endless discussion without any agreement on how the Tourist Board should be financed and on the appointment of a chairperson led to a paralysed Board. Without any financial support, the Board could not initiate any activities such as marketing campaigns or standardisations of individual service providers.³²

Although the tourism policy recognises the government's role as co-ordinating the private sector and the financial institutions, co-ordination of marketing strategies is hardly mentioned apart from the establishment of a National Tourist Board. Co-operation between the Government and individual service providers has up to now been very difficult. The tourism Board has now come on-stream, increasing these possibilities, although its 1.5 million USD budget is extremely low. Its primary objective is marketing the country as a tourist destination. Branding Namibia has up to now been very elaborating. The Board has created a new logo and is in the process of introducing a whole new marketing strategy. An Act of Parliament made

³² The Namibia Tourism Board seems recently to have come on stream.

provision for tourist levies to finance the Board. The levies were proposed to be charged on business turnovers, but is now rather to be charged on tourists' bills (15%).

The tourist policy recognises the need to raise the level of its marketing expenditure, particularly in its key markets in Europe, and in certain developed markets throughout the world, but barely discusses how the Government may support marketing campaigns.

5 Conclusion

Tourism is a service sector with untapped potential for developing countries. In this article I highlight the specific character of tourism as a bundle of complementary information goods. Tourism is an ICT- intensive sector with spillover impact on other sectors. The main question addressed here is whether ICT, particularly internet, changes the traditional structure of the supply chain and thus opens up new possibilities for tourist suppliers in developing countries. Data from Namibia is used to illustrate some of the theoretical findings.

The internet facilitates direct access to the customer. Reduction in distribution costs is of particular importance for the South. Today, intermediaries overseas certify and bundle the tourist product. I argue that without certification and the ability to bundle goods, it is unlikely that the producers of tourism will be able to bypass the intermediaries located overseas without reducing the value of the product. While SAS may succeed with online direct marketing, a small provider in Namibia will probably fail. Accordingly, I find that the introduction of ICT in the tourist sector underscores the importance of market certifiers. Certification is needed, although new institutions may do it.

Direct marketing may lead to a reduction in the existing client base. At the same time, internet will stimulate groups of tourists with low search costs and low certification demands (such as backpackers or independent travellers), but they will not exploit complementarities between tourist products since bundling possibilities are weak.

Until new technological standards are available, I also dispute that new virtual travel agencies such as Expedia will increase competition between GDS and thereby reduce the service provider's costs of being connected to the network. Rather, these firms compete with travel agencies- not with GDS since they generally use existing GDS booking engines and technological platforms.

Consumers' switching costs will, however, reduce. Another GDS is just a click away. Competition will increase when new virtual agencies or reputable individual suppliers (such as air companies) market online (outside existing GDS platforms). I conclude that fees will be reduced, making it more likely for service

suppliers to connect and reach a larger market. At the same time, the individual service providers, will be faced with higher price competition.

In order to reach a larger market and to exploit complementarities between products in the tourist bundle, I argue that individual service providers need to connect to a network. Currently, Namibian service providers are generally not connected to a GDS. The establishment of virtual travel portals in Namibia has not changed this yet.

Establishing a common marketing destination portal is a way to exploit network externalities and build trust, and thus, a mechanism to promote the tourist industry. In fact, the industry itself or representatives from the business community have initiated some portals, and the Namibian government is currently seeking to establish a marketing destination organisation. By the creation of a marketing destination organisation, one may explicitly feature that the introduction of ICT does not change the vendor's individual gain from bypassing the travel agent. Tourist suppliers in Namibia therefore need to co-operate in order to achieve disintermediation. Such efforts may increase the profit from tourism in the internet age. The major structural changes of the industry are probably still yet to come.

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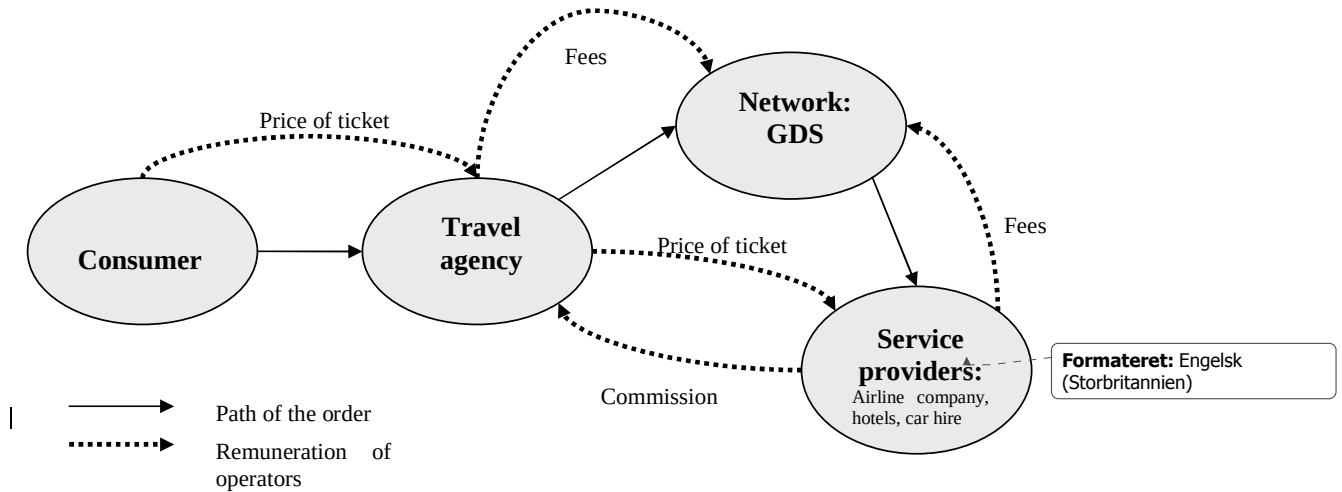
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Figure 1: The traditional pattern of the travel industry



Adapted from WTO, 1998

Figure 2: Internet access may facilitate disintermediation in the travel industry

