TWO METHODOLOGICAL APPROACHES TO THE STUDY OF PRODUCTION CHAINS IN TOURISM INDUSTRY

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Abstract

In this article, two different methodological frameworks are applied to study the production chains in the tourism industry in Andalusia (Spain). Firstly, from a macroeconomic perspective, input-output techniques are used to identify tourism production chains from the regional input-output table. Secondly, from a microeconomic perspective, a different approach is taken based on the concept of Global Value Chains (GVC) (Gereffi 1999; Kaplinsky and Readman 2001). In this respect, the structure and main agents participating in the GVC in tourism are presented, and the role of SMEs in the tourist industry in Andalusia is put forward. Finally, the relationship between the two approaches is discussed, pointing out their main differences and complementing factors.

Key words: input-output; global value chains; SMEs; tourism.

INTRODUCTION

The idea of visualising production processes by sequencing them into production chains has its origin in the Austrian School in Economics. Later the concept of '*filière*' was also coined by the French school to refer the flow of raw materials and services needed in the production of a good or service. In this respect, input-output techniques and accounts pose a powerful methodological approach to delimitate and study the structure of production chains. From this perspective, some sectors find themselves in the initial positions of the production chains, while others are in later stages. However, even though production chains are usually presented as a linear causal relationship, there are numerous feed-back effects along the chain. Thus, the extensive input-output literature focuses on quantitative technical relationships, trying to establish input-output linkages between sectors and estimate local multipliers (for a review of

the situation and perspectives of input-output analysis, see Lahr and Dietzenbacher 2001). Specifically, input-output techniques have been also applied to study production chains in tourism and to measure the total effect –direct and indirect- of tourism activity on national and regional economies (for instance, Fletcher 1989; Briassoulis 1991; Archer and Fletcher 1996; Andrew 1997).

More recently, from a microeconomic perspective, a new approach to the study of production chains based on the concept of Global Value Chains (GVC) has emerged. Value Chain could be defined as the set of activities required to transform raw materials into finished production and to sell them. It includes all the activities comprised from the very conception of the product, going through production and marketing, to distribution and even disposal or recycling after use (Kaplinsky and Morris 2001). The essential idea in value chains is that each link adds value to the product (Gereffi 1999; Kaplinsky and Readman 2001; UNIDO 2002). In reality, however, there usually is a large number of links in each value chain. Nowadays, it is very rare for a single firm to perform all the activities needed from the conception of the product to final delivery to the consumer. Moreover, the different activities comprised in each value chain are frequently carried out by firms located in different countries. Thus, the concept of GVC stresses the fact that value chains nowadays are organized across the world as a consequence of a process of fragmentation (Arndt and Kierzkowski 2001). In this way, traditional production process has split into different blocks which are performed in different places. As a result, coordination of activities becomes a crucial issue.

It is important to stress that this concept is different from Porter's (1985) 'value chain', which is a basic tool for firm analysis. Porter tries to systematically explore all the activities performed *within* the firm, and their interactions. The final objective is to identify sources of competitive advantages, which cannot be appreciated looking at the firm as a whole. Porter's value chain splits the firm into strategic activities, to understand both the evolution of costs and the existing and potential sources of differentiation. It is made up of all the activities generating value added (*value activities*) and the margins, and, therefore, it gathers all the *firm* value. The concept of GVC, however, comprises more than the relationships established within the firm. Even vertical integrated multinational corporations with subsidiaries in several countries cannot carry out the whole production process themselves; they require as well some inputs provided by other large companies or small and medium-sized enterprises (SMEs). GVC analysis is interested in the full set of activities included in the value chain of a product, considering specifically the relationships between the different agents (large enterprises, SMEs, etc.) participating in the value chain. The concept and methodology of GVC is mainly being applied to study industrial activities (Schmitz 1995 and 1999; Gereffi 1999; Humphrey and Schmitz 2000, 2002; Rabellotti 2004), but there are only a few attempts to use it to analyse the tourist sector (see Clancy 1998 and 2002).

During the last few years, the tourism industry has faced a number of unprecedented challenges. At a global level, the industry has shown its resilience to external shocks. However, at regional or local levels, the effects have been more serious. Tourism organizations, such as WTTC, indicate that these international events have accelerated changes which were taking place since the early nineties due to the globalization process. The role of SMEs as traditional partners, suppliers or distributors of large firms would have been deeply affected (Smeral 1998). The tourism industry has a dual character. On the one hand, a relatively small set of large multinationals exerts great power on the global tourism market. On the other hand, large numbers of SMEs play a significant and growing role in this sector. This increasingly competitive environment makes the whole tourism industry -but especially SMEs- faces a large number of challenges (OECD 2005). In this context, the OECD has started a study on 'The Role of SMEs in the Global Tourism Industry', within the larger research project 'Enhancing the Role of SMEs in Global Value Chains'. The aim of project was to identify what practices could be considered adequate for the SMEs to be successful within the globalisation framework via the optimising of their participation in the GVCs (OECD 2005, 2006; Guzmán *et al.* 2006).

In this paper, the complementing factors and differences between input-output and GVC approaches to study production chains will be addressed. In order to do it, the production/value chains of the tourism industry in Andalusia will be analysed from both perspectives. Andalusia, a region located in the south of Spain, is an important international destination. In terms of receptive tourism, it is equivalent to Thailand, while more than doubles other well known destinations such as Cuba, Dominican Republic, or Argentina (Aurioles *et al.* 2001). During 2005, a total of 23,6 million tourists visited the region, according to the Andalusian tourism survey (Instituto de Estadística de Andalucía 1995) 60% of them were Spanish, whereas the remaining 40% were foreigners. To meet that tourism demand, the Andalusian economy has produced goods and services valued in €12.5 million (SAETA 2006). Tourism has become the most significant industry in the region, contributing 11% to GDP. This production generates important effects on other activities, both direct and indirect. In 2005, it has been estimated in €18,913 million, with 66% being direct effects and the remaining 33% being indirect ones. Thus, the multiplier effect on production would be 1.5. The impact of tourism on employment is also very remarkable in Andalusia. In 2005, 206,491 job positions were needed to satisfy tourism demand; 144,149 of them are direct ones, and the other 62,343 are indirect. Therefore, the estimated employment multiplier effect is 1.43.

This paper is organised in two main sections. The first one illustrates the application of the input-output techniques to analyse productions chains in tourism and discusses some specific problems which arise in this aim. The second one addresses the issue of GVCs in the tourism industry. In order to do that, firstly the characteristics and main agents participating in the GVC in tourism will be presented. Secondly, an specific study on the role of SMEs in the tourist industry in Andalusia will be put forward as an illustration of the application of the GVC

concepts and methodology to the tourist industry. The results shown in this section are part of a broader research project carried out by the research group 'SMEs and regional development' of the University de Seville, and embodied in the OECD project 'The Role of SMEs in the Global Tourism Industry'.

A TWO-LEVEL ANALYSIS OF TOURISM PRODUCTION CHAINS IN ANDALUSIA

THE INPUT-OUTPUT APPROACH: TOURISM PRODUCTION CHAINS IN ANDALUSIA

As it has previously been said, input-output tables and techniques are a powerful tool to delimitate production chains, and they have been used in many cases to analyse the tourism industry. This section illustrates the application of input-output analysis to the study of tourism production chains using the input-output tables of Andalusia for the year 2000 (Instituto de Estadística de Andalucía 2006).

In order to identify the production chains in tourism, it is necessary to face the problem that the tourism industry doesn't appear as a specific industry in the input-output tables. Tourism activity involved the consumption of very diverse goods and services, that, however, can be also purchased by locals. Therefore, there are not specific sectors or products with a full tourist character. Thus, when intending to identify production chains in tourism industry, only a mere approximation is possible. Nevertheless, some goods and services can be considered as *characteristic* or specially *connected* with tourism (see, for the case of Andalusia, Gallego *et al.*). Characteristic products are those which would not exist in any significant quantity or whose consumption may be reduced, in absence of tourism. The WTO (2001) proposes a close list of characteristics products of tourism. Connected products are those which are consumed by visitors in quantities which are significant for the supplier and/or the visitor but which do not appear in the list of tourism's characteristic products.

In this exercise, the tourism industry will be represented by two main sectors in the input-output tables which show a marked tourism character, namely: the hotel services, on the one hand (Figure 1), and the travel agency services, on the other hand (Figure 2). The services of travel agencies in the regional input output tables of Andalusia are included in a sector together with the support activities for transportation (handling and storage of goods; services of bus and train stations, services of airports and seaports; car parking, toll highways, etc.). It is necessary to take into account that some of these services related to transportation are often purchased by tourists, but also by locals, while other services included in the category have no connection with tourism (for instance, the handling and storage of goods). Unfortunately, there is no simple and accurate way to separate the data for the services of travel agencies from the rest of the sector in the input-output tables. In consequence, the whole sector will be taken as a core tourism sector in order to identify the tourism production chains.

From a methodological perspective, an extensive literature in the input-output analysis exists which puts forward different techniques to delimitate production chains (see, for instance, Pulido and Fontela 1993; Dietzenbacher and Lahr 2001; Sánchez-Chóliz and Duarte 2003; Cai and Leung 2004; Dietzenbacher and Romero 2006). In this exercise, the method described below will be applied.

Let z_{ij} (the typical element of the matrix **Z**) denote the domestic intermediate deliveries (in money terms) from industry *i* to industry *j*. The typical element f_i of column vector **f** denotes the final demand for the goods and services produced by industry *i* (domestic consumption, domestic investments, government expenditures, and gross exports). The typical element w_j of the row vector $\mathbf{w}'$, gives the primary inputs of industry *j* (labor costs, capital depreciation, the operating surplus and imports). The two accounting equations then yield

$$\mathbf{x} = \mathbf{Z}\mathbf{e} + \mathbf{f} \tag{1}$$

$$\mathbf{x}' = \mathbf{e}'\mathbf{Z} + \mathbf{w}' \tag{2}$$

where **x** denotes the vector of gross domestic output values in each industry and **e** is the column summation vector consisting of ones.

From the backward-looking perspective, the input coefficients are defined as $a_{ij} = z_{ij} / x_j$, or in matrix notation as $\mathbf{A} = \mathbf{Z}\hat{\mathbf{x}}^{-1}$, where $\hat{\mathbf{x}}$ denotes the diagonal matrix with the elements of the vector **x** on its main diagonal. The coefficient a_{ij} indicates the value of the inputs of the sector *i* needed to produce a monetary unit of the sector *j*, thus reflecting the <u>direct</u> 'backwards' dependence of the sector *j* with respect to the sector *i*. Using the input coefficients, accounting equation (1) can be rewritten as

$$\mathbf{x} = \mathbf{A}\mathbf{x} + \mathbf{f} \tag{3}$$

The solution of this equation yields

$$\mathbf{x} = (\mathbf{I} - \mathbf{A})^{-1}\mathbf{f} = \mathbf{L}\mathbf{f} \tag{4}$$

where $\mathbf{L} \equiv (\mathbf{I} - \mathbf{A})^{-1}$ denotes the Leontief inverse. If the input coefficients remain the same, an increase $\Delta\mathbf{f}$ in final demands, would require that production is increased by $\Delta\mathbf{x} = \mathbf{L}(\Delta\mathbf{f})$. The typical element l_{ij} of the Leontief inverse gives the (extra) output in industry *i*, that is necessary to satisfy a unitary increase of final demand in industry *j*. The elements of the Leontief inverse,

therefore, collect together the total effect, direct and indirect, that a rise in the demand of a sector causes on the output of the other sectors.

On the other hand, to analyse the 'forwards' production chain, identifying the most relevant clients for the reference sector, the technical distribution coefficients defined as follows will be used:

$$b_{ij} = z_{ij} / x_i \text{ (or } \mathbf{B} = \hat{\mathbf{x}}^{-1}\mathbf{Z}\text{)} \qquad (5)$$

where b_{ij} gives the share of the output of industry *i* that is sold to industry *j*. The technical distribution coefficients can be interpreted as a measure of the direct 'forwards' dependence of the sector *i* due to the sales of the sector *j*. In the same way, the accounting equation (2) can be rewritten as $\mathbf{x}' = \mathbf{x}'\mathbf{B} + \mathbf{w}'$ and its solution yields $\mathbf{x}' = \mathbf{w}'(\mathbf{I} - \mathbf{B})^{-1} = \mathbf{w}'\mathbf{G}$. Assuming that the output coefficients remain unchanged, an exogenous change $\Delta\mathbf{w}'$ in the primary inputs affects the gross output values as $\Delta\mathbf{x}' = (\Delta\mathbf{w}')\mathbf{G}$. This model is known as the supply-driven input-output model proposed by Ghosh (1958)[1].

The typical element g_{ij} in **G** represents the increase in the value of the output of the industry *j* motivated by a unitary increase in the cost of the primary inputs of sector *i* (assuming the technical distribution coefficients are maintained constant). The elements of the Ghosh inverse give, therefore, the total effect, direct and indirect, which bring about an increase of the primary input cost that a sector *i* uses concerning production of its client sectors.

Thus, the production chains in which the two tourism reference sectors –hotel services and travel agencies services- are involved have been identified as follows:

1. A sector *i* was considered to be integrated as supplier in the chain of the reference sector *k* (hotel services or travel agency services) whether $a_{ik} > 0.01$. The average value for the production coefficients in the 86x86 input-output table was 0.004; 0.006 for the production coefficients of hotel services, and 0.004 for the support activities for transportation and travel agency services. Thus, the threshold of 0.01 is sufficiently high to capture only the most important direct linkages.
2. For each of the suppliers relevant by virtue of the previous procedure, the process described in 1 was repeated, identifying their relevant suppliers for every one of them. Nevertheless, in this case it also was required to consider including the sectors in the chain that $l_{ik} > 0.025$, again representing *k* the sector of hotel services in the first case, and the travel agency services

[1] The Gosh model has been heavily criticized and became regarded as theoretically implausible (see Oosterhaven 1988, 1989). Dietzenbacher (1997), however, showed that all implausibilities vanish once the model is interpreted as a price model instead of as a quantity model.

in the second. The average value for the elements of the Leontief inverse was 0,018; 0.016 in the case of the hotel services, and 0.018 for the support activities for transportation and travel agency services. This process was repeated until running out of the chain production 'upwards'. In this way, by means of considering a threshold for the l_{ik}, only the suppliers of the second and successive levels to some extent relevant from the perspective of the chain's reference sectors were selected.

3. In a way analogous to that described in point 2, a sector was considered to be integrated in the chain as relevant client of the reference sector *k* (hotel services or travel agency services) whether $b_{kj} > 0.01$. The average value for the distribution coefficients was 0.005; 0.003 for the distribution coefficients of hotel services, and 0.005 for the support activities for transportation and travel agency services.

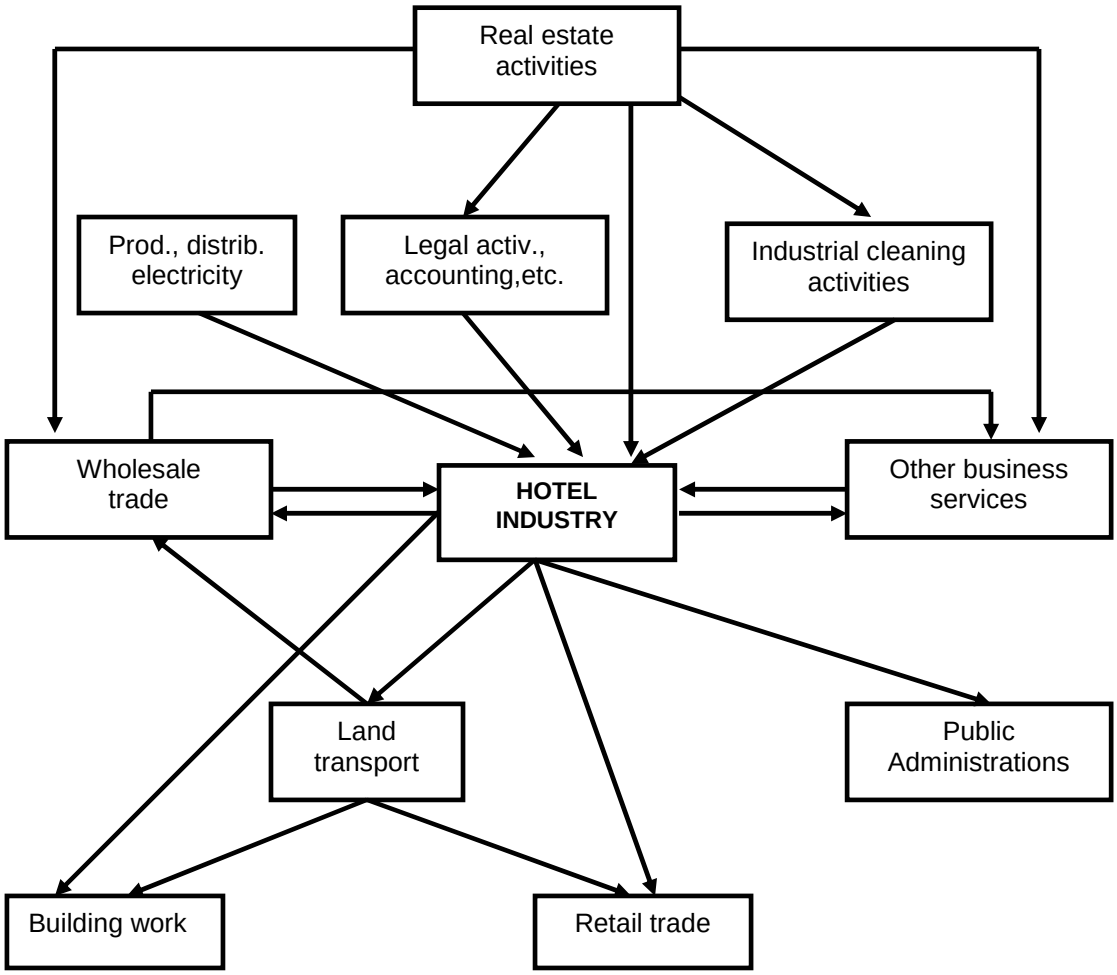
4. For each of the relevant suppliers identified in step 3, the process was repeated, but in this case also requiring, to consider included in the sectors of the chain, $g_{kj} > 0.025$. The average value for the elements of the Gosh inverse was 0.019; 0.016 in the case of the hotel services, and 0.021 for the support activities for transportation and travel agency services. This process was repeated until running out of the production chain 'downwards', identifying the clients of the second and successive levels relevant from the perspective of the chain's reference sectors.

As a result of applying this procedure to the 2000 regional input-output table, the production chains graphically represented in Figure 1, for the hotel services, and Figure 2, for the travel agency services, were identified.

Five levels or tiers can be observed in the production chains of hotel services:

1. A level of direct suppliers made up of the production and distribution of electricity; legal services, accounting, etc.; and industrial cleaning services.
2. A real estate services sector which acts at the same time as a first and second level supplier via the branches of legal services, accounting, etc.; industrial cleaning; wholesale trade, and other business services.
3. Two productive branches – wholesale trade and other business services- that act at the same time as relevant hotel industry suppliers and clients. Also, notice that a loop exists between this two sectors and the hotel industry (hotel industry→wholesale trade→other business services→hotel industry).
4. A first level of direct hotel industry client sectors made up of public administration services and land transport. Notice that also other loop exists between these three sectors (hotel industry→land transport→wholesale trade→hotel industry).
5. A second level of hotel industry clients made up of building activity and retail trade, meaning a hotel output demand, both directly and indirectly, via the land transport sector.

Figure 1. Productive chains of hotel activity

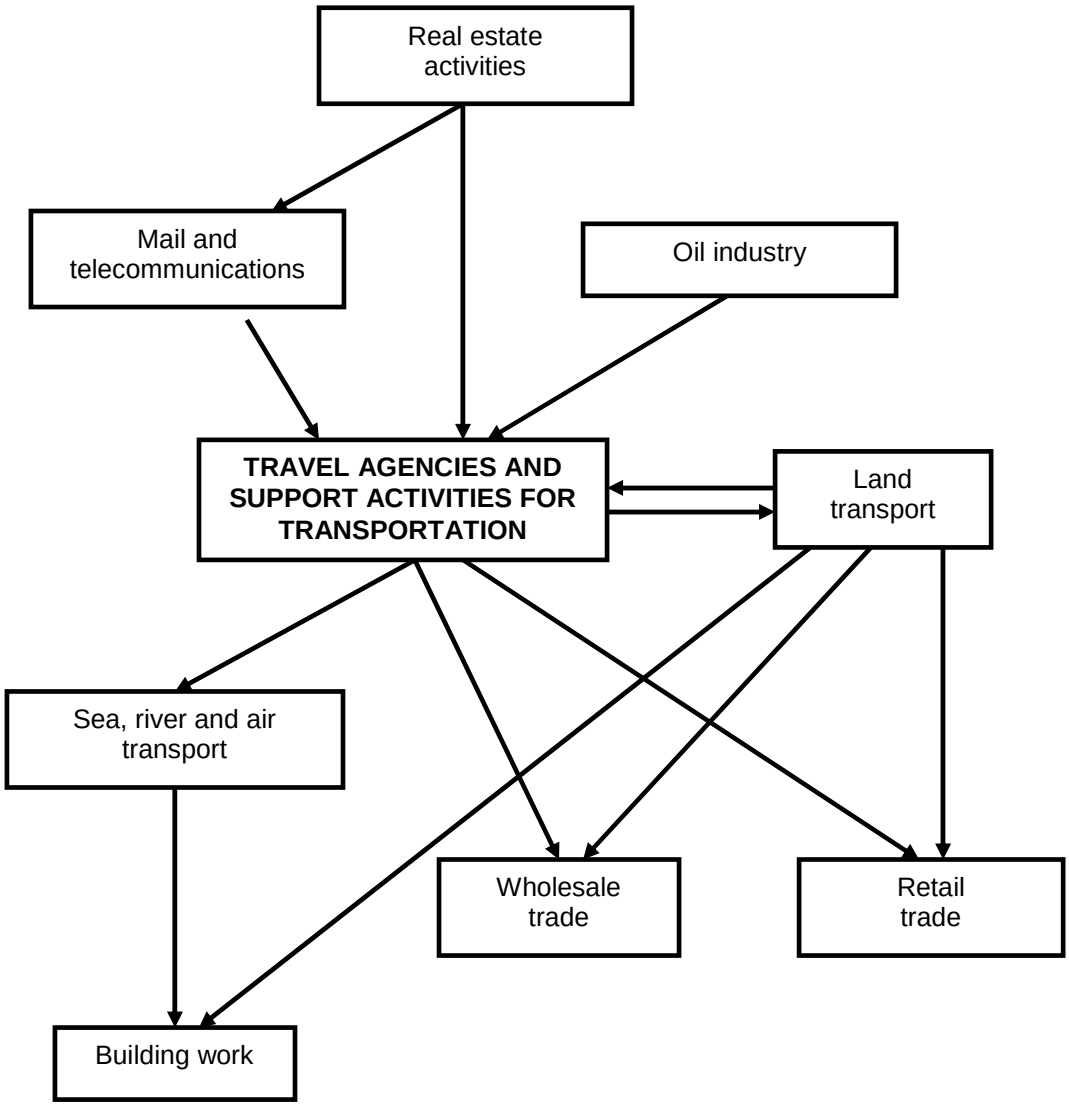


In the case of travel agencies and support services for transportation, six levels or tiers in its production chain can be identified:

1. Two main direct suppliers: mail and telecommunications services and oil industry.
2. The real estate sector, that acts at the same time as a first level supplier, directly serving the agencies, and as a second level supplier via sales to the mail and telecommunications sector.
3. The land transport sector that acts at the same time as main supplier and client of the agencies services.
4. The sea, river and air transport sector that represents a main direct client of the travel agencies.
5. The trade sector that, in its wholesale and retail branches, acts at the same time as a first and second level client, directly requiring the travel agencies' services, and also indirectly via its purchases from the land transport sector.
6. The building sector appears as a second level client that generates an indirect demand of the travel agencies' services and support activities for transportation via its purchase from the

transport branches. Nevertheless, this linkage does not seem to have a direct relationship with tourism activity.

Figure 2. Productive chains of tourism intermediation and support activities for transportation



THE GLOBAL VALUE CHAINS (GVCs) APPROACH: THE ROLE OF ANDALUSIAN SMES IN TOURISM INDUSTRY

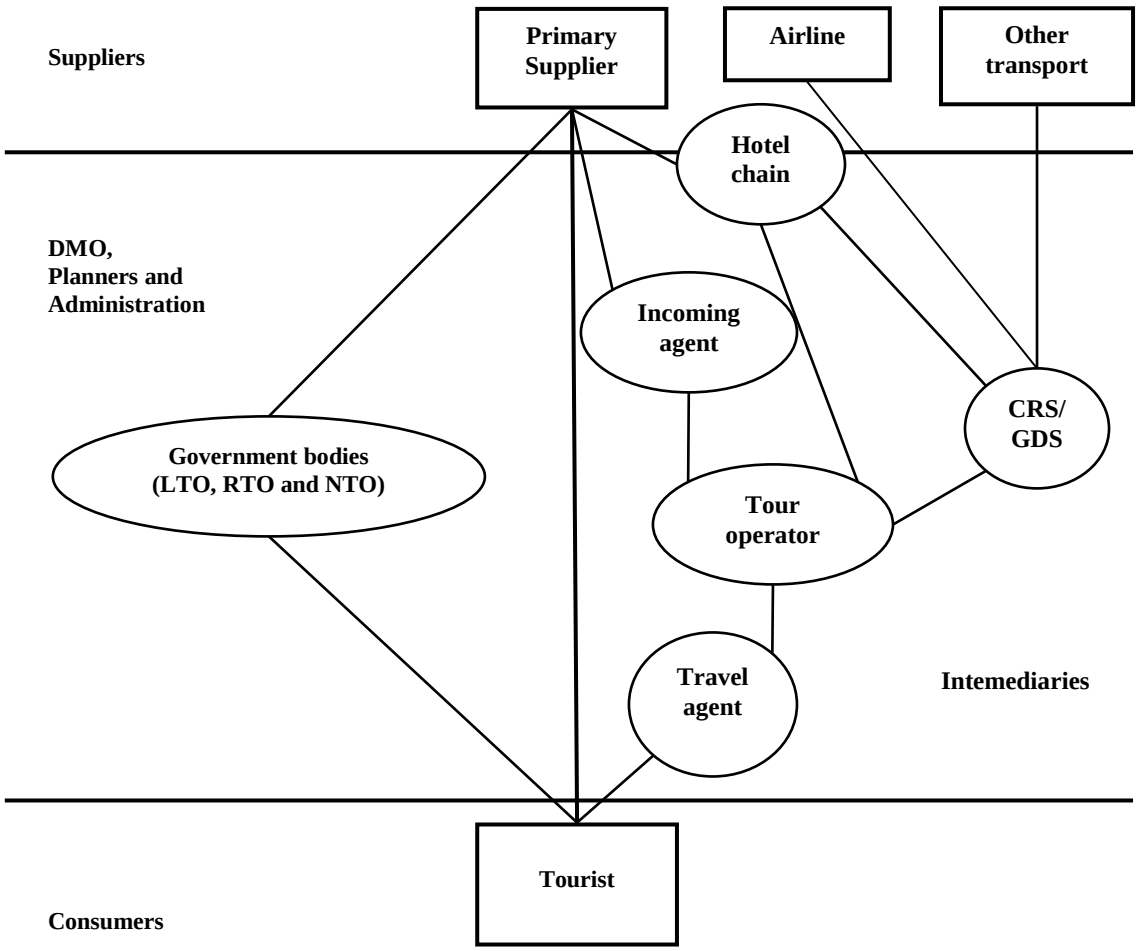
In this section, firstly, the configuration of Tourism Global Value Chains (TGVCs) will be analysed, paying attention to the particularities of this activity and the transformations it has been undergoing presently. Secondly, the participation of Andalusian SMEs in the TGVCs will

be investigated. To do so, information from case studies carried out with hotels and travel agencies located in Andalusia will be used.

The configuration of tourism value chains

A useful approximation to the present configuration of TGVC is presented in Figure 3, which shows the most relevant agents involved in the tourism activity, together with their most significant relationships.

Figure 3. Global Tourism Value Chains.



Source: Adapted from Werthner and Klein (1999).

At one beginning of the value chain, the **primary supply** is found. It includes firms such as hotels and restaurants, being mostly SMEs. Airlines are situated at the same level, together with other transport companies. One important different, though, is that these firms are usually large. However, these suppliers present some common characteristics:

- Need for significant investments in fixed assets.

- A considerable rigid supply, as the number of beds or seats cannot be modified in the short run.
- Fixed costs are quite high. They represent some two thirds of total cost in airlines, and around 40% in hotels (Sinclair and Stabler 1998), whereas marginal costs are very low (the cost of including an extra passenger in a plane with spare seats, or an extra costumer in a hotel with empty rooms, is close to zero).
- Their production is of a highly perishable nature, as it may not be stored. Any empty room in a hotel means a forgone income.

These characteristics make these activities prone to price wars, since high occupancy rates are needed to absorb fix costs and be profitable.

In the next link of the chain **tourism intermediaries** are located. Among them a great diversity is found, from the most traditional ones to some new ones which have appeared basically as a consequence of the new distribution channels opened by the internet revolution. Within this second link, *tour-operators* could be highlighted. There is some discussion in the literature regarding their role. Some authors emphasize their function as mediators between suppliers of tourism services (transport, accommodation, catering, etc.) and retailers or final consumers (Sheldom 1986; Yale 2001). However, other researchers stress their role as assemblers of basic supplies, transforming them into a totally different product. The tourist package is then marketed under its own brand and, therefore, they could be considered not only as intermediaries, but as producers (Holloway 1989; González 1999). The tour-operator's level is dominated by a small number of large firms. Therefore, they have enough resources to face mass advertising campaigns that may reach many consumers in different parts of the world. As they channel large numbers of tourists, they can ensure permanently high occupancy rates, lowering uncertainty and demand fluctuations. In addition, they have been increasing their market power through different integration processes, both vertical (hotels, airlines, travel agents) and horizontal (merging with competitors). Hence, it may be said that these companies exerts the *governance* of TGVC, as they have the capacity to impose conditions on the other actors along the chain. Governance ensures that interactions between firms along a value chain exhibit some reflection of organisation rather than being simply random (Gereffi 1994). The concept of governance has different implications that the mere idea of co-ordination of the actors within a value chain, since power asymmetry is central to value chain governance. That is, there are key actors in the chain who take responsibility for the inter-firm division of labour, and for the capacities of particular participants to upgrade their activities (Kaplinsky and Morris 2001). There are two main typologies of value chain governance proposed by Gereffi (1999) and Humphrey and Smith (2000).

On the one hand, Gereffi (1999), in an analysis conceived for manufacturing sectors, distinguished between 'buyer-driven' value chains and 'producer-driven' commodity chains:

- In *'buyer-driven' chains*, large retailers, branded marketers, and branded manufacturers exert the governance of the chain setting up decentralized production networks in a variety of exporting countries, typically located in the Third World. This chains are characteristic of labor-intensive, consumer goods industries such as garments, footwear, toys or consumer electronics. The tiered networks of contractors make finished goods to the specifications of foreign buyers. The key issue in this chains for retailers, marketers, and manufacturers which assume the governance is to shape mass consumption via strong brand names and global sourcing strategies to meet the demand. Profits derive from unique combinations of high-value research, design, sales, marketing and financial services.
- In *'producer-driven' chains*, manufacturers making advanced products like aircraft, automobiles and computers are the key economic agents. They are responsible of the value chain governance exerting control over backward linkages with raw material and component suppliers, and forward linkages into distribution and retailing. In contrast with, buyer-driven chains, the main factors determining profits in producer-driven chains are scale, volume, and technological advances.

On the other hand, Humphrey and Schmitz (2000) distinguish four forms of value chain governance:

a) *'Arm's-length market relations'*: buyer and seller do not need to collaborate in product definition, either because this is standard or because supplier has sufficient capacity. Risks to buyer are low, due to the requisites are easy to achieve or supplier has a clear capacity of attaining them.

b) *'Network':* co-operation is established between firms with a similar level of power and who share their competences within the chain. Supplier and buyer collaborate together in the definition of the product, mutually complement each other. This tends to be more common between innovative firms. Buyer's risk is minimal due to the high capacity of the offerer.

c) *'Quasi-hierarchy'*: these are the relations established between firms that are legally independent yet subordinated to the one which has the governance. High degree of control of buyer over supplier, given that it may incur in important losses due to mistakes in the functioning of the supplier, of whose capacity it has doubts.

d) *'Hierarchy'*: buyer has a direct control on the productive process, the one who has the governance is the owner of the rest of the firms subordinated to it.

The issue of the characteristic models of governance in TGVC will be addressed later on, based on the analysis of case studies for Andalusia. However, together with large tour-operators exerting the governance of TGVC, an important number of small tour-operators do exist. According to Sinclair and Stabler (1998), this would be explained by the high degree of maturation reached by the tourism market, allowing for the possibility of increased segmentation and differentiation. Therefore, large tour-operators concentrate on mass production of tourist packages with very similar characteristics, which are highly substitutable with each other. These

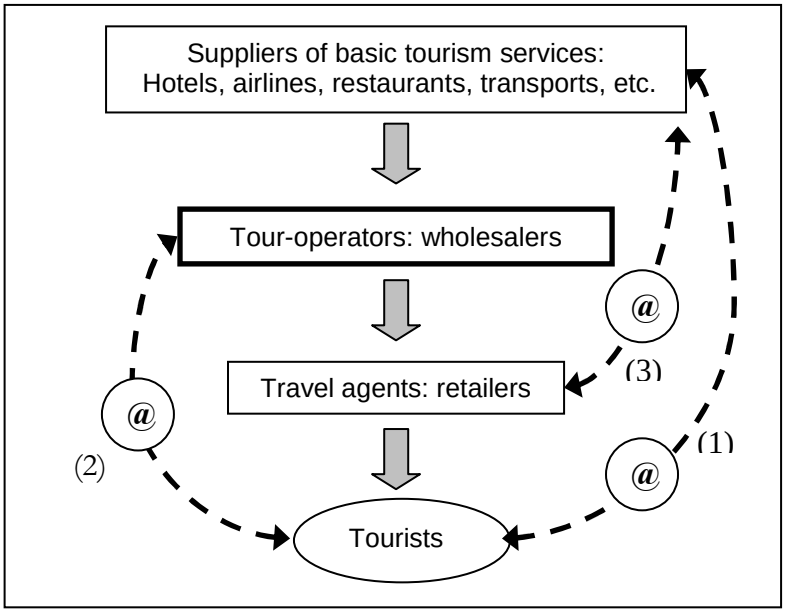
packages do not satisfy the preferences of specific segments of the demand (market niches), which are served by smaller tour-operators, specialized in the production and marketing of highly specific products.

Next, connecting tour-operators with either final costumers or primary suppliers, another traditional tourism intermediary can be found, the *travel agents* or *retailers*. Their main function is marketing tourist packages made by tour-operators or products of other suppliers, such as airlines or hotels. They usually get a commission on each sale. At the same time, they provide customers with information about different destinations, services or suppliers, acting as advisors. In the last few years much debate has been generated about the possibility that these agents may disappear from the tourism value chain. The increasing use of internet has opened a new direct distribution channel between tourism suppliers and final consumers, where intermediaries are not needed. This new situation is pressing margins and commissions down for travel agents, endangering one of their most important sources of income.

Furthermore, the *Computerized Reservation Systems* (CRS) have their origin in the 1960s, when American Airlines and IBM developed the first computerized system called SABRE, an automatic procedure to manage the availability of airplane seats was needed. It was initially limited to internal company use, but soon it started to be installed at travel agents, giving birth to the first real CRS. At a second stage, the geographical extension of their operations, together with the inclusion of other tourism suppliers (hotels, car rental, railway companies), transformed them into what has been called Global Distributions Systems (GDS). These agents have taken advantage of the new opportunities offered by internet creating virtual travel agencies, such as Travelocity by SABRE, or Amadeus.net by Amadeus. Within the intermediation stage, different *local, regional or national tourism organizations* (LTO, RTO, NTO -also called sometimes National Tourism Boards, NTBs) would also be placed. Their main function is normally to promote tourism in that territory and provide information about the different suppliers located in it. They are normally public bodies. Finally, a relatively new intermediary is having an increasing presence and importance. The so-called *Destination Management Organizations (DMO)* are normally public bodies or receive strong public support. They offer a number of services related to their specific tourism destination, with the purpose of attracting more tourists.

For the aim of this article, a more simple version of the tourism value chain will be adopted, as it is represented in Figure 4. Only four tiers will be considered: suppliers of basic tourism services represents the first tier; the second and the third ones are formed by intermediaries -on the one hand, tour-operators or wholesale agents; on the other hand, travel agents or retail trade-. Finally, consumers or tourists will be situated at the end of the chain. Figure 4 shows also some changes in the traditional tourism value chain caused by the use of the internet which will be commented later on.

Figure 4. Traditional Tourism Value Chain



Source: Elaborated from Yale (2001)

The role of Andalusian SMEs on Global Tourism Value Chains

As it was previously said, the OECD has promoted a study on 'The Role of SMEs in the Global Tourism Industry', within the larger research project 'Enhancing the Role of SMEs in Global Value Chains'. The purpose of this study is to get to know how SMEs participate in GVCs. It will also allow the identification of good practices that may be adequate for SMEs to succeed in the framework of globalization, making the most of their participation in GVCs. The research group 'SMEs and Economic Development' of University of Seville undertook this study in the region of Andalusia. The fieldwork consisted on several case studies of SMEs in the tourism industry -hotels and travel agents-. In this section, some results from this study will put forward in order to address the issue of the participation of SMEs in Andalusian tourism industry.

To carry out this research, thorough interviews took place with the owners and/or directors of 4 hotels and 3 travel agencies. Tour operators were not interviewed because exclusively wholesale agents do not exist in Andalusia. Thus, a wholesale-retail and two retail were selected, given that the latter are more numerous. Regarding hotels, they were selected among those of three or four gold stars because, between them, they group together more than 70% of Andalusian hotel establishment places and are those that show highest occupation rates. The case studies were concentrated in two of the main Andalusian provinces with a high representation of the different tourism typologies: Malaga and Seville (see Table 1). On the other hand, the study also benefited from the collaboration of the President of the Andalusian Travel Agencies (FEAVV) and the Seville Entrepreneur Association of Travel Agencies (AEVISE), as well as the Vice-President of the Seville and Province Hotel Association (AHS).

They contributed a global vision of both subsectors that allowed the individual contributions of the firms interviewed to be complemented.

Table 1. Firms interviewed: tourism typologies and location

Nº	Activity	Nº	Tourism typology	Location of the firms
4	Hotels	1	Cultural tourism	Seville city
		1	Rural tourism	Cazalla de la Sierra (Seville)
		1	Business and congress tourism	Seville city
		1	Sun and sand tourism	Benalmadena (Malaga)
3	Travel agencies	1	Business and congress tourism	Seville city
		1	Cultural tourism	Sevilla city
		1	Sun and sand tourism	Malaga capital

With respect to the firms interviewed, some relevant characteristics can be pointed out:

- A high percentage of the firms have less than 50 employees, what it is line with the atomisation of the Andalusian tourism entrepreneur sector (see Table 2).
- None of the firms consulted are part of the hotel or travel agency chains. In some cases, they are family firms managed directly by their owners. In others, they belong to an investment group but are managed independently and, in one case, via a management contract. Therefore, they are all independent firms.
- With regards to the cost structure, those corresponding to staff stand out, representing about 35-45% in hotels and an even higher percentage in travel agencies (up to 75-80%). Secondly, intermediate consumptions, both goods and external services, are about 20-30% of total costs in hotels and slightly lower in travel agencies (less than 10%).
- Last year's sales figures of the firms consulted were moderate, mainly between 1 and 5 million euros.

Table 2. Structure of Andalusian tourism enterprises

	1-9 employees		10-199 employees		199-499 employees		> 499 employees	
	Travel Agencies and similar*	Hotels **	Travel Agencies and similar*	Hotels **	Travel Agencies and similar*	Hotels** *	Travel Agencies and similar*	Hotels** *
Andalucía (2005)	89.4	81.0	10.5	18.3	0.1	0.7	0.1	0.1

Source: Elaborated with data from Directorio Central de Empresas (DIRCE), INE.

* Division 63 National Classification of Economic Activities (CNAE), corresponding to Division 79 of the International Standard Industrial Classification (ISIC, Rev. 4).

** Division 55.1 of CNAE, corresponding partly to Division 55 of ISIC (Rev. 4).

For the sake of obtaining more specific conclusions, an independent analysis of each tourism subsector –hotels and travel agencies- was carried out. For both of them three core aspects were addressed: the awareness of the value chain, the relationships within the value chain, and the dynamics within the value chain.

A.- Hotels

a) Awareness of the value chain

The added value generated by the hotel establishments is reckoned to be about 60-70% of the total incomes. The main intermediaries hotel establishments have recourse to are tour operators, given that 45-55% of sales are carried out via this channel. The second position is central bookings, which are entrusted with selling approximately 20-30% of their product and, lastly, travel agencies, which distribute 5-15%. The percentage of rooms booked directly at hotels, either by telephone or online, continues being very small, which is why the role of intermediaries remains fundamental for these basic-offer suppliers. For this reason, they recognise that the main agents of the tourism value chain are the large, vertically-integrated tour operators, given that they have the capacity of setting up the GVCs, taking part in different firms from various countries that operate in a number of destinations all over the world. The main vertical tourism groups in Spain are Globalia, Corporación Empresarial, Grupo Iberia and Grupo Marsans.

b) Relationships within the Value Chain

The hotel establishments consulted have signed a great number of individualised contracts with different tour operators, booking centres, and virtual or traditional agencies (in one case, more than 500 contracts), where specific prices and quotas tend to be set. What is notable is the strong pressure on prices they bear on behalf of intermediaries, though these do not usually fulfil the quotas reserved for them. The contracts are normally seasonal, depending on the location of the hotels (for example, on the Costa del Sol, the high season coincides with the holiday period, which, on the other hand, is the low season in Seville city). They normally negotiate a year in advance, in spite of clients increasingly contracting at the last minute. This means that the uncertainty level is ever higher. This is why specific hotels expect that in the near future there will be a tendency to negotiate less in advance and with a greater flexibility in prices, depending on the existing demand (a price discrimination similar to that practised by the airline companies).

Some of the hotels interviewed belong to specific commercialising chains or independent hotel associations (GSM, Etursa, Domus Selecta, etc.). This allows them to increase their negotiating power with the others in the tourism value chain in exchange for a

fixed monthly or quarterly quota and a commission per room sold (this tends to be in the 20-30% range). With respect to business tourism, in some cases direct agreements with the firms are set up.

The typologies of governance previously introduced arise within studies on industrial sectors, and they are not completely adapted to terciary activities. If, moreover, one takes into account the heterogeneity existing within the tourism sector, to establish a governance category within those defined is more complex. Clancy (1998), when considering the governance patterns in hotel industry, concludes that they have some aspects in common with both 'buyer-driven' and 'producer-driven' chains, but, however, differ from both of them. Therefore, he proposes a third model: 'contract-driven' chains regarding the governance in hotel industry. Nevertheless, his analysis has a focus on the relationships between individual hotels and hotel chains to which they are tied by different types of contractual formulas. On the contrary, in this case study for Andalusia mainly independent hotels are being considered, and a broader perspective of the hotel industry has been adopted, which includes the role of tour-operators. From this perspective, the governance of the value chain seems to be close to the model of 'buyer-driven' chain. Furthermore, in the case of the Andalusian hotel firms interviewed, one may conclude that the governance of the large, vertically-integrated tour operators is close to co-ordination via market relations, but with a certain degree of subordination. On the one hand, the co-ordination is carried out via market relations, because the product is perfectly defined, since the hotel establishments categories demand very specific product characteristics. Therefore, the suppliers (hotels) do not need to co-operate with the tour operators in the definition of the afore-mentioned product. Furthermore, the hotel establishments can opt for diverse channels or intermediaries to distribute their products, including retailers (travel agents) or themselves, by direct contracting with tourists (for example, via their web-page). But, on the other hand, there is a certain subordination, as is shown by the concentration of their sales to main clients (50% of their sales depend on tour operators) amongst which there is a great concentration and with which they maintain clearly asymmetrical negotiation-power relations, given that they carry out strategic activities (branding, marketing, etc.). Lastly, the governance in the 'sun and sand' destinations is in a greater measure closer to the 'quasi-hierarchy', the subordination of the hotel establishments being greater with respect to the tour operators, their dependency being especially high with respect to attracting foreign tourists.

c) Dynamics within the Value Chain

The main effects of globalisation noticed are a great increase of uncertainty and of competitors, both in the destination itself by the setting up of new hotels by large national and international chains, and by other destinations, such as North African countries, Eastern Europe, as well as South-East Asia. In most cases, this results in a real 'price war'. They note that in recent years, especially since 2002, the profit margins with which they work are being

reduced by the continuous price pressure, mainly by the large tour-operators. They also notice the effects of the reduction in air transport prices, especially since the appearance of 'low cost' companies. This is attracting a greater number of tourists, but with a high percentage of a younger tourism with a lower purchasing power.

A essential issue in GVC analysis is the concept of upgrading, which means an ascending process in the value scale, distancing from the activities in which competitivity increases via production costs reductions and whose entrance barriers are low (Pietrobelli and Rabelotti 2005). Upgrading within the chain can be of four types (Humphrey and Schmitz 2000, 2002):

- *Process upgrading:* transforming inputs into outputs more efficiently by reorganizing the production system or introducing superior technology.
- *Product upgrading:* moving into more sophisticated product lines, increasing the unit values.
- *Functional upgrading:* acquiring new functions (or abandoning existing functions) to increase the overall skill content of activities.
- *Inter-sectoral upgrading:* firms of clusters move into new productive activities.

The hotel firms interviewed have basically centred on product upgrading, trying to dote the product with better quality and services that increase its added value. However, also process upgrading can be found by hotel establishments which, in some cases, are trying to reduce their dependency on tour operators and increase their direct contracting with clients, especially online. In this sense, it must be pointed out that the most important changes in the TGVC structure and the dynamic of relations between the different elements comes certainly from adopting new technologies. The use of new technologies, especially Internet, is not imposed on the hotel establishments by intermediaries. However, all the hotel firms interviewed are trying to incorporate new technologies and therefore currently have Internet, Web-pages, IT systems, etc. Moreover, they almost unanimously coincide in new technologies having modified relations within the tourism value chain, especially affecting intermediation. Some hotel establishments hope that these new technologies will allow a greater freedom of movement with respect to tour operators, so that, for instance, prices may be more flexible and fluctuate in relation to demand. Nevertheless, for the moment, most of them do not consider it essential to have an ultimate generation Web-page because the percentage of contracting via this channel (virtual linkage 1 in Figure 4) tends to continue being very small and the setting up and maintenance costs are completely a hotel matter.

Travel agencies

a) Awareness of the Value Chain

A very high percentage of Andalusian travel agencies depends almost exclusively on outbound or domestic tourism, that is, Andalusians who travel within the region or beyond its borders. This is shown amongst the intermediation firms interviewed, as, on average, more than 80% of their work is national tourism. In some cases it is even exclusively so. The main modalities connected with the principal travel motive are holidays (price is the most influential factor), business (quality prevails: the client tends to be one who seeks comfort and safety), and congresses and conventions. Added value generated by travel agencies ranges between 10 and 20%. This, especially in retailers, demonstrates their 'commissionist' role. Tour operators are the main suppliers of the travel agencies consulted, as about 60% of their billing comes from them. This denotes a great dependency, particularly with respect to Spanish origin wholesalers (with whom they contract more than 90%). Next are the large transport firms (airline companies or RENFE – the national railways network), which represent about 30% of the products contracted through travel agencies. Lastly, they recognise the large vertical groups as the main agents of the tourism GVCs. These groups, comprised of the major tour operators and the airline companies, have enough power over the market to impose on the travel agencies the conditions they consider opportune for the contracting of their products. The firms interviewed highlight how these groups can even manage to modify tourism fashions (for example, promoting specific tourism destinations, these being the ones in which, owning their own hotel establishments or belonging to a new air route of their transport companies, they have greater interests).

b) Relationships within the Value Chain

The governance large integrated groups have over travel agencies is largely close to the 'quasi hierarchy' model, as, although they are legally independent firms, they are strongly subordinated to tour operators and large transport companies. As a proof of this, one may highlight the drastic reduction in recent years in the commissions retailers get from airlines (Iberia, Air Europa, Spanair, etc.). In spite of selling them more than 70% of their ticketing, they have announced their aim to substitute the system for a variable retribution from 2007. On the other hand, it is necessary to take into account that retailer tourist agencies delegate a great part of marketing to tour operators, as they are often the ones who carry out large advertising campaigns and make up brochures retailers later distribute. This configuration of the value chain co-ordinated by the producers (tour-operators or airline companies) basically fits into the Gereffi's concept of 'producer-driven commodity chains'.

The travel agencies interviewed are part of Commercial Management Groups or Purchase Groups (UNIDA, STAR, GEA, etc). About 30 or 40 of these groups exist in Spain, made up of travel agencies which, centralised in Madrid or Barcelona, negotiate together the commercial conditions (commissions, discounts for sales volume, etc.) with their suppliers (mainly tour operators). This way they gain 2-4% more profitability than if the agency negotiates individually. However, they recognise that in spite of the increase of the product volume these Purchasing Groups negotiate, given that there are even groups of *them* (AGRUPA), the negotiating power with the large vertical groups continues being minimum. This is why their role as 'pressure groups', aimed at by a high number of associated agencies, must continue being developed. Besides these products negotiated via their Purchasing Groups, they tend to have direct agreements set up with specific hotels or other tourism firms in exchange for a specific commission or a net price, to which the agency adds what they consider to be an appropriate margin.

c) Dynamics within the Value Chain

Among the main globalisation effects travel agents notice, what stands out is the growth of concentration in the tourism sector. This is originated by the large vertical groups having a greater power over the global market. This has been favourised by a notable increase in the use of Internet and the impact of new technologies. The result of this is a much more informed and independent client. This fact has modified the relations within the TGCV and will continue to do so in the near future, altering the intermediation functions that retailer travel agencies have traditionally carried out. A growing percentage of these clients do not need traditional travel agencies. They contract directly with the suppliers of tourism services (such as hotels or airline companies) or with the new virtual intermediaries (see, virtual linkages 1 and 2 in Figure 4). In this sense, there has been much debate in recent years about the possible disappearance of travel agencies in the tourism industry value chain, due to the pressure on them of the constant lowering of transaction costs. However, it seems more appropriate to conclude that what is being propagated is the rise of new intermediaries (reintermediation) or the use of new technologies by the traditional travel agencies (for instance, virtual travel agencies), rather than a disintermediation process as such. Yet, they consider that, despite the great disjunctive, they must head towards offering a better quality product, thus supplying a greater added value, to achieve the increasing of their clients fidelity. Similarly, they point out that a segment of the market exists made up of people who, due to their age or background, still resort to travel agencies and will never contract by Internet.

The upgrading within the value chain can affect the relation between different elements and even the governance (Humphrey and Schmitz 2002). The role the co-ordinators of the GVC have on the impulse of the SMEs' upgrading is not clearly defined. On the one hand, Gereffi (1999) maintains that these leaders automatically promote process, product and functional

upgrading between local SMEs, but he based his investigation mainly in Asia and on industrial sectors. On the other hand, Humphrey and Schmitz (2000) connect the modalities of upgrading with the type of governance of the leaders of each GVC, concluding that insertion in a 'quasi-hierarchical' chain provides very favourable conditions for processes and products upgrading, but hinders the functional ones. Therefore, it is not surprising that most Andalusian travel agencies concentrate on process upgrading (for example, incorporating new technologies) and product upgrading, offering a better quality service (staff with more experience), that is more individualised ('à la carte' tourism products), and is more complete (24-hour attention service). These upgrading provide users with a greater added value and have the aim of increasing the clients' fidelity by promoting differential services with respect to direct contracting via Internet or the new tourism intermediaries. The travel agencies interviewed have unanimously incorporated new technologies in their establishments, as, in their role of intermediaries, it is for them indispensable to have Internet, a Web-page, IT systems, etc. (which make possible the virtual linkage 3 in Figure 4). However, in no case among those interviewed do they have a Web-page that allows users to contract completely online, that is, book and pay via the Net. They justify this by the high cost it generates. Compared to the large travel agency chains, this cost is difficult for them to face and pay off. This means that, having this commercialisation possibility, the large chains dispose of a competitive advantage. Frequently, the use of new technologies is imposed by the large tourism intermediaries or suppliers. However, set-up costs are paid exclusively by the agencies, this meaning a considerable effort for them, especially for the global distribution systems. They all work with Amadeus, that does pay the maintenance costs for its IT application.

Lastly, it is necessary to highlight the possibility of functional upgrading. One of the agencies interviewed has become wholesaler-retailer and this allows the elaboration of their own brand of tourism products. But their aim is not a great expansion. They are not thinking of distributing their packages through other retailer agencies (except in specific cases), but of specialising in a greater quality product, that, 'made-to-measure', is more in line with the wishes and needs of their clients. Thus they seek to achieve a greater fidelity.

CONCLUSION

In this paper, production chains in Andalusian tourism industry have been studied from two complementary methodological approaches: input-output techniques and Global Value Chains analysis. Thus, a more complete and rich picture of the productions chains in the regional tourism industry can be shown. Both conceptual and methodological approaches has much in common: essentially, they focus on production processes conceiving them as a sequence of subsequent activities which ends in the final demand. Nevertheless, some relevant differences can be pointed out between them.

Firstly, Input-Output analysis focuses on sectors as the unit of analysis and studies intersectoral linkages from a macroeconomic point of view. However, GVC approach adopts a microeconomic perspective, and considers firms as the object of interest, deepen into the characteristics of inter-firm linkages. More specifically, the GVC approach addresses the role of large multinational corporations (MNC) coordinating and exerting the governance of value chains, but also the function of SMEs participating in these GVC, and the strategies they can develop in order to improve their position within the chain.

Secondly, input-output analysis takes into account production linkages within a previously determined spatial scope: a region, a country, or a set of regions or countries (in the case of interregional input-output tables). In this way, input-output analysis can measure the regional/national direct and indirect effects of specific sectors. Thus, it is a useful framework to develop impact analysis on a particular spatial area. In contrast, GVC approach takes an interest in any type of inter-firm linkages, regardless their spatial location. Thus, GVC analysis consider those international linkages, which are nowadays gaining increasing relevance and cannot be captured in standard national or regional input-output tables[2].

In the third place, input-output analysis represents basically a static approach since input-output tables show a picture of a regional or national economy in equilibrium. On the contrary, the GVC analysis is specially interested in the impact of changes in technology, demand, competition or entrepreneurial strategies on the management and configuration of GVCs. From a temporal point of view, it is also interesting to take into account that microeconomic changes in GVC need time to have macroeconomic consequences which can be captured in the input-output tables. An increase in the margins of domestic firms within a sector or a strengthening of firms' domestic linkages versus external linkages necessarily have effects on the input-output tables. Nevertheless, the impact of GVC dynamism on the input-output tables is only visible in the medium and long run.

Finally, input-output approach has eminently a quantitative character. Its aim is to measure productive linkages and build a simplified quantitative representation of the whole economy. However, GVC analysis take into account managerial variables which not always have a direct and easy quantitative expression. Thus, GVC analysis has a significant qualitative dimension.

These different characteristics determinate that the combination of the two approaches provide us a richer view of the production chains in Andalusian economy.

[2] However, international input-output tables can be estimated which show international linkages, allowing to identify international production chains (see Dietzenbacher and Romero 2007, as an example, with a table for six European countries).

Table 3. Main differences between Input-Output and Global Value Chain approaches

	I-O Approach	GVC Approach
Level of analysis (Units of analysis)	Macroeconomic (Sectors)	Microeconomic (Firms)
Spatial dimension (Type of linkages)	Regional/national (Linkages within a spatial area)	Global (Functional linkages)
Temporal dimension	Static	Dynamic
Character	Quantitative	Qualitative

In this respect, on the one hand, the input-output analysis in the first part of this paper shows the main regional inter-sectoral linkages within the regional tourism industry. This type of exercise provides some useful knowledge about the direct and indirect effects of the tourism sector on the regional economy and also shows how these effects are transmitted throughout the Andalusian economy. Thus, it provides a macroeconomic picture of the tourism production chain in the regional economy.

On the other hand, the analysis of the participation of Andalusian SMEs in tourism GVC in the second part of the paper allows us to deepen into the microeconomic foundations of tourism production chains. Both hotels and travel agencies interviewed coincide in highlight the central role of the large, vertically-integrated tour operators exerting the governance of TGCV. Thus, from the perspective of hotels the tourism chain have many of the characteristics of the Gereffi's 'buyer-driven' chains, whereas from the perspective of the travel agencies the configuration of the chain reminds the 'producer-driven' chains. However, what both groups of facts are showing is the presence of a mixed model of governance characteristic of the tourism industry as a whole, which could be called as a 'centrally-driven' value chain. The specificity of this model lies in that fact that the agents exerting the governance of the value chain are neither situated at the end of the production chain –as in the buyer-driven model, nor at the beginning – as in the producer driven model, but in the middle of the chain. Furthermore, applying the Humphrey and Schmitz (2000) classification, in the case of hotels, the type of governance could vary from a co-ordination carried out via market relations, though with a certain degree of subordination, to a quasi-hierarquic coordination, mainly, in the case of the 'sun and sand' destinations. In the case of travel agencies, the governance of the GVCs basically follows the quasi-hierarquic model, since they are strongly subordinated to large vertically integrated tour-operators.

Advances in technology are causing profound changes in the configuration of TGVC. The most important consequence is a more direct access of clients to the primary offer (for instance, hotels) and tour-operators thanks to the Internet. This process poses new

opportunities for hotels, but a serious threat for travel agencies. Hotels can upgrade increasing their direct contracting online and reducing that way their dependency on tour operators, whereas travel agencies could become an unnecessary tier in the tourism value chain. Their response to this challenge have to come as well from up-grading. Travel agencies must incorporate new technologies -process upgrading- and offer more specialized services and better quality (staff with more experience, a more individualised service, or 24-hour attention service, …) -product upgrading-. In that way, they could supply a greater added value and increase the fidelity of their clients. Some possibilities for functional upgrading could also exists, for instance, becoming wholesaler-retailers and elaborating their own brand of tourism products. Finally, the position of SMEs within GVC could be improved boosting commercialising chains, in the case of hotels, and purchasing groups, in the case of travel agencies, as a way to increase their negotiating power with the large vertical groups.

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