Hedonic Pricing Evaluation of Agritourism Activity in Italy

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Abstract

This paper focused on how and what diversified activities influence the price level of agritourism. A hypothesis that contrasts two directions was examined: facility-based and local culture-based activities. First, from the conceptual consideration, we defined that agritourism based on local cultural resources can internalize positive externalities, which are uniquely nurtured local cultural resources, into income, unlike facility-based activity that has no connection with local cultural resources. Second, the results of estimations from the price determinant ordered logit model clarified that owning a swimming pool was the most common and influential factor in enhancing the price level while regional diversity was observed in terms of local cultural resource-based activities such as restaurants, world heritage sites and DOC wines. These findings indicate that hardware-based evolution is more effective in the short term than evolution based on software aspects. Nevertheless, this hardware-based evolution of agritourism is implicitly based on the assumption of continuously growing demand and sufficient financial capability for the fixed investment. When growth in demand becomes stagnant, facility installation can be a heavy burden on operators. Consequently, for the sustainable development of agritourism it will be necessary to harness locality to create a balance between facility-based services and local culture-based services.

Keywords: diversification of agritourism, local cultural heritage, facility-based activity, internalization of externalities, cultural capital, ordered logit model, hedonic pricing

Introduction

Agritourism has been recognized as an effective measure toward diversification of farm activity (Sharpley, 2005). Due to its soft-tourism characteristics based on endogenous utilization of local resources, we can say that diverse local characteristics and heritage will be reflected upon in agritourism in addition to the characteristics of the agriculture in a particular region. As a result, agritourism differs from one region to another. On the other hand, Ohe and Ciani (2003), from their study on agritourism in Italy, pointed out that as facility-based agritourism, which is a type of agritourism that has nothing to do with rural cultural heritage, has evolved and progressed, characteristics of agritourism have emerged that are almost identical from the viewpoint of the tourist to a hotel stay in a rural area. Agritourism in Italy has enjoyed steady growth, and in our opinion presents a successful model of development of agritourism. In this context, the evaluation of diversified agritourism activity in Italy can provide important information on the future evolution of agritourism not only in Italy, but also in other parts of the world.

   Nevertheless, it has been neither explored conceptually nor empirically how the orientation toward facility-based evolution exerts influence on the direction of diversification of tourism activity by farmers. To put it differently, it is essential for the endogenous evolution of agritourism, which is local culture-based, to clarify how agritourism activity is performed in connection with local resources. Studies on this aspect have focused mainly only on conceptual

considerations or descriptive case studies. Therefore, economic studies of agritourism on the utilization of local resources are still at the initial stage and, recognizing this, this paper aims at conceptual and empirical evaluations of the diversification of agritourism in Italy and at clarification of how facility-based or local culture resource-based activity determines the price level of agritourism services by incorporating the concept of cultural capital (Throsby, 2001). The concept of cultural capital has not been applied in economic empirical studies on agritourism. Exploration of the significance of cultural capital from an economic approach by focusing on agritourism that is based on the local cultural heritage will benefit not only agritourism research, but also economic research in the tourism arena in general, especially on aspects of how to utilize local cultural resources and define measures to support these activities.

First, we review literature related to the topics described above and the purposes of our study. Second, we present an economic conceptual framework for types of utilization of local cultural resources by defining which agritourism activities are facility-based or local culture-based from the viewpoint of agritourism diversification, enabling us to undertake the empirical examination that follows. Thirdly, in the latter half of this paper we empirically clarify the regional characteristics of agritourism and evaluate how local cultural resource-based factors and factors without a local cultural resource base determine prices for accommodations. Finally, we summarize our results and suggest policy recommendations.

Literature review with respect to diversification of Agritourism through the utilization of local cultural resources

From the viewpoint of utilization of cultural heritage and resources, which are crucial for the diversification of agritourism, Thorsby (2001) presented the concept of cultural capital as an asset that embodies, stores or provides cultural value and that added a cultural dimension to economics. Thorsby (2009) also pointed out the necessity for advancement of analytical models. In empirical studies, Garrod and Fyall (2000) dealt with the pricing strategy of heritage tourism. Nevertheless, empirical studies on this type of capital have not been conducted sufficiently in the arena of tourism economics except for evaluation of the economic impact of festivals and events (Dwyer and Forsyth, 2006; Timothy, 2007). Cultural tourism has focused on urban areas rather than on rural areas (Bonet, 2003).

For the sustainable utilization of cultural heritage, which is often termed as commotization (Cohen, 1988) or commodification (McKercher and du Cros, 2002; George et al., 2009), several points of concern have been discussed. Authenticity issues have been addressed (Cohen, 1988; Timothy and Boyd, 2003, pp.237-256.) and George et al. (2009) discussed, in addition to positive aspects, negative aspects of rural tourism such as conflicts and loss of diversity in local communities. Although we should keep in mind these issues, they go beyond the focus of our paper. Thus we assume that these points are given conditions in this paper.

Cultural heritage, typically represented as UNESCO world heritage, (for studies on the

connection between UNESCO world heritage and tourism, see Robinson et al, 2000; Di Giovine, 2009)) has close connection with identities of local people (De Beus, 1996). Awareness of local identity is essential for the initiation of local resource utilization. Services based on local cultural resources are considered to reflect local identity. In this context, farm and traditional culinary specialties are included in the scope of heritage (Timothy and Boyd, 2003, pp.33-34). Agritourism enables farmers to attain two goals at once: the preservation of traditional cultural heritage and the utilization of these resources as a business. Although both the tangible and intangible aspects of rural cultural heritage are crucial for agritourism, agritourism cannot be a market distinct from that of hotels unless agritourism operators essentially utilize these local cultural resources. There have been few supply side studies in the arena of rural and agritourism whereas cultural aspects have been attracting growing attention from conceptual and demand aspects (Barbič, 1998; Royo-vela, 2009).

Garrod et al. (2006) presented an interesting concept of countryside capital that explicitly deals with rural resources as stock, including the intangible rural cultural heritage. However, an empirical evaluation has not been done, yet.

The local cultural resources that we deal with in this paper are confined to cases whereby they are utilized for agritourism diversification and provided as the flow of goods and services rather than the stock of local cultural heritage, which is included in the cultural or countryside capital. A flow concept similar to countryside capital is multifunctionality in agriculture that is generated along with farm activity as non-commodity outputs, i.e. a joint product of farming and exerting positive externality to society such as the succession of rural cultural heritage, maintenance of biodiversity, landscape formation, and food security (for the definition of multifunctionality, see OECD 2001, 2003, and from an European perspective, see van Huylenbroeck and Durand, 2003). Multifunctionality includes not only environmental functions, but also socio-cultural functions (Ohe, 2007).

Normally, the generators of multifunctionality are not rewarded from the externalities they generate. How to internalize these externalities matters for optimal rural resource allocations. Therefore, farm diversification in connection with multifunctionality is attracting growing attention (van der Ploeg et al., 2009). Especially non-governmental approaches are explored for this goal and agritourism is one of these solutions through a market mechanism (OECD, 2005). In this context, the importance of business management in rural tourism and agritourism has increased (Sharply, 1996; Page and Getz, 1997; Sharpley, 2005; Sharpley and Vass; 2005).

Regarding the relationship between agritourism and multifunctionality, Vanslembrouck et al. (2005) conducted hedonic pricing analysis of the rural landscape that is an essential factor for agritourism, while Allali (2009) conducted a case study in Morocco on the relationship between landscape and agritourism to explore the possibility of agritourism in developing countries. Ohe (2007, 2008) mentioned that rural tourism conducted by female and retiree farmers from other occupations enhanced multifunctionality.

While Cracolici et al. (2009) conducted evaluations on tourism sustainability and economic efficiency, that study did not focus on agritourism. Studies on Italian agritourism were conducted mainly from the perspectives of farm diversification and multifunctionality (Fanfani and Galizzi, 2000; Velázquez, 2005) or were regionally focused (Tondini, 1995; Ohe and Ciani,1998) while there have been studies on local brand products, such as DOC wines, but these were not in connection with agritourism (Viganò, 2005; Belletti et al., 2007; Gatti, 2009). DOC is the most common rank of three levels of Italian quality wines meaning 'Denominazione di Origine Controllata', controlled origin denomination.

As shown in Table 1, agritourism in Italy has experienced rapid growth, with factors in terms of both supply and demand driving that development. As for demand factors, it was pointed out that both domestic and inbound demand have worked for the development of the agritourism market (Ohe and Ciani, 2010). Abundant local diversity in farm and rural cultures in Italy and the entrepreneurship of Italian farmers have been cited as widespread supply side factors in Italy (Ohe and Ciani, 1998).

Table 1. Growth of Agritourism in Italy			
Year	1998	2004	2004/1998 ratio
No. agritourism farms	8,034	11,575	1.44
No. beds	93,824	140,685	1.50
No. farms providing restaurant service	4,724	6,833	1.45

Source : *Dati Annuali Sull'agriturismo* by the Italian National Institute of Statistics (ISTAT).

To sum up, the connection between rural tourism and the local tangible and intangible cultural heritage, which the local community has traditionally nurtured and is related to the local identity and diversity of local culture, has not been evaluated conceptually and empirically, so this connection should be more fully explored.

Conceptual framework for the utilization of local cultural resources and diversification

Here, we present an economic framework to explore the relationship between the utilization of local cultural resources and the diversification of agritourism. We consider a micro level operator's subjective equilibrium model because we use micro level data for estimation. Market equilibriums at the regional and national levels are assumed to be attained from the aggregation of these micro-level behaviours.

To simplify the discussion here, we focus on the two contrasting types of activities or

attractions: local culture-based activities and facility-based activities that have nothing to do with local culture. We define these two types of activities by making different assumptions for each activity. Assumptions for local cultural resources are based on the following. First, these resources exert positive externalities on society, which are often referred to as the multifunctionality of agriculture as mentioned above. Of course, although agriculture generates negative externalities as well as positive externalities, such as the contamination of water resources, we assume that negative externalities are a given condition here. Our focus therefore was on the net positive externalities that remain after any negative externalities have been deducted from positive ones. The second assumption is that the utilization of local cultural resources means the internalization of externalities to generate income without an increase in the marginal cost of utilization. Put another way, it is assumed that if an installation cost exists, which shifts upward the marginal cost, the facility installation is identical with internalization benefits, which shifts downward the marginal cost. In reality, however, costs of facility installation will be larger than the externality, so this assumption undervalues the upward shift of the *MC* curve caused by the facility installation. Still, under this assumption, our main point is not influenced by such costs because even if the facility installation cost is larger than the externality, the burden of facility installation only becomes heavier. Therefore, from these considerations, it is natural to assume that the effect of these local cultural resources on prices is not large, but that their effect in generating income will be greater than could be expected from price increases.

With regard to facility-based activity that has nothing to do with local culture, we define such activity with the following assumptions, which contrast with those for local culture-based activities. First, no externality is generated along with the process of service production. Second, although the demand shift effect can be increased by facility investment, the marginal cost will shift upwardly as well due to the installation cost of facilities. Therefore, third, the price increase effect will be over-estimated, and operators will not accrue benefit from the facility installation unless there is a sufficiently large demand increase.

These assumptions, that is, those made for local culture-based and facility-based agritourism, are illustrated in Figure 1. This figure shows these two cases of agritourism diversification and subjective equilibrium points for a typical agritourism operator. Service prices and costs in value terms are measured vertically and activity levels in value terms are measured horizontally. Activity levels are outcome-based, and include not only diversification of activity, but also quantitative enlargement of activity. The values of services provided by agritourism farms are assumed to be properly evaluated according to the prices of accommodation in a single market. As mentioned below, data that we use are from a nationwide survey so that it is considered that this assumption of agritourism as a single good is satisfied.

In the figure, right upward curves illustrate the marginal cost curves *MC* because the marginal cost will also increase when the activity level increases. Curves are actually depicted as linear,

which means that agritourism is a business with a constant return to scale. This is because agritourism is legally stipulated as a side business of farm activity and therefore its scale is constrained, unlike that of hotels in general: the maximum available number of beds for tourists is limited from twelve to thirty depending on the regional law. Right downward curves illustrate the marginal revenue curves MR because repeat visitors are not uncommon in agritourism because of consumer loyalty. Under the assumption of the same demand shift in the two cases, first in the facility-based case, facility installation normally is undertaken under the expectation of a demand upward shift from MR_0 to MR_1 and of higher prices as a consequence while the marginal cost curve will shift upwardly from MC_0 to MC_1 due to the installation cost of the facility. In Italy, the demand for agritourism has been growing steadily, which means that MR upward shifts have occurred in reality. Subsequently, a new equilibrium point becomes e_1 after the facility installation from the initial equilibrium point e_0. At the new equilibrium point, both levels of activity and prices increase, and thus the farmer's gain increases as well. In the facility-based case, however, the portion of price increase from p_0 to p_1 includes the portion of marginal cost increase (from p_2 to p_1) in addition to the portion of demand increase (from p_0 to p_2).
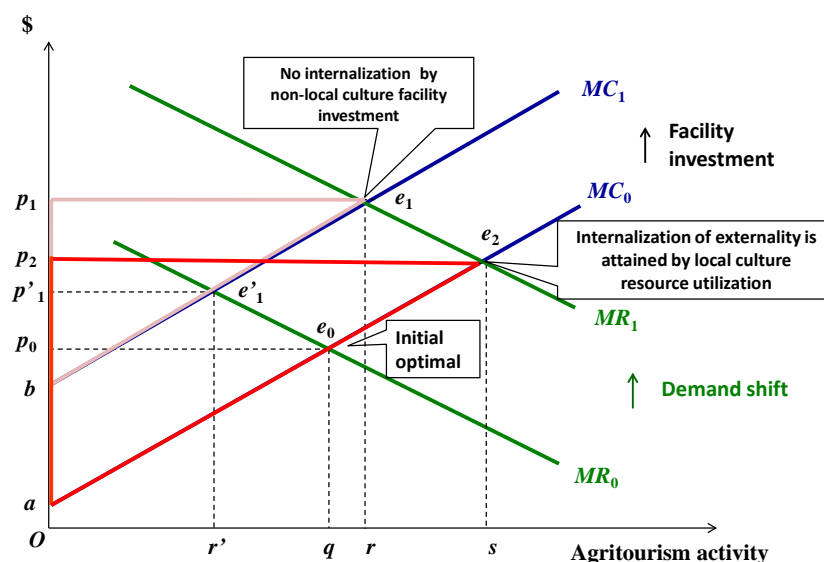
Figure 1. Operator's subjective equilibrium of agritourism diversification

In contrast, in the case of local culture resource-based activity or attractions, the new optimal point is e_2 because the positive externalities that these resources have are internalized into income through agritourism. This is because, if externalities exist, MC_1 becomes the private marginal cost curve while MC_0 becomes the marginal social cost because the vertical gap between the two curves expresses the existence of externality. When those operators internalize the externality into new activities that generate income sources, then the MC_1 curve eventually shifts down to MC_0 as mentioned above. Thus, MC_0 will also represent the actual marginal cost

after internalization at the new optimal point e_2.

However, this shift downward of the *MC* curve will not occur with the non-local culture-based case because of the absence of externality or its internalization process. Then the farmer's gain in the case based on local cultural resources, depicted as the triangle ae_2p_2, will be greater than the case based on a non-local cultural facility depicted as another triangle, be_1p_1. This means that a simple increase in price does not always guarantee an increase in the farmer's gain because of the marginal cost shift.

Typical examples of the above two contrasting cases are swimming pools for outdoors and restaurants for indoors. Although an accommodation facility is the common minimum requirement from the viewpoint of diversification, we focus on contrasting the two diverse facilities here. A farm restaurant embodies a diverse local gastronomical culture in connection with externalities while a swimming pool has nothing to do with local cultural resources without externalities. Swimming pools were never commonly used by ordinary peasants, whereas the landlord class occasionally had swimming pools for personal use. Although swimming pools provided as part of agritourism are neither in the rural tradition nor connected with local identity, they have recently increased as agritourism has evolved for the following reasons. Peak demand for agritourism is in summer, so tourists want to escape from heat, especially in Italy. In this respect, swimming pools that provide outdoor recreation as well as escape from the heat are effective in creating a demand increase in the peak season and differentiate an operator's agritourism facilities from those of rivals; however, swimming pools are very seasonally limited facilities. In contrast, although the demand for farm restaurants has seasonality as well, operators can expect day trippers in addition to lodging tourists, making a year-round operation possible. Thus, while revenue per capita day tripper will be lower than in the case of lodging tourists, the demand for restaurants is more stable than that for swimming pools. The difference between these two facilities depends not only on differences between indoor and outdoor facilities, but on differences in the demand characteristics. Moreover, restaurants can create a year round demand shift through utilization of local food cultural resources unlike swimming pools, the use of which is accompanied by an unavoidable seasonality in demand.

To summarize, we should be careful in only looking at the price increase effect and understand that it does not guarantee an increase in farmer's gain as mentioned above. If a farmer makes a decision by only looking at the price increase without consideration of an increase in *MC*, sound management of one's own agritourism would be lost because it is considered that the larger the installation cost of a facility, the larger the gap between a nominal price increase and the farmer's actual gain. Therefore, when we evaluate facility-based diversification from the price increase aspect, unless we consider the upward shift of *MC*, we tend to overestimate the demand shift effect. We should pay attention to this gap between the nominal price and farmers' actual gain.

Table 2. Classification of goods, services & resources utilized by agritourism				
Connection with local cultural heritage	Necessity of facility installation*: MC upward shift	On-farm or off-farm resources for utilization	Example of goods, services & resources	Internalization: MC downward shift
None: accompanied by no externality	Yes (Facility based)	On-farm resources	Accommodation facility	None
			Swimming pool	
			Availability for disabled	
Yes: accompanied by externalities (Local culture based)			Restaurant	Yes
			Equitation	
	None		Educational farm	
			Organic farming	
		On/off-farm private goods with traits of local public goods	Local brand products	
		Off-farm local public goods	World heritage sites	

Note: *facility installation cost for agritourism is considered here other than that for conventional agricultural purposes.

Connection of agritourism activities and attractions with local cultural resources

Given the conceptual framework with a dichotomous classification as a purely conceptual model, we classified actual activities conducted by agritourism. Table 2 shows actual activities and attractions that constitute agritourism resources available for tourists, which were also classified according to whether services are provided on- or off-farm and are facility- or local culture-based. This is because although an operator conducts agritourism activity on an on-farm basis, available resources exist not only on the farm, but also outside of the farmyard. With respect to goods, services and resources shown under the broken horizontal line in Table 2, operators can internalize externalities of local cultural resources through agritourism, which causes the downward shift of MC_1 to MC_0.

Now we examine three types of local culture-based activities and attractions, with the exception of restaurants, which were already mentioned. The first type of activity or attraction consists of off-farm local cultural resources that operators take advantage of that generate externalities as local public goods. Examples are world heritage sites designated by UNESCO. World heritage sites exert positive externalities not only to the surrounding local community but also to the global community. Italy has many such sites, so that their impact on the local

economy will extend widely. Although the internalization of externalities was done mainly by those who use resources locally in tourism businesses, which includes agritourism, for our purpose here we focus on agritourism-related effects only. Operators take advantage of these heritage sites as simple users of externalities. In the case of local public goods, operators do not pay for the benefit of externalities, so that the MC curve does not shift, as in the case when there is no facility installation. Therefore, the MC_0 curve remains in place because beneficiaries stay at the social marginal cost, which is MC_0 in this figure if externality exists without payment by beneficiaries for that externality, and only the MR curve shifts upwardly. Thus in this type, an increase in activity level causes an increase in prices and in farmer's gain as well at the new optimal point e_2.

The second kind of local culture-based resource consists of local brand products that are produced by farmers themselves or by the local food processing industry within a designated area. A typical example is DOC, i.e., controlled designation of origin for wine. Local brand products exercise positive externalities to the radius of designated local areas in the enhancement of the attractiveness of the production area for tourists. Local brand production is privately conducted and locally designated, and at the same time these local brand products generate externalities because they have an aspect of local public goods as well. If operators are simple beneficiaries of externalities, then MC will not shift upward as mentioned. In contrast, if operators are generators of externality, MC_1 becomes the private marginal cost curve while MC_0 becomes the marginal social cost due to the existence of externality. When those operators internalize the externality into new activities generating income sources, then the MC_1 curve eventually shifts down to MC_0 as mentioned above. Thus, in any case, MC_0 will represent the actual marginal cost after internalization at the new optimal point e_2. Local restaurants in general can use these products for foodstuff and sell them to tourists. In this respect, it is fair to say that these products are private goods with an aspect of local public goods or have the intermediate characteristic of on-farm and off-farm resources because some operators are producers of these goods while others are only users of them.

The last type is individual-based activity not accompanied by special facilities, such as organic farming and educational farm (fattoria didattica) activity. These activities basically do not need special facilities for agritourism that differ from those needed for conventional farming. Even if such facilities are necessary, they will add only trivial installation costs, e.g., additional toilets for visiting children. Educational farm activity provides an opportunity for children to learn about farming and rural life through visits to these farms. This activity is usually conducted by individual farmers or a farmer's family. In these cases farmers internalize on-farm resources that have local cultural identity. Point e_2 is again the new optimal point because no MC shift occurs from the initial MC_0 because of no additional facility installation cost and the internalization of externalities.

Given the considerations above, next we will explore empirically to what extent these types

of services influence the prices of agritourism by examining the following question of which will work more strongly: local cultural resource-based services or facility-based tourism.

Data and methodology

Data were obtained from "Agriturist 2005", a catalogue of agritourism farms, edited and issued by the largest national agritourism organization in Italy. This organization promotes agritourism, provides guidance to potential users through issuing information on agritourism and also has a reservation service (for instance, Agriturist, 1994). The catalogue covers the largest number of agritourism farms across the country and provides information on prices and the services offered by the farms associated with this organization. Photographs of each farm are also provided. The drawback of these data is that we cannot evaluate subtle differences in services because published prices are grouped according to four ordinal levels. Nevertheless, other than this catalogue there are no other publicly available micro-level data on a nationwide basis despite the improvement in government statistics on agritourism. Thus this catalogue provides the most reliable micro-level agritourism data based on the same yardstick regardless of the region within the country. We used all of the population involved in agritourism in this database, not just a sample.

  To make comparisons with Agriturist data, we used data from Annuario Statistico Italiano (ASI) issued by ISTAT, the National Institute of Statistics. ASI also provides agritourism data although the data are not micro data, but are regionally aggregated. Data on local brand products were obtained at the regional level as of the year 2004 from the Annuario Dell'agricoltura Italiana by INEA, National Institute of Agricultural Economics, and data on world heritage sites were taken from the World Heritage List compiled by UNESCO in 2004.

  We conducted statistical tests to clarify the regional characteristics in agritourism and estimated the price determinant function with the notion of the hedonic pricing function to examine the influence of local culture resource-based factors on the price. However, because of constraints placed by the data on prices as mentioned above, our estimation is actually quasi-hedonic rather than exactly hedonic.

Characteristics of data on agritourism

Before embarking on the results of the subsequent analysis, it is necessary to grasp the characteristics of the data. From the ISTAT data, we can regionally compare differences in the commonly disclosed basic items between the Agriturist and ISTAT data, because the ISTAT data do not allow examination at the micro-level due to regional aggregation as mentioned above while the Agriturist data do.

  Table 3 contrasts the differences between the two data sources in three common regional classifications. We compared the growth of agritourism in the three regions in terms of the regional level and farm level. Data from Agriturist show that the percentage share in terms of the

number of farms is larger in central regions and smaller in the northern regions than shown by ISTAT. Central regions as represented by Tuscany are considered to be the growth center of agritourism in Italy (Ohe and Ciani, 1998). In contrast to growth in terms of the number of agritourism farms, growth is indicated by the number of beds on agritourism farms. However, the maximum number of beds in a facility is legally stipulated in each region as mentioned earlier, i.e. 30 beds in Tuscany and 12 beds in the north. In terms of the number of beds as a proxy of business size in agritourism, the percentage share of the total number of beds in the central regions from Agriturist data is larger than those from ISTAT data.

In short, Agriturist data, which we use, have an upper bias in terms of the size of agritourism activity. Thus, while we should be careful about this upper bias, this bias also means that we will be able to forecast what will happen in the future after the increase in the number of beds using Agriturist data, which is an advantage of using those data.

Table 3. Sample characteristics of agritourism farms associated with Agriturist compared with ISTAT data

Region	No. agritourism farms			No. beds on agritourism farms			Average no. beds		
	Data source		(B)/(A) ratio	Data source		(B)/(A) ratio	Data source		(B)/(A) ratio
	Istat(A)	Agriturist(B)		Istat(A)	Agriturist(B)		Istat(A)	Agriturist(B)	
North	4,582 (39.6)	422 (26.6)	9.2%	48,142 (34.2)	6,211 (19.5)	12.9%	10.5	14.7	1.40
Central	4,530 (39.1)	843 (53.1)	18.6%	62,055 (44.1)	19,569 (61.3)	31.5%	13.7	23.2	1.69
South	2,463 (21.3)	322 (20.3)	13.1%	30,488 (21.7)	6,129 (19.2)	20.1%	12.4	19.0	1.54
Total	11,575 (100.0)	1,587 (100.0)	13.7%	140,685 (100.0)	31,909 (100.0)	22.7%	12.2	20.1	1.65
t test	-	-	-	-	-	-	***		-

Note: Agriturist 2005 by Agriturist, data at 2004 in Annuario Statistico Italiano by ISTAT(the National Institute of Statistics). Numbers in parenthesis are % share of each region. *** implies 1% significance

Statistical comparison of regional characteristics

Tables 4 and 5 show comparisons of regional differences in the average bed number, types of accommodation, facility-based and/or local culture-based services, price levels and cultural resources available for tourism.

In comparison with other regions examined, agritourism in the north was operated on a rather small scale in terms of the number of beds in any type of room accommodation and in the number of services other than accommodation services and prices were relatively low. Conversely, operations in the central region were larger, with more than half providing apartment accommodation; prices were highest among the regions. Also, there was a contrast between the high portion of facility-based services and lower portion of local culture-based services. Those in the south operated with the highest portion of local culture-based activities such as restaurants, were intermediate between the other two regions in terms of size and in the middle in terms of the number of beds available, and prices were low. In short, agritourism in

Table 4. Regional comparison of agritourism in Italy				% of agritourism farms	
Items	Region			Result	Test
	North	Central	South		
Average no. beds (farms that offer rooms & apartments)	16.4	22.9	19.9	***	mt
Average no. beds (farms that offer only rooms)	12.8	13.9	14.7	**	mt
Average no. beds (farms that offer only apartments)	13.1	20.1	17.8	***	mt
Only rooms available	39.6	18.6	47.7	***	chi
Only apartments available	23.9	52.3	26.4		
Rooms and apartments available	25.6	28.6	24.9		
Swimming pool	15.6	65.4	25.3	***	chi
Barrier free	38.2	45.5	44.0	**	chi
Tennis court	3.8	9.0	11.9	***	chi
Camping site	7.4	3.7	14.4	***	chi
Restaurant	55.5	38.2	81.2	***	chi
Equitation service	15.6	16.1	20.2	n.s.	chi
Educational farm	14.5	8.3	16.3	***	chi
Organic farming	17.5	22.8	33.6	***	chi
Low level (fee level for accommodation ≦ 20 Euro per night)	38.9	19.0	37.0	***	chi
Higher level (fee level for accommodation ≧ 40 Euro)	21.2	36.4	18.8		

Source: Agriturist 2005 by Agriturist

Notes: ***, ** implies 1%, 5% significance. mt and chi mean multiple test and chi-square test, respectively.

Table 5. No. world heritage sites, local brand products, and operating rates of agritourism and hotels					
Items	Region			Results	Test
	North	Central	South		
No. world heritage sites	1.9	3.5	1.6	n.s.	mt
No. DOC wine brands	15.5	20.8	12.6	n.s.	mt
No. DOCG wine brands	1.9	2.0	0.6	n.s.	mt
No. IGT wine brands	5.1	4.3	7.8	n.s.	mt
No. PDO and PGI food products	10.5	7.8	7.3	n.s.	mt
No. traditional agri-food products	207.9	236.0	176.1	n.s.	mt
Operating rate for agritourism	43.9	40.2	31.0	n.s.	mt
Operating rate for hotels	115.3	122.6	94.2	+	mt

Source: Original data were obtained at regional level as of 2004 from Annuario Dell'agricoltura Italiana by INEA for local brand products, Annuario Statistico Italiano by ISTAT and World Heritage List by UNESCO for world heritage sites.

Note: mt means multiple test. n.s. and + mean no significance among regions and 20% significance (as reference). DOCG and IGT indicate levels of Italian quality wines in accordance with EU category: Denominazione di Origine Controllata e Garantita (DOCG), the highest rank, and Indicazione geografica tipica (IGT), the initial rank. Likewise, the designation of PDO and PGI are given to traditional quality farm products and foodstuffs by the EU Commission: Protected Designation of Origin (PDO), Denominazione di Origine Protetta, and Protected Geographical Indication (PGI), Indicazione Geografica Protetta.

Italy is characterized as embracing regional diversity. The percent of farms offering facility-based services such as a swimming pool goes along with the number of beds. These facts suggest that quantitative enlargement and diversification based on local cultural resources do not go along with each other. Bearing in mind these findings, we look into what services will strongly influence prices below.

Estimation of price determinant function

The estimation model assumes that prices are determined by four vectors, which are the combination of local culture-based and facility-based activities as tabulated in Table 2.

$p=g$ (*fb*, *fc*, *lcpr*, *lcpc*)

where,

$p=$ prices of accommodation

fb= vector of non-local culture- and facility-based services

fc= vector of local culture- and facility-based services

lcpr= vector of local culture based on farm service activity

lcpc= vector of local cultural factors as local public goods

Prices are not a value term, but are expressed by four groupings, as explained above. Thus we used the explained variable as an ordinal variable of price level; less than 20 Euro=1, from 20 to 30 Euro=2, from 30 to 40 Euro=3, over 40 Euro=4. Although prices with or without meal service should be evaluated, this data constraint does not allow for such a detailed and subtle examination. We can, however, investigate the influence on prices by facility-based services and local culture-based services and deal with the issue of meal service by taking into account restaurant service.

For the explanatory variables, as actual variables of the *fb* vector, non-local culture- and facility-based service, we considered the number of beds, type of accommodation facility (room=1, apartment=2, room and apartment=3), provision of a camping site (yes=1, no=0), provision of a swimming pool (yes=1, no=0), availability for the disabled (yes=1, no=0), and provision of a tennis court (yes=1, no=0), as based on the above results.

As a variable of the *fc* vector, local culture- and facility-based service, we considered operation of a restaurant (yes=1, no=0). As variables of the *lcpr* vector, personally conducted local culture-based services, we considered the following three activities: organic farming (yes=1, no=0), educational farm (yes=1, no=0), and equitation service (yes=1, no=0). As variables of the *lcpc* vector, indicators of local cultural public goods, we considered the number of designated world heritage sites in each region and also the number of DOC wines as typical local brand products. In comparison with the variable of DOC wines, we used the number of traditional agri-food products and various combinations of local brand products in place of the DOC wine variable. Since these local brand products are private goods with positive externality,

we focus on the aspects of local public goods of these products rather than treating them as simple private goods. Ordered logit model estimation was employed for estimation and conducted at national and three regional levels. This is because regional dummy variables are highly correlated with variables of local cultural resources. Sample size was 1634 for the national level.

Results

Estimation results are tabulated in Tables 6 to 9. Results on the national level showed that the parameters of facility-based services were positive except that of a camping site, which was negative (Table 6). Particularly, the parameter of a swimming pool and its odds ratio were the largest with 1% significance among services examined, which indicates that the availability of a swimming pool is the most influential factor that raises prices. This was followed by availability for the disabled, number of beds and a tennis court, although availability of a tennis court was not highly statistically significant. The negative sign for a camping site, 1% significance, is consistent with the common perception that this facility is a less expensive accommodation facility for both operators and tourists, which also suggests that the market is functioning properly.

Among parameters of local culture-based services, a restaurant, educational farm, number of world heritage sites and the number of DOC wines were positive with significance (5% and 1%). Although we used other local brand products as variables that were not shown in the table, the results were mostly identical with the tabulated cases. Therefore, we only listed results for two cases as representative local brand products. However, the odds ratios of these local brand products were all smaller than that of a swimming pool. Parameters of world heritage sites and DOC wine were smaller than those of personal local culture-based services such as educational farms, as were odds ratios. This means that local public goods exert a certain level of influence on prices, but not as highly as individually conducted local culture-based services. This result is also reasonable. On the other hand, organic farming and equitation service did not have statistically significant parameters, which indicates that these two activities do not exert any influence on prices.

In considering the examined variables according to region, in the north the largest odds ratio was for a swimming pool followed by that of availability for the disabled and number of beds (Table 7). The parameter of a camping site was negative, but mildly influenced prices because of the small odds ratio (1% significance). Among local cultural factors, while there was no significant parameter of individually conducted services, those of world heritage sites and DOC wine were positive with significance (5% or 1% significance). In short, the north is characterized as having no connection between individually conducted local culture-based services and prices; thus, it is the least diversified area.

Table 6. Results of estimation of rate determinant function (all of Italy)				
Region	All of Italy			
Variables	Parameter	Odds ratio	Parameter	Odds ratio
No. beds	0.0139***	1.014	0.0138***	1.0139
	(0.0039)		(0.0039)	
Camping site (yes=1, no=0)	-1.0247***	0.3589	-1.0035***	0.3666
	(0.1987)		(0.1982)	
Swimming pool (yes=1, no=0)	1.1060***	3.0223	1.1244***	3.0783
	(0.1102)		(0.1109)	
Availability for disabled (yes=1, no=0)	0.3450***	1.4120	0.3404***	1.4055
	(-0.1007)		(0.1008)	
Tennis court (yes=1, no=0)	0.3155+	1.3710	0.3000+	1.3499
	(0.1954)		(0.1949)	
Restaurant (yes=1, no=0)	0.3792***	1.4612	0.3900***	1.4770
	(0.1058)		(0.1059)	
Organic farming (yes=1, no=0)	-0.0437	0.9573	-0.0565	0.9451
	(0.1180)		(0.1179)	
Educational farm (yes=1, no=0)	0.3284**	1.3888	0.3333**	1.3956
	(0.1619)		(0.1620)	
Equitation (yes=1, no=0)	0.0891	1.0933	0.1200	1.1275
	(0.1366)		(0.1364)	
No. world heritage sites	0.0874***	1.0913	0.1095***	1.1157
	(0.0280)		(0.0308)	
No. DOC wines	0.0288***	1.0293	-	-
	(0.0644)		-	
No. traditional agri-food products	-	-	0.0017***	1.0017
	-		(0.0006)	
LR chi-square	-1656.3589***		-1662.4597***	
Sample size	1534		1534	

Source: same as Tables 4 and 5.

Note: ***, **, *,+ mean 1%, 5%, 10%, 20% (reference) significance, respectively, and figure in the parenthesis shows standard deviation.

Region	North			
Variables	Parameter	Odds ratio	Parameter	Odds ratio
No. beds	0.0363*** (0.0114)	1.0369	0.0318*** (0.0110)	1.0323
Camping site (yes=1, no=0)	-1.0810*** (0.3688)	0.3392	-1.1323*** (0.3674)	0.3223
Swimming pool (yes=1, no=0)	1.3310*** (0.3006)	3.7847	1.3141*** (0.2998)	3.7212
Availability for disabled (yes=1, no=0)	0.7478*** (0.2062)	2.1124	0.7755*** (0.2063)	2.1717
Tennis court (yes=1, no=0)	-0.1448 (0.5758)	0.8652	-0.1522 (0.5726)	0.8588
Restaurant (yes=1, no=0)	-0.1778 (0.2091)	0.8371	-0.1406 (0.2080)	0.8688
Organic farming (yes=1, no=0)	0.3731+ (0.2530)	1.4522	0.3747+ (0.2519)	1.4545
Educational farm (yes=1, no=0)	0.3012 (0.2948)	1.3515	0.2720 (0.2948)	1.3126
Equitation (yes=1, no=0)	0.0288 (0.2824)	1.0292	0.0812 (0.2813)	1.0846
No. world heritage sites	0.1497** (0.0739)	1.1615	0.3651*** (0.8459)	1.4407
No. DOC wines	0.0362*** (0.0078)	1.0369	- -	-
No. traditional agri-food products	- -	-	0.0059*** (0.0012)	1.0059
LR chi-square	-422.8309***		-421.2638***	
Sample size	377		377	

Table 7. Results of estimation of rate determinant function (north)

Source: same as Tables 4 and 5.

In the central region, multicollinearity was observed because of the high correlation between world heritage sites and DOC wine, so we abandoned the use of these two variables together and made estimations using each variable separately (Table 8). The odds ratio for a swimming pool was the largest (1% significance), as in the north, but that of a restaurant followed (1% significance). A camping site was a negative parameter with a low odds ratio (1% significance). With respect to local culture-based services, the parameters of world heritage sites and DOC wine were positive with statistical significance. In contrast, there was no parameter of individual local culture-based services with significance.

Table 8. Results of estimation of rate determinant function (central region)						
Region	Central region					
Variables	Parameter	Odds ratio	Parameter	Odds ratio	Parameter	Odds ratio
No. beds	0.0090[*]	1.0090	0.0090[*]	1.0090	0.0094[*]	1.0095
	(0.0047)		(0.0047)		(0.0047)	
Camping site (yes=1, no=0)	-1.0777[***]	0.3404	-1.0653[***]	0.3446	-1.1471[***]	0.3176
	(0.3643)		(0.3648)		(0.3638)	
Swimming pool (yes=1, no=0)	1.1240[***]	3.0771	1.1087[***]	3.0304	1.1535[***]	3.1692
	(0.1471)		(0.1471)		(0.1470)	
Availability for disabled (yes=1, no=0)	0.1228	1.1307	0.1133	1.1199	0.1215	1.1292
	(0.1357)		(0.1356)		(0.1357)	
Tennis court (yes=1, no=0)	0.4068[+]	1.5019	0.4012[+]	1.4936	0.3834[+]	1.4673
	(0.2525)		(0.2525)		(0.2520)	
Restaurant (yes=1, no=0)	0.7201[***]	2.0546	0.7292[***]	2.0735	0.6978[***]	2.0094
	(0.1500)		(0.1502)		(0.1496)	
Organic farming (yes=1, no=0)	-0.0946	0.9097	-0.0850	0.9185	-0.0900	0.9139
	(0.1629)		(0.1630)		(0.1626)	
Educational farm (yes=1, no=0)	0.15502	1.1677	0.1465	1.1578	0.1259	1.1342
	(0.2517)		(0.2517)		(0.2514)	
Equitation (yes=1, no=0)	0.1917	1.2113	0.1839	1.2019	0.2088	1.2321
	(-0.1877)		(0.1878)		(0.1877)	
No. world heritage sites	0.2080[***]	1.2312	-	-	-	-
	(0.0237)		-		-	
No. DOC wines	-	-	0.0542[***]	1.0557	-	-
	-		(0.0061)		-	
No. traditional agri-food products	-	-	-	-	0.0036[***]	1.0036
	-		-		(0.0004)	
LR chi-square	-902.4733[***]		-900.8289[***]		-905.7623[***]	
Sample size	886		886		886	

Source: same as Tables 4 and 5.

Note: Multifunctionality was observed between the world heritage variable and variables of DOC wine or traditional agri-food products, so only one of these variables was used for estimation.

In the south, having a restaurant had the largest odds ratio (5% significance), meaning that the presence of a restaurant is the most influential factor on prices. This was followed by a swimming pool and availability for the disabled (Table 9). These results indicate the significance of the local food culture in the south. On the other hand, neither local public goods, such as world heritage sites and DOC wine, nor individually conducted culture-based services, with the exception of a restaurant, were statistically significant.

Table 9. Results of estimation of rate determinant function (south)

Region	South			
Variables	Parameter	Odds ratio	Parameter	Odds ratio
No. beds	0.0162* (0.0096)	1.0163	0.0147^{+} (0.0098)	1.0149
Camping site (yes=1, no=0)	-0.8889*** (0.3351)	0.4111	-0.9085*** (0.3342)	0.4031
Swimming pool (yes=1, no=0)	0.7085** (0.2893)	2.0310	0.7517*** (0.2864)	2.1206
Availability for disabled (yes=1, no=0)	0.4171* (0.2344)	1.5175	0.4083* (0.2348)	1.5043
Tennis court (yes=1, no=0)	0.5142^{+} (0.3969)	1.6723	0.5339^{+} (0.3983)	1.7056
Restaurant (yes=1, no=0)	0.7454** (0.3323)	2.1073	0.7875** (0.3319)	2.1980
Organic farming (yes=1, no=0)	-0.2393 (0.2502)	0.7872	-0.2434 (0.2499)	0.7840
Educational farm (yes=1, no=0)	0.3258 (0.3202)	1.3852	0.3898 (0.3227)	1.4767
Equitation (yes=1, no=0)	-0.0923 (0.3042)	0.9118	-0.1122 (0.3020)	0.8939
No. world heritage sites	0.1119^{+} (0.0760)	1.1184	0.1575^{+} (0.1075)	1.1706
No. DOC wines	-0.0145 (0.0240)	0.9856	- -	-
No. traditional agri-food products	- -	-	-0.0019 (0.0026)	0.9981
LR chi-square	-301.9713***		-301.8750***	
Sample size	271		271	

Source: same as Tables 4 and 5.

To summarize, non-local culture-based and facility-based services as commonly exemplified by a swimming pool strongly influence prices across the country, which is consistent with our conceptual framework and common perception because of the existence of a fixed cost for the facility. Therefore, non-local culture-based services are the most commonly observed throughout country. In contrast, the influence from local culture-based activities such as restaurants differs from one region to another due to differences in the provision of boarding services among regions. This is evidence that rural cultural diversity is reflected upon in the agritourism activity.

One reason that organic farming statistically had no influence on prices in any of the regions is that there are already farm product markets in which organic products are dealt. Another

reason is that the value is reflected in the price of meals prepared in restaurants that use organic foodstuff. That equitation service had no significant influence on prices is because this service is not considered as a necessary service, but as an optional service, which means that it has not yet been considered as an independent market. It is considered that the regionally variable influence of an educational farm service is due to a newly inaugurated service, so this service has not been evaluated well at the regional level, but only at the wider national level.

In summary, it is safe to say that agritourism in Italy is evolving with two contrasting vectors: the uniform facility-based vector and the diverse local culture-based vector.

Conclusions

Results of the estimation of the price determinant function indicate that the influence of facility-based service on price formation is commonly observed across the country.

To strengthen a locality it is desirable for the evolution of agritourism to utilize local resources. Nevertheless, the most influential factor on prices is the facility without any local cultural resource base. The reason for the facility-based influence, which is a self-contradictory vector of agritourism, is that it is easy for consumers to recognize the difference in quality as visible hardware in terms of amenity improvement with a uniform style despite a non-negligible installation cost. Thus it is quicker for operators to achieve a response from consumers with installation of a facility. Because of that, facility installation is easily reflected in prices.

On the other hand, the problems of this facility-based, or hardware-based, evolution is that, firstly, the financial capability of farmers determines the level of facility installation so that small operators with low financial capability eventually will be excluded from participation in this evolution. Secondly, even if an operator has financial capability, unless the demand shift is large enough, facility installation does not always result in a better business outcome due to the upward shift of the MC curve, which represents the fixed cost on the business. Stated differently, suppose demand remains constant, the effect of nominal facility installation on price formation will be overestimated. Therefore, when growth in demand becomes stagnant, facility installation can be a heavy burden on the business of agritourism.

Consequently, it will be necessary for the sustainable development of agritourism to harness locality by creating a balance between facility-based services and local culture-based services. In this respect, it is important to develop software for the utilization of local resources and the establishment of markets for newly emerging local culture-based services in combination with facility-based services. At the same time, care should be taken, as a sharp price increase can ironically reduce revenue because agritourism is a price-elastic good. Thus, the segmentation of agritourism markets seems to be inevitable in the long term. Policy support should be focused on those software aspects.

References

Agriturist (1994), *Stato e Prospettive Dell'Agriturimo in Italia*, Agriturist, Rome.

Allali, K. (2009), 'Agricultural landscape externalities, agro-tourism and rural poverty reduction in Morocco', in Lipper, L., Sakuyama, T., Stringer, R., and Zilberman, D., (eds.) *Payment for Environmental Services in Agricultural Landscapes: Economic Policies and Poverty Reduction in Developing Countries*, FAO and Springer, Rome, pp 189-220.

Barbič, A. (1998), 'Cultural identity of the Slovenian countryside: territorial integrity and cultural diversity from the perspective of rural communities', *Agriculture and human values*, Vol 15, pp 253-265.

Belletti, G., Burgassi, T., Manco, E., Marescotti, A., Pacciani, A., and Scaramuzzi, S. (2007), 'The roles of geographical indications on the internationalization process of agri-food products', in Canavari, M., Regazzi, D., and Spadoni, R. (eds.) *International Marketing and International Trade of Quality Food Products*, Edizioni Avenue media, Bologna and Milan, pp 517-539.

Bonet, L. (2003), 'Cultural tourism', in Towse, R. (eds.) *A Handbook of Cultural Economics*, Edward Elgar, Cheltenham, pp 187-193.

Cohen, E. (1988), 'Authenticity and commoditization in tourism', *Annals of Tourism Research*, Vol 15, pp 371-386.

Cracolici, M.F., Cuffaro, M. and Nijkamp, P. (2009), 'Tourism sustainability and economic efficiency: a statistical analysis of Italian provinces', in Girard, L.F. and Nijkamp, P. (eds.), Cultural Tourism and Sustainable Local Development, Ashgate, Surry, pp 167-180.

De Beus, J. (1996), 'The value of national identity', in Klamer, A. (eds.), T*he Value of Culture: on the relationship between Economics and Arts*, Amsterdam University Press: Amsterdam, pp 166-186.

Di Giovine, M. A. (2009), *The Heritage-scape: Unesco World Heritage and Tourism*, Lexington Books, Maryland.

Dwyer, L. and Forsyth, P. (2006), *International Handbook on the Economics of Tourism*, Edward Elgar, Cheltenham.

Fanfani, R. and Galizzi, G. (2000), 'La multifunzionalità in agricoltura: l'agriturismo in Emilia-Romagna', *Il Systema Agro-Alimentare Dell'Emilia-Romagna: Ropporto* 1999, Franco Angeli, Milan, pp 311-328.

Garrod, B. and Fyall, A. (2000), 'Managing heritage tourism', *Annals of Tourism Research*, Vol 27, 682-708.

Garrod, B., Wornell, R., and Youell, R. (2006), 'Re-conceptualising rural resources as countryside capital: The case of rural tourism', *Journal of Rural Studies*, Vol 22, pp 117-128.

Gatti, S. (2009), 'Protected designation of origin, sustainable development and international policies: a survey of DOC wines from Emilia-Romagna', in Vaz, T. d. N., Nijkamp, P., and Rastoin, J. L. (eds.) *Traditional Food Production and Rural Sustainable Development: A European Challenge*, Ashgate, Surry, pp 255-265.

George, E. W., Mair, H., and Reid, D. G. (2009), *Rural Tourism Development: Localism and Cultural Change*, Channel View Publications, Ontario.

McKercher, B. and du Cros, H. (2002), *Cultural Tourism: The Partnership between Tourism and Cultural Heritage Management*, Haworth, New York, pp 115-134.

OECD (2001), *Multifunctionality: Towards an Analytical Framework*, OECD, Paris.

OECD (2003), *Multifunctionality: The Policy Implications*, OECD, Paris.

OECD (2005), *Multifunctionality in Agriculture: What Role for Private Initiatives?* OECD, Paris.

Ohe, Y. and Ciani, A. (1998), 'The activity and characteristics of agri-tourism farms: a study of Umbria, Italy', *The Bulletin of the Chugoku National Agricultural Experiment Station*, No 19, pp 1-18.

Ohe, Y. and Ciani, A. (2003), 'Evolutionary process of agri-tourism in central Italy, Umbria', *Japanese Journal of Tourism Studies*, No 2, pp 11-18.

Ohe, Y. (2007), 'Multifunctionality and rural tourism: a perspective on farm diversification', *Journal of International Farm Management*, Vol 4, pp 1-23.

Ohe, Y. (2008), 'Impact of rural tourism operated by retiree farmers on multifunctionality: Evidence from Chiba, Japan', *Asia Pacific Journal of Tourism Research*, Vol 13, No 4, pp 343-356.

Ohe, Y. and Ciani, A.(2010), The demand trend of Italian agritourism, in Brebbia, C.A. and Pineda, F.D. eds, *Sustainable Tourism IV*, WIT Press, Southampton, pp 437-448.

Page, S. J. and Getz, D. (1997), *The Business of Rural Tourism: International Perspectives*, International Thompson Business Press, London.

Robinson, M., Evans, N., Long, P., Sharpley, R., and Swarbrooke, J. (2000), *Tourism and Heritage Relationships: Global, National and Local Perspectives*, Business Education Publishers, Sunderland.

Royo-vela, M. (2009), Rural-cultural excursion conceptualization: a local tourism marketing management model based on tourist destination image measurement, *Tourism Management*, Vol 30, pp 419-428.

Sharpley, R. (1996), *Tourism & Leisure in the Countryside 2nd Edition*, ELM Publications, Huntingdon, pp 73-80.

Sharpley, R. (2005), 'Managing the countryside for tourism: a governance perspective', in Pender, L. and Sharpley, R. (eds.) *The Management of Tourism*, SAGE Publications, London, pp 175-187.

Sharpley, R. and Vass, A. (2005), 'Tourism, farming and diversification: an attitudinal study', *Tourism Management*, Vol 27, pp 1040-1052.

Throsby, D. (2001), *Economics and Culture*, Cambridge University Press, Cambridge.

Thorsby, D. (2009), Tourism, heritage and cultural sustainability: three 'golden rules', in Girard, L.F. and Nijkamp, P. (eds.), Cultural Tourism and Sustainable Local Development, Ashgate,

Surry, pp 13-29.

Timothy, D. J. (2007), *Managing Heritage and Cultural Tourism Resources: Critical Essays, Volume One*, Ashgate, Aldershot.

Timothy, D. J. and Boyd, S. W. (2003), *Heritage Tourism*, Pearson Education, Harlow, pp 33-34.

Tondini, E. (1995), *La Valutazione Dell' Agriturismo*, Regione Dell'Umbria, Perugia.

Van der Ploeg, J. D., Laurent, C., Blondeau, F., and Bonnafous, P. (2009), 'Farm diversity, classification schemes and multifunctionality', *Journal of environmental Management*, Vol 90 Supplement 2 , pp S124-S131.

Van Huylenbroeck, G. and Durand, G. (2003), *Multifunctional Agriculture: A New Paradigm for European Agriculture and Rural Development*, Ashgate, Aldershot.

Vanslembrouck, I., Van Huylenbroeck, G., and Van Meensel, J. (2005), 'Impact of agriculture on rural tourism: a hedonic pricing approach', *Journal of Agricultural Economics*, Vol 56, pp 17-30.

Velázquez, B. E. (2005), 'Agritourism in Italy', in *Multifunctionality in Agriculture: What Role for Private Initiatives?* OECD, Paris, pp 35-40.

Viganò, L. (2005), 'La qualità dei prodotti agricoli e agro-alimentari', *La Riforma Dello Sviluppo Rurale: Novità e Opportunità, Quaderno n.* 1, INEA, Rome, pp 63-74.