The Agritourism and the Role of eCommerce in the Agribusiness Evolution: Evidence from a Regional Survey

Salvatore Ammirato

GiudaLab, Department of Electronics, Computer Science and Systems, University of Calabria, Italy, ammirato@deis.unical.it

Abstract

Agritourism represents an important entrepreneurial strategy for rural communities in supporting the diversification of farms economy. In this sense, the adoption of effective eCommerce web interfaces by agritourisms can play a significant role in improving farms revenue streams. This study introduces a method able to evaluate eCommerce web interfaces of a sample of agritourisms. A particular attention is devoted in searching for statistical evidence relating web interfaces evaluation and agritourisms services. Furthermore, the paper presents the key findings of a survey of 176 agritourism firms carried out in Calabria (Italy) during 2006 using the proposed method.

Key words: Agritourism, eCommerce, Relocalisation, Short agri-Food Supply Chain, Calabria.

1 Introduction

In the era of the information and communication technologies, the use of eCommerce as a means to drive economic return is rapidly developing in various economic sectors [eMarketer, 2004; Eurostat, 2002]. On the contrary, in the agribusiness sector the eCommerce technologies are still not as diffused as their potentials. Moreover, there are significant differences in eCommerce adoption between agribusinesses placed in developed areas rather than in lagging behind regions. In the EU, the European Council has included the lagging behind regions in the “Objective 1” [European Council, 1999]; many of these regions, also referred as Lagging Rural Regions (shortly LRRs) [Ilbery et al., 2004], are characterized by low income levels, limited employment opportunities, dependency on agriculture, low diffusion of technology culture and low penetration of ICT [Ilbery and Kneafsey, 1998; Renting et al., 2003].

Calabria is a southern Italy LRR in which the agribusiness sector contributes for 7.8% to the aggregate regional product and accounts for 18.9% of the total employment in the region; both of these rates are approximately twice the equivalent national averages [Girardi et al., 2002]. In this context, the number of Calabrian agribusinesses which decide to introduce a form of agritourism enterprise are rapidly increasing; the growth rate of the number of new authorized activities in the agritourism, in the period 1999/2005, is equal to 64.8%, while the Italian national rate is 8.9% [agriturist, 2005].

This study, starting from a method developed by Volpentesta and Ammirato (2007), is designed to survey the evolution of the agribusiness sector, the eCommerce implementation level among agritourism enterprises, and the potential links between eCommerce effectiveness and agribusiness evolution. Based on this method, the results of a survey carried out in Calabria during 2006 are reported too. The paper is structured as follows. Section 2 introduces the theoretical background, section 3 is focalized the survey’s method and section 4 presents the key findings of the study and a brief discussion.
2 Theoretical background

Over the last years, the European agribusiness sector is facing new challenges due to deregulation and globalisation of the markets, increased customers’ quality requirements in agrifood products and the development of new technologies. The growing competitive pressure drives farmers in searching for new ways of doing business able to guarantee competitive advantage in facing the global companies, to expand farm operations, to use farm based products in new and innovative ways, to improve farm revenue streams and to develop new consumer market niches [Williams et al., 2001]. As stated in Van der Plog et al. [2002], the main question for European farmers seems to be “How, why, to what extent and under what conditions can the combination of activities within a rural enterprise positively affect costs, benefits, risks and prospects?”. Different studies show that a way to realise farmers’ expectations consists in operating both on the agrifood products, setting them with high quality and typicality features, and production processes, making shorter the long and complex agrifood supply chains. A successful approach in order to instil the concept of “typical and quality” on products is based on “relocalisation”. The relocalisation concept can be considered the antithesis of the globalisation idea and, thus, of the agriculture industrialization occurred the last decades. Relocalisation is characterized by the rediscovery of local traditions as a mean to gain wellbeing, genuineness and, in a more general sense, quality of life. Relocalisation extends the local idea meaning the shortest and simplest route from field to plate. In some cases, local is defined by a set distance; in all cases we refer to a self-contained trading area, with close contact between all parties and few middlemen. The importance to exploit the opportunities offered by the relocalisation, is confirmed by the growing farmers’ request for protection of geographical indications, designations of origin and certificates of specific character for agricultural products. Furthermore, “local and quality” are considered important by the CAP (Common Agricultural Policy) reform; in this sense, the European Union is enacting policies meant to reduce producers dependence on subsidies while increasing the competitiveness of agricultural products and returns to producers; nevertheless EU policies aim to reinvigorate rural communities and to encourage environmentally sound production methods [Clemens, 2004]. Strictly interconnected with relocalisation, the ability of typical agrifood producers in accessing to Short agri-Food Supply Chains (briey, SFSC) represents a means to reduce the final price to the consumer, to increase the producers revenue by removing the intermediaries, to build customer loyalty offering a “personal” quality guaranty on products [Renting et al., 2003]. Relocalisation and SFSC emerge as possible ways for modern rural development redefining identities, strategies, practices, interrelations and networks.

A form of secondary enterprise that offers much promise in adding value to a growing number of farm operations is agritourism. It can be deﬁned as a combination of natural settings and products of agricultural operations combined within a tourism experience. It includes providing tourists with opportunities to experience a broad spectrum of local agriculturally based products and services ranging from fruit stand shopping to winery, orchard, and cattle tours, from farm based bed and breakfast accommodation, to tourist participation in regional tours [Williams et al, 2001]. Agritourism represents a significant example of SFSC. Agritourism, while it reduces the agrifood supply chain stages, is able to be the contact point between the request for quality of life and the offer for typical products. The continuous growth in the number of farms offering agritourism activities, both in Europe and in North America [ISTAT, 2006; Che et al, 2005], conﬁrms the actual possibilities of agritourism to enhance farmers revenue streams.

A significant way to increase economic revenues from agritourism activities consists in the employment of an agritourism web interface. In this sense, different studies highlight the opportunities offered by the web, particularly by the eCommerce, as an effective and proﬁtable instrument for agribusiness ﬁrms [Volpentina et al, 2005; Salampasis et al, 2003; Igual et al., 2003] and that eCommerce effectiveness could be further improved developing web interfaces following trust models [Fritz et al., 2005; Canavari et al, 2005]. On the other hand, these studies have also demonstrate that farmers are not always able to catch the eCommerce opportunities, above all if compared with the expectations of the beneﬁts of such instrument.

3 Methodology

In this section, we summarize a method aimed to estimate the ability of the agritourisms in taking advantage of relocalisation and in supporting agribusiness to shorten the agrifood supply chain.
Moreover, the study analyses the level of attention which is devoted by agritourisms in adopting eCommerce B2C web interfaces as well as the ability of such web interfaces in exploiting relocalisation and SFSC as economic levers. In detail, after a classification of the agritourisms and their web interfaces, the method is able to provide: a frequency distribution analysis of the agritourisms based on the agritourism characteristics (the ability in being a mean to shorten the agri-food supply chain and a mean to exploit the relocalisation economic leverage); an evaluation of web interfaces of B2C e-commerce systems for agritourism products and services; statistical evidence, about differences in B2C e-commerce adoption depending on the agritourisms characteristics. The method is made up of 4 phases.

Phase 1: sample and unit of analysis definition. For this method, the reference universe, \( U \), is constituted by the set of all agritourisms placed in the selected region. For any \( u \) belonging to \( U \), a set of web pages, containing at least a brief description of the products and/or services by the agritourism, makes up the web interface of \( u \), \( w(u) \). The sample \( S \) for this analysis consists in the set of \( w(u) \), \( \forall u \in U \), such that \( w(u) \neq \emptyset \). The set of any \( u \in U \), such that \( w(u) \in S \), is the unit of analysis.

Phase 2: frequency distribution analysis. Based on official agritourisms databases, any \( u \) in the unit of analysis is classified with respect to the services it offers (hospitality, hospitality and agrifood products direct selling) and to the ability to interconnect with the local territory (availability of services or activities relating the agritourism with local territory).

Phase 3: functionality evaluation of web interfaces. Two functionality families of indexes, ProInd and SellInd, may be evaluated. The ProInd family is constituted by three different indexes: proIndGi, calculated for any \( w_i \in S \), which measures the ability of \( w_i \) to work as a promotion tool for the agritourism; proIndPi, calculated for any \( w_i = w(u) \in S \) such that the agritourism \( u \) is able to sell its agrifood products, specially addressed to measure the ability of \( w(u) \) in promoting the agrifood products; proIndHi, calculated for any \( w(u) \in S \) such that \( u \) is able to sell services relating the agritourism with the territory, to measure the web interface aptitude both in promoting the agritourism services and in relating the agriturisms with the local territory. With analogous logic, the SellInd indexes family is constituted by three different indexes, sellIndGi, sellIndPi and sellIndHi, which measure the ability of \( w_i \) to work as a products and/or services selling tool. The definition of such indexes is based on different evaluation functions derived from a contextualisation of the ‘7C Model’ [Volpentesta and Ammirato, 2007] to the agritourism sector (see Tab. 1). Each evaluation function is a sum of mostly binary variables whose values are determined according to the presence or not in \( w(u) \) of some selected characteristics (see Tab. 2).

Phase 4: dependency analysis of web interface effectiveness. “One way” and “two-way” ANOVA models are used in order to investigate whether the agritourism ability in using the web interface can be related with the relocalisation and SFSC features available in the agritourism. In such models, the indexes in phase 3 are used as dependent variables while the agritourisms characteristics, introduced in phase 2, are the independent variables.

4 Key findings

The proposed method has been applied to a sample of agritourisms located in Calabria (Italy) and has been carried out from April, 1st, to June, 30th, 2006. In line with phase 1 of the method, the reference universe has been formed using official agritourisms databases of the Italian Chambers of Commerce and of the Agriturist-Confagricoltura, the Italian Agritourism Confederation. For any agritourism in the universe of reference, its web interface has been identified by collecting information from the main agritourism specialized Italian web portals (agrilandia.com, agriturismo.it, agriline.it, agriturismiitaliani.it), from other Internet directories of agritourism resources and from four search engines on the Internet (Yahoo, Google, Altavista and MSN).

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1 For each \( u \), \( w(u) \) is constituted by the set of all web pages belonging to one or more of the following categories: (1) websites exclusively dedicated for the presentation of the \( u \) site and the services it offers, (2) web-sections and/or (3) technical cards, dedicated to \( u \), present on the main agritourism specialized web portals.
respectively, 1.40 for territory related agritourisms and 0.32 for the other ones), are statistically
main effect due to relocalisation for
sellIndGi
introduced in phase 3 have been calculated. It’s remarkable that the indexes show mean values much
176 agritourisms in the unit of analysis have been classiﬁed as in Fig. 1. The mean values for the indexes
The sample
Table 2
Table 1 Characteristics of web interfaces of agritourism e-commerce

Promotion Indexes

\[
\text{proInd}_1 = \sum_{k=1}^{65} c_{k,j} \begin{cases} 
  c_{k,j} = 0,1 & k \neq 4,7,9,10,11 \\
  c_{k,j} = 0,2 & k = 4,7,9,10,11 
\end{cases}
\]

Selling Indexes

\[
\text{sellInd}_1 = \sum_{k=1}^{65} c_{k,j} \quad \text{sellInd}_2 = \sum_{k=48}^{65} c_{k,j} 
\]

* only when referred to products selling

Community (customer versus customer)

| c41 = chat | c42 = instant messenger | c43 = agritourism forum/blogs/electronics board | c44 = community e-mail list | c45 = guestbook |

Commerce

| c46 = presence of room booking forms | c47 = presence of products order forms | c48 = presence of local tour booking forms | c49 = info about deposit to pay | c50 = info about special offers |

| c51 = info on delivery cost | c52 = info on delivery time and procedure | c53 = info on minimum of purchase | c54 = order traceability | c55 = info on contract withdrawal rights |

| c56 = description of legal sale conditions | c57 = payment with wire transfer | c58 = payment on delivery | c59 = payment with postal order | c60 = payment with credit card |

| c61 = enabled circuits | c62 = presence of credit card logos | c63 = presence of security systems (SSL & SET) | c64 = info on credit card transaction security |

Content

| c12 = agritourism proﬁle | c13 = possible ways to reach the site | c14 = local territory description | c15 = info about agritourisms activities | c16 = suggested itineraries/paths/visits |

| c17 = offered services | c18 = production, processing and preservation methods for typical products | c19 = designations of origins certifications | c20 = agritourism certifications | c21 = norms and laws regulating the agritourism activities |

| c22 = agritourism products traceability | c23 = recipes, curiosities and suggestions related to the territory | c24 = terms of personal data treatment | c25 = agritourism reviews | c26 = agritourism rooms virtual tours |

| c27 = photogallery | c28 = webmaster | c29 = visitors counter | c30 = rooms/apartments price list | c31 = agritourism products price list |

| c32 = other services price list | Customisation | c33 = site map | c34 = toll-free number | c35 = FAQ |

| c36 = information request form | c37 = e-mail address | c38 = site map | c39 = login/registration procedure | c40 = multiple languages |

| c41 = agritourism news | c42 = chat | c43 = instant messenger | c44 = agritourism forum/blogs/electronics board | c45 = community e-mail list |

| c46 = chat | c47 = instant messenger | c48 = agritourism forum/blogs/electronics board | c49 = community e-mail list | c50 = guestbook |

* only when referred to products selling

The sample 5 for the analysis is made up of 176 web interfaces. According to phase 2 of the method, the
176 agritourisms in the unit of analysis have been classiﬁed as in Fig. 1. The mean values for the indexes
introduced in phase 3 have been calculated. It’s remarkable that the indexes show mean values much
lower than their maximum possible values (see Fig. 2). The two-way ANOVA models for proIndGi and
sellIndGi, using agritourisms services and the interconnections with local territory as factors and
considering a 5% level of signiﬁcance, show that there aren’t interaction effects between factors; but the
main effect due to relocalisation for proIndGi is statistically signiﬁcant (see Fig. 3). Furthermore, the
differences in the mean values for proIndPi, considering relocalisation features as independent variable
(respectively, 1.40 for territory related agritourisms and 0.32 for the other ones), are statistically
confirmed by the one-way ANOVA test (sig. = 0.000). No statistically significant results have been detected from the one-way ANOVA tests for `proIndHi`, `sellIndPi` and `sellIndHi`.

<table>
<thead>
<tr>
<th>SFSC</th>
<th>Absence of links with the local territory</th>
<th>Activities/services territory-related</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>No agrifood products direct selling</td>
<td>8</td>
<td>17.6%</td>
<td>39</td>
</tr>
<tr>
<td>Agrifood products direct selling</td>
<td>29</td>
<td>61.4%</td>
<td>137</td>
</tr>
<tr>
<td>Overall</td>
<td>37</td>
<td>90.0%</td>
<td>176</td>
</tr>
</tbody>
</table>

Figure 1 Frequency distribution of agritourism number per offered services

<table>
<thead>
<tr>
<th>SFSC</th>
<th>Relocalisation</th>
<th>proIndG (51)</th>
<th>proIndP (7)</th>
<th>proIndHi (13)</th>
<th>sellIndG (19)</th>
<th>sellIndP (13)</th>
<th>sellIndHi (9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No agrifood products direct selling</td>
<td>Absence of links with the local territory</td>
<td>16.5</td>
<td>.3</td>
<td>2.8</td>
<td>1.8</td>
<td>.13</td>
<td>1.38</td>
</tr>
<tr>
<td></td>
<td>Activities/services territory-related</td>
<td>18.93</td>
<td>1.14</td>
<td>5.52</td>
<td>1.28</td>
<td>.07</td>
<td>1.28</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>18.35</td>
<td>1.03</td>
<td>4.95</td>
<td>1.30</td>
<td>.08</td>
<td>1.30</td>
</tr>
<tr>
<td>Agrifood products direct selling</td>
<td>Absence of links with the local territory</td>
<td>13.10</td>
<td>.32</td>
<td>3.32</td>
<td>.52</td>
<td>.03</td>
<td>.52</td>
</tr>
<tr>
<td></td>
<td>Activities/services territory-related</td>
<td>18.86</td>
<td>1.40</td>
<td>5.58</td>
<td>1.25</td>
<td>.19</td>
<td>1.18</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>17.58</td>
<td>1.16</td>
<td>5.08</td>
<td>1.09</td>
<td>.16</td>
<td>1.03</td>
</tr>
<tr>
<td>Overall</td>
<td>Absence of links with the local territory</td>
<td>13.74</td>
<td>.38</td>
<td>3.23</td>
<td>.69</td>
<td>.05</td>
<td>.69</td>
</tr>
<tr>
<td></td>
<td>Activities/services territory-related</td>
<td>18.88</td>
<td>1.34</td>
<td>5.57</td>
<td>1.26</td>
<td>.17</td>
<td>1.20</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>17.74</td>
<td>1.13</td>
<td>5.05</td>
<td>1.13</td>
<td>.14</td>
<td>1.09</td>
</tr>
</tbody>
</table>

Figure 2: Indexes mean values comparison related to agritourism offered services and to agritourism ability to connect with the territory. In brackets, the maximum possible values for each of the indexes.

Survey results highlight that, generally, Calabrian agribusinesses, with direct selling of their agrifood products through agritourism, understand the importance of this means in shortening the agrifood supply chains; furthermore, making available services or activities relating the agritourism with local territory, most agribusinesses exploit the relocalisation leverage in improving revenue streams. In contrast, data show a poor strategic approach to e-commerce from Calabrian agritourisms whether the web interface is considered a promotional tool or a selling tool. It’s remarkable that agritourisms offering links with local territory better exploit their web interfaces as promotional tools than the others.

The rapid agritourism activities development and the ability of farmers in catching the relocalisation and SFSC benefits, jar with the lack of Calabrian farmers’ ICT culture. Lessons emanating from successful initiatives in different parts of the world [Williams et al., 2001], point to the strategic importance of coordinating and linking agricultural and tourism policies with educational programs aimed to show how the strategic use of ICT can benefit farmers in rural areas. The identification of appropriate initiatives,
specifically addressed to stimulate the farmers’ wishes in employing and professionally managing ICT business services, can be a real opportunity to get over the regional structural limits in order to improve farmers’ economic returns.

5 References


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