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Sustainable Development for Rural Areas: A Survey on the Agritourism Rural Networks

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Abstract. The topic of sustainable growth is becoming central in the debate over the rural development policies. Rural communities can completely fulfil the new challenges in the area of sustainability only with the implementation of innovative forms of collaborations among their business networks. In this work, we consider a particular form of business collaboration arising within rural communities, namely Agritourism Rural Network (ARN). In an ARN, a farm, providing agritourism activities, represents a touchpoint between a network of business and organizations in a rural area and tourists interested in enjoying the local territory. With the aim to deeper the extend of the agritourism phenomenon in a rural region and the potential of the related ARNs in being means of sustainable development, we report main results of an empirical survey carried out in 2016 on a sample of 105 agritourism farms all belonging to the same region (Calabria, Italy). Results confirm our intuitions about the importance at farm level of setting agritourism activities and their impact for the ARN related to the farm and for the sustainable development of a local community as a whole.

Keywords: Sustainable development; Agritourism; Collaborative network; Agritourism Rural Network; ICT

1 Introduction

Rural communities have been heavily impacted from a wide range of changes, mainly consisting in the loss of economic importance of agricultural activities, low wages, a dramatic fall in employment rates and a large amount of people that left rural areas for big cities. Such changes exposed rural communities to the risk of inexorable decline, from an economic, social and environmental point of view.

To overcome the present unsustainable development model, rural communities are gaining an increasing awareness on the importance of territorial specific resources (e.g. typical foods, landscape, monuments, history, traditions) as a way to produce a long lasting development for rural area as a whole. Agrifood producers and other

organizations (e.g., suppliers of touristic service, craftsmen, local administrations) operating in rural areas have spontaneously started organizing in rural networks, as a way to answer the rural communities' needs in terms of socio-economic development, improving their revenue streams, developing new market niches and increase their competitiveness against large retail companies. Collaboration in the agrifood sector is characterized by a re-connection among producers and consumers that is known in literature as "re-localisation" whose aims are: "re-vitalisation of territory identity and rural community relations to local food and agriculture, linking with sustainable agriculture, economically viable and socially responsible practices"[1][2]. Collaboration based organization models which rise under the principle of re-localization are generally named Alternative AgriFood Networks (AAFNs) [3]. In this work we consider a particular form of AAFNs, namely Agritourism Rural Networks (ARNs), where farms, which deploy agritourism activities, represent a touchpoint between a network of rural actors (organizations, companies, public administrations) and tourists interested in enjoying the local territory [4]. This work aims to provide a deeper understanding of the ARN phenomenon evaluating its potentials in fostering socio-economic development of rural areas. Agritourism is able to balance needs of rural tourists with those of rural communities, offering a real opportunity for the economic and social development while mitigating undesirable impacts on environment and other socio-cultural aspects. In particular, we report main results of an empirical survey carried out in 2016 on a sample of 105 farms offering agritourism activities and all located in the same region (Calabria, Italy). After analysing the extent of the agritourism phenomena in the region, the survey was aimed to evaluate the presence of ARNs and their characteristics. A specific section has been devoted to introduce ICT tools useful to support collaboration among the ARN's members and to exploit the collectable big amount of data in order to design new patterns of sustainable development.

2 Theoretical Background

Over the last decades, both at political and scientific level there has been an increasing consensus on the need of a transition to sustainable rural development strategies [5][6]. Such strategies are aimed to balance economic growth with cultural and natural resource conservation [7], taking into account the three pillars of sustainability which are known as the Triple Bottom Line (TBL) [8]. Several authors have argued that the agricultural sector represent a 'seedbed' for sustainable rural development and has the potential to foster the interrelationships between farms and people, both within rural areas and between rural and urban areas [9][10]. To foster sustainable development pathways, scholars advocate the necessity to re-construct local agro-food systems [11] leveraging on the concepts of re-territorialization, re-localization [2], diversification [12] and on the adoption of organizational models which allows the re-connection between producer and consumers. Thanks to the renewed interest in local food production, new organizational networks, based on processes of synergic collaboration between farmers, consumers and other rural actors, have emerged in recent years [3]. These collaborative networks (that have been called AAFNs) aim at short-

ening the physical and social distances between producers and consumers by minimizing the number of intermediaries in the food supply chain [13] [14]. AAFNs have the potential to positively affecting the sustainable development of rural areas along all the three pillars of sustainability in agricultural systems [15][16].

Strictly related to the sustainable rural development and to the sustainable agriculture, there is the topic of sustainable rural tourism. Rural tourism represents a growing market offering to rural communities growth opportunities that arise from the emerging trends in tourism demand, which tent to pay more attention to the values of culture, food, and to the countryside. It can bring a valuable contribution to the sustainable development of rural areas. Its contribution can be expressed not only in financial terms, but also in terms of jobs, enhancement and revitalization of community pride, encouragement to the adoption of new working practices, and the injection of a new vitality into sometimes weakened economies [17]. In particular, within rural tourism, agritourism offers to small farmers a chance for the economic diversification. In [7] agritourism is defined as "tourism activities exercised by farmers through the exploitation of their own farm according to logic of connection complementarity and non-prevalence" of tourism activities with respect to agricultural based activities. This definition is in line with the Italian Legislative System. In the scientific literature the term "agritourism" is often understood as a synonym for "farm tourism," "farm-based tourism," and "rural tourism" [18]. In our work, while the term "rural tourism" refers simply to tourism services provided in a rural context, we refer to agritourism as "tourism services provided by agricultural entrepreneurs within their own farm, allowing also visitors to take part, directly or indirectly, in agricultural activities". It has been observed that agritourism offers many opportunities to small and medium farms, including increased farm gross income, the generation of cash flow and the creation of job opportunities. Moreover, it has the potential to affect positively the local rural development as a whole because its positive impacts extend beyond the farm gates through the interrelated activities with other local economic sectors [19]. Strictly connected with the concept of agritourism, the concept of Agritourism Rural Network, ARN, has been first introduced in [4]. Within a rural community it is possible to identify particular kinds of *Collaborative Networks*, namely ARNs, whose members are agritourism farms and other rural organizations (craftsmen, artists, local public administration, transportation services, typical agrifood producers, etc.) that collaborate to offer tourists the opportunity to enjoy the local territory. Rural communities, by means of the ARNs, could achieve the common goal of sustainable local development in order to increase their general competitiveness in a larger area.

The aim of this regional study is to analysing the extent of the agritourism phenomena and, in particular, its potentials to trigger and support ARNs as means of sustainable development for rural areas. To pursue the above purpose, we operationalized it in three research questions which can be formulated as follows according to [4] and [20].

- RQ1: Do farmers understand the importance of setting agritourism activities within their farm (i.e.: to what extend do farmers engage in agricultural activities)?
- RQ2: Can the agritourism farm be a direct contact point between the rural community offer of products/services and the tourist request for relocalization?

- RQ3: Is it possible to highlight the presence of an agritourism rural network in supporting the activities of the agritourism farm?"

3 The Research Design, Results and Discussion

To answer the research questions, we analysed:

- secondary data from the Italian National Institute of Statistics – ISTAT [21], and Confagricoltura, [22], related to agribusiness sector in Calabria for the year 2015;
- results of a survey carried out among the Calabrian agritourism farms in the period 02 January 2016 to 31 January 2016 concerning activities they performed in 2015.

Moreover, to give a better understanding of the evolution over time of the surveyed phenomenon, results of this study are compared with those obtained from a similar research conducted in 2012 [20]. The period between the two surveys was characterized by a strong economic crisis in the EU agricultural sector, thus putting in contrast results of the two surveys helped us to better understand the role of agritourism and ARNs in giving sustainable answers to the rural development question. At the end of 2015, 521 agribusinesses were authorized to offer agritourism activities, in Calabria [21]. They represent the population of interest, *P*, of this study. In other Italian regions agritourism was much more widespread both in absolute and proportional terms. Tuscany and Trentino Alto Adige were the regions where agritourism was most diffused. In Tuscany, in the 2013 on 66.584 agribusinesses, 4.108 deployed agritourism activities (6,16%) while in Trentino Alto Adige on 34.693 farms, 3.506 of them offered agritourism activities (10.10%). At the national level, on 758.953 Italian agribusiness, only 22,238 (2,93%) offered agritourism activities [22]. In Calabria only 521 to 30.857 agribusinesses offered agritourism activities meaning that the rate (1,69%) was lower than the national one. In 2012 data were more promising in Calabria: on 20474 agribusinesses, 610 were authorized to offer agritourism activities (1,96%). After three years, the already limited percentage of agritourism on the total agribusinesses in Calabria was further decreased (from 1,96% to 1,69%). Moreover, while the overall number of agribusiness showed a growth rate of 8,62%, in the same three years, the number of agritourism farms decreased at a rate of 14,6% [23]

A questionnaire was set up containing 16 questions aimed to answer the research questions. The questionnaire has been delivered to managers of all the farms belonging to *P*. On 521 agritourism farms in *P*, 105 of them (20,1%) returned the filled questionnaires with the requested data. Such farms constituted the sample *S* of our survey; for each farm in *S*, we analysed their responses and statistical results are reported.

When requested to quantify the percentages of farm's yearly turnover and overall costs coming from the agritourism activities, 74% of respondents affirmed that more than 20% of turnover come from agritourism while 90% of respondents reported that agritourism costs represent more than 20% of the overall farm's costs. While data about turnover is essentially in line with the analogous data in [20], surprisingly, percentage of agritourism costs on overall farm's costs is more than double in 4 years (from 44% to 90%). Details can be found in table 1.

Table 1. Percentages of farm's yearly turnover and overall costs coming from the agritourism activities

% of respondents	% of Yearly turnover coming from agritourism activities		% of overall farm's costs coming from agritourism activities	
	2012	2015	2012	2015
< 20 %	33 %	27 %	56 %	10 %
Between 20 % and 50 %	29 %	61 %	23 %	69 %
> 50%	38 %	12 %	21 %	21%

Moreover, when asked to point out trends of evolution of turnover and costs of agritourism activities on the overall farm's turnover and costs in 2015, with respect to the first year of activity of the agritourism, what emerges is:

- 29% of respondents stated that in 2015 agritourism turnover is decreasing respect the first year of activity, 19% reported a stable trend of evolution, 34% reported a growth while 18% did not answer the question.
- 1% of respondents stated that in 2015 agritourism costs are decreasing respect the first year of activity, 27% stated a stable trend of evolution, 48% stated a growth while 24% did not answer the question.

The small number and percentage of agritourism farms present in Calabria in 2015, together with the strong decrease of them in 4 years (-14,6% while the total number of agribusiness in the region remained unchanged in the same period) highlight that we cannot positively answer to RQ1. This result confirms the conclusion in [20]. Data from the survey have a twofold interpretation. On the one side, investments in agritourism activities give farmers a good return in terms of turnover that is durable through time. On the other side, percentage of farm costs imputable to the agritourism costs have been increasing considerably in the last 4 four years and, generally, since the beginning of the agritourism activity.

To answer RQ2, respondents were enquired to indicate which of the activities in table 2 they offered to tourists as part of the agritourism products portfolio. Activities in table 2 go in the direction to make the agritourism a contact point between the tourist and the local territory. The aim of these questions is to understand if agritourism farms have potentials to be drivers for the development of ARNs. In table 2, results of the survey are compared with results in [30].

Table 2. Activities offered to tourists and percentage of agritourism which offer them

Activity	agritourism farms offering the activity in **2012**	agritourism farms offering the activity in **2015**
Meal provision	94,23%	96,19
Selling of self-produced food	71,15%	93,33
Selling of products of other local farms	13,46%	68,5%
Visits to touristic/cultural/naturalistic places close to the agritourism (Excursion)	53,8%	67,7%
Active participation in the life of the farm (e.g. 'pick-your-own' facilities, participation in farm	48,5%	60,9%

tasks) also in the form of "Educational farm" (e.g. milking cows, sheepdog display, feeding animals)

Data highlights that farmers well understand the importance to enlarge the product portfolio with territory-related activities that let tourists enjoy the cultural/naturalistic heritage of the region (also in the form of participation to farm life) as well as to buy typical agrifood products of the region (both self-produced and purchased from local producers). When put in contrast with data from the 2012, 2015 results become more important considering the growth rate in the offering of activities from surveyed farms. We can give a positive answer to RQ2; agritourism is no more conceived only as a means to sell products/services self-produced as in 2012 but it can be considered a sort of tourist's bridgehead to the rural network. This result is in contrast with result of the 2012 survey when "agritourism is still intended by farmers only as a means to sell products/services self-produced" [20].

To answer RQ3, respondents were asked about the presence of formal cooperation agreements with other local service/product providers to carry out the agritourism activities and the percentage of agrifood products utilized in agritourism activities coming from local producers. Moreover, respondents were asked about the numbers of local workers engaged by the farm exclusively to carry out the agritourism activities. Results are present in table 3 together with similar data from the 2012 survey [20].

Table 3. Agritourism connections with the local territory

	2012	**2015**
The farm has some kinds of formal cooperation with other local service/product providers to carry out the agritourism activities	40%	89,5%
How many local workers are engaged by the farm exclusively to carry on the agritourism activities? (mean value among answers)	5	1,53
More than 20% of agrifood products utilized in agritourism activities (direct selling, meal provision, etc.) come from local producers	12%	60%
Less than 20% of agrifood products utilized in agritourism activities (direct selling, meal provision, etc.) come from other local producers	61%	35%
The farm utilized only self-produced agrifood products for its agritourism activities.	27%	5%
Overall farms using products supplied from local producers.	71%	95%

Data highlights that ARNs are present and consolidated in Calabria, thus we can positively answer to RQ3. Local service/product providers definitely benefit from the agritourism presence considering that almost 90% of farms declare some kind of formal cooperation with them. Moreover, local products are purchased from 95% of agritourism farms.

4 ICT and Agritourism

On the basis of a recent literature and empirical exploration we can suggest how ICTs can provide noteworthy opportunities for organizations belonging to an ARN in term of reduction of operational and management costs [24][25]. ICTs have in fact a con-

siderable impact in improving internal business processes (e.g. reservation management, back-office activities), facilitating business transaction and networking among partners in ARNs. From ARNs perspective, ICTs have not only a considerable impact in process efficiency, thus reducing operational costs, but represent also an effective advertising medium and a fundamental distribution channel in order to increase customers and visitors the (e.g. booking platforms). Moreover, social interactions between organizations in an ARN and tourists enable new learning opportunities, educating tourists about local tangible and intangible assets (monuments, typical foods, traditions, cultural heritage). Hence, the use of ICTs is able to engender trust and cooperation within a community and supports the exchange of local knowledge that can revitalise local/traditional knowledge and encourage sustainable territorial management.

ICT can be deployed in many business activities carried out by the ARN. When evaluating the business opportunities coming from tourism activities, farmers can be helped by the large amount of data available from a variety of sources. A good starting point can be offered by social media platforms which are taking an important role in supporting tourists in decision support both for planning and enjoy a journey experience. Data coming from the social activities of tourists are important to point out new trends in destination choices and preferences in tourism experience. According to [26], a multidimensional analysis of such a data can be deployed to improve marketing strategies. The use of mobile devices, during the journey experience, generate another class of data very useful to depict and track tourist behaviors in different contextualized scenarios. Smartphones can interact with other smart "objects" to generate an "augmented tourism experience" within the local territory [24]. Internet-of-Things technologies let farmers create and manage *cyber-physical systems*, CPS, in tourism activities in order to perform virtual interactions with visitors using sensors already present in their devices [27]. Bluetooth beacons, NFC tags, GPS positioning, e.g., can help user to improve the information quality of the destination, to digital control and manage access to physical resources, to guide and support orienteering [28]. In [29], a service oriented architecture of CPS in tourism infomobility is proposed in order improve the tourism management activities. The concept of CPS, as integration of digital and physical processes, can lead to the achievement of valid smart tourism management to ensure its sustainability and efficiency. All these interactions can be analyzed both at farm and at ARN level to better tune the overall experience and plan an improved bundle of suggested activities within the ARN territory [30].

E-commerce platforms can be the main digital touchpoint through which tourist can buy ARN products and services. In planning phase of the tourism experience, tourists can book events and services to enjoy in situ. In experience phase, tourists can do the same and can buy food or ingredients used during cooking experiences; tourists can buy products previously delighted at farms site and eat them at home. In [31], authors have analyzed and explored some case studies in introducing ICT to increase the value proposition of a touristic organization. ARNs should consider the influence and impact of social media (as part of tourism marketing strategy) for all involved actors in agritourism sector to determine the economic contribution of social media

networks [32]. It is crucial, for farmers in ARN, get experienced in using social media tools to meet marketing objectives quickly and improve their competitiveness.

From a supply-chain point of view, ARN member might adopt many ICT solutions to support collaboration and cooperation. B2B e-commerce solution or digital multi-sided platforms (DMSPs) can be a valid support for supply chain management for meal and services provisioning. One goal can be an e-Marketplace framework in which all cooperative actions of ARN members can take place. One of the pre-requirement to deploy such an innovative strategy can be the partial adoption of process automation (for example, using basic ERP solutions) to support farmer organization internal activities [33].

5 Conclusion

Overall, Calabrian farmers do not understand the importance of setting agritourism activities within their farm. In this sense, they look less far-sighted than farmers in other Italian regions, like Tuscany and Trentino Alto Adige. Such result is more serious considering that survey results confirm the potential of agritourism activities in improving the revenue streams of Calabrian farms. Anyway, among the Calabrian farmers there is a leading group (the 521 ones that offer agritourism activities) who exploit the potential of agritourism in giving sustainable development to the farm and in being a contact point between the tourist and the local territory through the presence of consolidated ARNs. The ARNs can be means of sustainable development for local areas also in order to react to the economic crisis. This conclusion is in contrast with [20] who stated that, in 2012, "Local suppliers, through their long-term contracts with the farm, offer agritourists their goods and services having an indirect contact with them (mediated by the farm)". Survey results demonstrate that, in 2015, local suppliers can have a direct contact with tourists selling them their products and services, even if this is mediated through the agritourism.

A change in the ARNs structure is evident respect to the 2012 survey:

- farms which declare some kinds of formal cooperation with other local service/product providers to carry out the agritourism activities increase from 40% in 2012 to 89,5% in 2015.
- farms using products supplied from local producers increase from 71% in 2012 to 95% in 2015.
- farms selling products of other local suppliers through the agritourism surprisingly increase from 13,46% to 68,5%.
- Percentage of respondents who declare a yearly turnover coming from agritourism activities more than 20% of the overall farm turnover remains almost the same in 2012 and 2015 among while % of respondents who declared that overall farm's costs coming from agritourism activities are more that 20% of the overall farm costs grow up from 44% to 90%.
- The mean value of the number of local workers engaged by the farm exclusively to carry out the agritourism activities decreased from 5 to 1,53.

It seems that farmers reacted to the economic crisis improving collaboration with local suppliers, so strengthening the connection within the ARN, and reducing the

number of direct employers. Unfortunately, in the same period when such forms of outsourcing were set up, an overall increase in the agritourism costs was evident. Whether it was the outsourcing the motivation of the cost increase or vice-versa, the question remains unclear. What is certain is that the increase of operational costs is a problem for agritourism farms. At the same time, it is evident how the growth of tourist number would have a direct impact on improving farm's turnovers and on increasing the number of ARN customers. Lastly, agritourism farm owners should increase service value and their competitiveness exploiting the potential of ICT, both to consolidate the relationships with ARN partners and to meet and anticipate travelers' needs and expectations. Further questions on this topic will be investigated in future research.

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References

1. Marsden, T.: The Condition of Rural Sustainability. Royal Van Gorcum, Assen, The Netherlands (2003)
2. Volpentesta, A., Ammirato, S., Della Gala, M.: Classifying short agrifood supply chains under a knowledge and social learning perspective. Rural Society 22(3), 217-229 (2013)
3. Volpentesta, A.P., Ammirato, S., Della Gala M.: Alternative Agrifood Networks as Learning Communities: Some Issues for a Classification Model. Communications in Computer and Information Science, 278, pp. 293-300, (2013).
4. Ammirato, S., Felicetti, A.: The potential of Agritourism in revitalizing rural communities: some empirical results. In: Collaborative Systems for Reindustrialization: 14th IFIP WG 5.5 Working Conference on Virtual Enterprises, PRO-VE 2013, Dresden, pp.489-497 (2013)
5. Watts, D., Ilbery, B., Maye, D.: Making reconnections in agro-food geography: alternative systems of food provision. Progress in Human Geography 29(1), 22-40 (2005)
6. Feagan, R. B., Morris, D.: Consumer quest for embeddedness: a case study of the Brantford Farmers' Market. International Journal of Consumer Studies 33, 235–243 (2009)
7. Sonnino, R.: For a 'piece of bread'? Interpreting sustainable development through agritourism in Southern Tuscany. Sociologia Ruralis 44(3), 285-300 (2004)
8. Elkington, J.: Cannibals With Forks: the Triple Bottom Line of 21st Century Business. Capstone, Oxford (1997)
9. Miller, E., Van Megen, K., Buys, L.: Diversification for sustainable development in rural and regional Australia: How local community leaders conceptualise the impacts and opportunities from agriculture, tourism and mining. Rural Society 22(1), 2-16 (2012)
10. Sonnino, R., Kanemasu, Y., Marsden, T.: Sustainability and rural development. In : Unfolding webs: the dynamics of regional rural developmen. Royal Van Gorcum, Assen, Netherlands (2008) 29-52
11. Berti, G., Mulligan, C.: Competitiveness of Small Farms and Innovative Food Supply Chains: The Role of Food Hubs in Creating Sustainable Regional and Local Food Systems. Sustainability 8, 616 (2016)

12. Volpentesta, A.P., Ammirato, S.: A collaborative network model for agrifood transactions on regional base. Communications in Computer and Information Science, 112 CCIS (PART 2), pp. 319-325. (2010)
13. Kneafsey, M., Venn, L., Schmutz, U., Balázs, B., Trenchard, L., Eyden-Wood, T., Bos, E., Sutton, M., Blackett, M.: Short food supply chains and local food systems in the EU. A state of play of their socio-economic characteristics., European Commission (2013)
14. Goodman, D.: Editorial the quality ''turn'' and alternative food practices: reflections and agenda. Journal of Rural Studies, 1-7 (2003)
15. Sonnino, R., Moragues Faus, A., Maggio, A.: Sustainable food security: an emerging research and policy agenda. Int. J. Sociology of Agriculture and Food 21(1), 173-188 (2014)
16. Forssell, S., Lankoski, L.: The sustainability promise of alternative food networks: an examination through alternative characteristics. Agriculture and human values 32(1), 63-75 (2015)
17. Irshad, H.: Rural Tourism – an overview., Alberta, Canada (2010)
18. Tew, C., Barbieri, C.: The perceived benefits of agritourism: The provider's perspective. Tourism Management 33, 215-224 (2012)
19. Yang, L.: Impacts and challenges in agritourism development in Yunnan, China. Tourism Planning & Development 9(4), 369-381 (2012)
20. Ammirato, S., Felicetti, A.: The Agritourism as a means of sustainable development for rural communities: a research from the field. The International Journal of Interdisciplinary Environmental Studies 8(1), 17-29 (2014)
21. ISTAT: Report on Agritourism activities in Italy. (2016)
22. CONFAGRICOLTURA: imprese agricole nel 2012. (2013)
23. UNIONCAMERE: Rapporto economico sulla Calabria. Collana dell'Ufficio Studi di Unioncamere Calabria. (2016)
24. Ammirato, S., Felicetti, A., Della Gala, M.: Rethinking tourism destinations: collaborative network models for the tourist 2.0. International Journal of Knowledge-Based Development 6(3), 178-201 (2015)
25. Ammirato, S., Felicetti, A., Tourism Breeding Environment: Forms and levels of collaboration in the tourism sector. IFIP Advances in Information and Communication Technology. 14th IFIP WG 5.5 Working Conference on Virtual Enterprises, PRO-VE 2013; Dresden; Germany; Volume 408, (2013), Pages 517-524
26. Mariani, M. M., Di Felice, M., Mura, M.: Facebook as a destination marketing tool: Evidence from Italian regional Destination Management Organizations. Tourism Management 54, 321-343 (2016)
27. Rho, S., Vasilakos, A., Chen, W.: Cyber physical systems technologies and applications. Future Generation Computer Systems 56 (2016)
28. Nitti, M., Pilloni, V., Giusto, D., Popescu, V.: IoT Architecture for a Sustainable Tourism Application in a Smart City Environment. Mobile Information Systems (2017)
29. Smirnov, A., Shilov, N., Kashevnik, A., Ponomarev, A.: Cyber-physical infomobility for tourism application. Int. Journal of Information Technology and Management 16(1) (2017)
30. Li, Y., Hu, C., Huang, C., Duan, L.-: The concept of smart tourism in the context of tourism information services. Tourism Management 58, 293-300 (2017)
31. Vassalosa, M., Lim, K. H.: Farmers' Willingness to Pay for Various Features of Electronic Food Marketing Platforms. Int. Food and Agribusiness Management Review 19(2) (2016)
32. Zeng, B., Gerritsen, R.: What do we know about social media in tourism? A review. Tourism Management Perspectives 10, 27-36 (2014)
33. Yoo, K.-H., Gretzel, U.: The Role of Information and Communication Technologies (ICTs) in Marketing Tourism Experiences. In : The Handbook of Managing and Marketing Tourism Experiences. (2016) 409-42.

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