FACTORS AFFECTING AGRITOURISM PERFORMANCE

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Abstract

The purpose of this paper isto examine the role of agritourism size, food and beverage service offered and agriprenuer's characteristics on agritourism performance. Quantitative data from an online survey conducted on 292 agritourism, are considered. To test the proposed hypotheses an ordinal regression with two link functions was applied. Results indicate that those agritourism that offer food and beverage services perform better in terms of gross income. The size of agritourism is positively associated with its performance. Regarding the agripreuner characteristics, while gender has a significant influence on performance, by contrast, education and age are not significant. This paper practically contributes by guiding agripreuners on their daily management decisions, and furthermore, to those who aim to invest in agritourism.

Keywords: Agritourism, agripreuner, performance, ordinal regression.

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Introduction

Although agritourism is considered a strategy that foster rural development (Capelleras et al., 2022; Lupi et al., 2017; Flanigan et al., 2015; Barbieri and Mshenga, 2008; Saxena et al., 2007; Slee et al., 1997), only a few studies have examined factors that foster its successful development (Barbieri and Mshenga, 2008; Barbieri, 2010; Lupi et al., 2017). Indeed, still it is not well understood which of the factors lead to improved agritourism performance (Hollas et al., 2021).

Literature has been arguing about the size (e.g., land surface) (Barbieri and Mshenga, 2008; McElwee, 2006; de Wolf et al., 2007; Khanal and Mishra, 2014) and food services activities (Giaccio et al., 2018) as significant drivers to the performance. The larger a farm (e.g., land surface), the better it is assumed to perform in terms of revenues due to their great possibilities to have a wider range of products (Barbieri and Mshenga, 2008). In addition, due to their higher investment capabilities, larger farms may benefit from economies of scale (McElwee; 2006; de Wolf et al., 2007).

Lupi et al. (20017) stated that in Italy, food services and food tasting is the second most important service offered by agritourism farms. However, existing literature is scarce about empirically examining the effects of food and beverage services on agritourism

performance (see e.g., Giaccio et al, 2018), and this study attempts to create a better understanding of this relationship.

Agripreneurs ' characteristics are argued as predictors of agritourism performance (see e.g., Nakana and Mkhabela, 2011; Barbieri and Mshenga, 2008; Hung et al., 2016; Giaccio et al., 2018; Khan et al., 2019). While there are several Agripreneurs' characteristics within our conceptual model, age, type of education and gender are considered as the operationalization of the agripreneurs' characteristics. However, several scholars have found controversial results regarding the relationship between agripreneurs' characteristics (i.e., education, age, gender) and agritourism performance (see e.g., Nakana and Mkhabela, 2011; Barbieri and Mshenga, 2008; Hung et al., 2016; Giaccio et al., 2018). Consequently, this study aims to further contribute to clarify these controversial results. In addition, differently to the previous studies, which have examined the effects of level of education on agritourism performance, this study is innovative by addressing the effects of the type of education (Barbieri and Mshenga, 2008).

In sum, there is a scant of researchers investigating the effects of agripreuner and agritourism characteristics on its performance (see e.g., Barbieri and Mshenga, 2008; Çera et al., 2020; Nakana and Mkhabela, 2011; Hung et al., 2016; Giaccio et al., 2018). The analytical results of these few studies are inconclusive (Hung et al., 2016). Additionally, due to that agritourism in Europe and especially in Italy, represents a unique form of rural tourism development in the international scene (Santucci, 2013), and a significant growth strategy in the context of structural change in agriculture (Esposti, 2012), investigating the most important drivers of the agritourism success, is indisputable.

Finally, this study attempts to create a more comprehensive understanding about influences of agripreuner and agritourism characteristics on its performance, in the case of Tuscany, Italy.

Literature Review

Agritourism is definitely considered a significant strategy for rural development (Lupi et al., 2017; Flanigan et al., 2015; Barbieri and Mshenga, 2008; Saxena et al., 2007; Slee et al., 1997). Due to its significance on these crucial issues related to rural development, it is intriguing to elaborate the drivers that mostly boost agritourism income (Lupi et al., 2017).

Owner/manager characteristics and performance

Generally speaking, agripreneurs' characteristics are strongly argued as predictors of the agritourism performance. While there are several Agripreneurs' characteristics within our conceptual model, age, type of education and gender are considered. In addition, while other studies were focused on the level of education, this study elaborates the effects of this type of education on agritourism performance (Barbieri and Mshenga, 2008).

Several scholars have found controversial results regarding the relationship between Agripreneurs' characteristics and agritourism performance relationship. While Nakana and Mkhabela (2011) found that gender and age were significantly associated with performance, on the other side, Hung et al. (2016) and Giaccio et al. (2018) had contrary conclusions. Hung et al. (2016) found a significant link between education and agritourism performance. In contrast to this, Barbieri and Mshenga (2008) and Giaccio et al. (2018) did not find any significant link on this relationship. Previous studies have shown controversial results regarding the gender role on agritourism performance. Thus, while Brandth and Haugen (2010), and Cánoves et al. (2004) found no change in women's position to significant improvements on agritourism performance, on the other side, Barbieri and Mshenga (2008) concluded that agritourism farms managed by man perform better than those operated by women.

In sum, previous controversial results about these relationships, and furthermore, scant of research about the role of education type, leads this study to the following hypothesis:
H1: Agripreuners' (A) gender (B) type of education (C) and age have positive effects on agritourism gross income.

Agritourism characteristics and performance

The size of the farm is considered another internal factor that plays a role on the agritourism performance. In this vein, Barbieri and Mshenga (2008) found that larger farms, in terms of acreage and number of employees, are more viable economically. In contrast to these studies, Khanal and Mishra (2014) found that small agritourism performed better than larger farms in terms of income.

Agritourism is a good channel where tourists can experience local food and beverages. Agritourism farms represents one of the main commercial channels of such food and beverages (Belletti and Marescotti, 2007), enhance the number of visitors at the farm (Wilson et al., 2001), and consequently, can directly influence the economic benefits of agritourism (Barbieri et al., 2008; Giaccio et al., 2018; Giaccio et al, 2016). Domi and Belletti (2022) found significant positive effects on this relationship. Through offering food and beverage services (i.e., restaurants, degustation rooms, teaching about cooking etc.), it is assumed to attract more customers, contacting direct with them, reduce the market risk, transactions costs, and consequently, enhance agritourism performance. Lupi et al. (2017) stated that in Italy, food and beverage services is the second most important service offered.

Literature has only begun to scratch the surface regarding the effects of food services on agritourism performance (see e.g., Giaccio et al, 2018) which in turn prompted us to further investigate it. For example, one of the few studies on this behalf is that of Giaccio et al. (2018) who found a significant positive relationship on this relationship. To the best of our knowledge, literature has only begun to scratch the surface regarding the effects of food and beverage services on agritourism performance (Giaccio et al, 2016) which in turn prompted us to further investigate it.
As a result, the above discussion leads us to the following hypotheses:
H2: The larger is an agritourism in terms of land surface, the more will increase its annually gross income
H3: Offering food and beverage services will positively influence the agritourism gross income

Methodology

Sample and data collection

To empirically investigate the proposed hypothesis, we considered the case of Tuscany. Tuscany is a well-known region in Italy and internationally about the level of agritourism development. This widespread phenomenon in Tuscany is due to the richness in local resources such as a beautiful landscape, high quality food products, historical centers spread out in the countryside etc. To this, the target group of the study were agritourism farms in Tuscany.

The data collection process was organized into three main stages. First, a database with a list of 4,622 agritourism farms was retrieved from the regional government of Tuscany. Second, in order to address objectives of the study, a structured questionnaire was compiled via adaptation of items from previous studies related to the agritourism and farm enterprise diversification (Tew and Barbieri, 2012; Barbieri and Mahoney, 2009; Barbieri and Mshenga, 2008). The questionnaire, designed in Google form platform, included 23 questions gathering information in the following areas: (1) agripreuner profile; (2) characteristics of agritourism

farms; (3) agritourism location; (4) economic performance in terms of subjective and objective measure. By using an online survey an email with the link of the questionnaire was sent to the 4,622 agritourism. The final response rate raised to 6.3% of the population, thus, reaching a sample of 292 responses. The usual response rate using e-mail survey is roughly 7–19% (see e.g. Domi et al., 2020; Capelleras et al., 2021; Domi and Domi, 2021).

This study has exploited triangulation of research methods on data gathering, by first using quantitative methods and then, in order to reinforce the results obtained from this method, we used qualitative methods. To this, qualitative data, through an unstructured questionnaire, are gathered at 8 agritourism farms, part of the target group, which are randomly selected. Questions of this unstructured questionnaire were based on the need for information to follow up the results of the quantitative data analysis.

Variables and measures

The conceptual model is designed based on objective measures. The dependent construct performance is operationalized in economic terms. We referred to the Pfeffer and Salancik (1978: 11, 34) study who defined performance as the "firm's ability to create acceptable outcomes and actions." As a result, performance was operationalized in terms of annual gross income (1=Up to €25,000; 2=€25,000–€74,999; 3=€75,000–€149,000; 4=€150,000 – €199,999; and 5 = Over €200,000). Independent variables are those related to the characteristics of agripreuner and agritourism entities. Agripreuners' characteristics are specified by considering their age (i.e., 1=Up to 40 years old, 2=41–64 years old, and 3=Over 65 years old), gender (0=Male, 1=Female) and type of education (1=Agriculture, 2=Tourism, 3=Trade, 4=Industry). Agritourism characteristics are operationalized in terms of the land surface, and offering food and beverage services (0=No, 1=Yes).

One control variable about the agritourism location in the coastal areas was included in the analysis, as it might influence agritourism performance (i.e., 0=No, 1=Yes).

Method

Ordinal regression methodology is applied with the aim to investigate the influence of size, food and beverage services and agripreuner's characteristics (gender, age, and education) on agritourism performance. There are five types of ordinal regression (Harrell, 2015). Since the lower category is more probable (see Table 1), then the negative log-log link function was used in this study. It predicts the probability of a certain category of the dependent variable (ξ) occurring based on the independent variables (Xi). The other types of link functions can be found in two recent studies (Çera et al, 2019; Çera et al, 2021).

All the data analysis is executed in SPSS version 23. The algorithm of the ordinal regression in SPSS enables it to perform a bootstrapping procedure (1,000 resamples).

Results

Hypothesis testing

An ordinal regression is performed to assess the prediction of the outcome level (performance measured using gross income). After checking for missing values, data of 267 firms were suitable to analysis. Since the distribution of the dependent variable reflects a negative trend (see Figure 1), a negative log-log link function of ordinal regression is performed. Table 1 summarizes the results of the employed ordinal regression. It was found that while gender as compared to females, males agripreuner lead to higher gross income ($W = 5.015$, $p < 0.01$). Hence, gender does matter for performance of the farmers in the context of agritourism. This result supports H1A. The data showed that neither education, nor age of the

agripreuner are significant for the prediction of farm performance, consequently, the H1B and H1C were rejected.

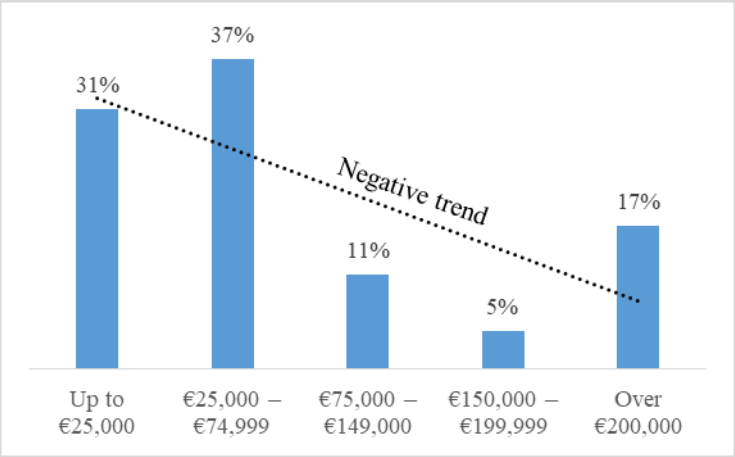

Figure 1. The dependent variable's distribution of the categories and their trend

Regarding the effect of farm size on its performance, the regression reveals a non-significant relationship (W = 2.505, p > 0.10). Nevertheless, the 95% confidence interval bounds (-4.3E-05; 0.0004) suggest running an in-depth analysis, which can be a bootstrapping procedure applied to the same regression. Such analysis is performed as a follow-up analysis to better understand the role of farm size in its performance.

Concerning the effect of offering food and beverage services on farm performance, the analysis has demonstrated a positive association (W = 15.48, p < 0.001). Hence, offering food service within the farm environment can lead to higher performance in terms of gross income. This result leads to the support of H3.

Table 1. Results of the ordinal regression

		Estimate	Wald	Sig.	95% Confidence Interval	
					Lower	Upper
Threshold	[Gross Income = 1]	-.0860	.0466	.829	-.866	.694
	[Gross Income = 2]	1.075	7.004	.008	.279	1.871
	[Gross Income = 3]	1.585	14.67	.000	.774	2.397
	[Gross Income = 4]	1.853	19.51	.000	1.031	2.676
Location	Coastal Areas	-.2029	1.157	.282	-.573	.167
	Gender	-.3420	5.015	.025	-.641	-.043
	Food Services	.6210	15.48	.000	.312	.930
	Farm Surface	.0002	2.505	.113	-4.3E-05	.0004
	[Education = Agriculture]	.0082	.0005	.982	-.704	.721
	[Education = Tourism]	-.1971	.2470	.619	-.974	.580
	[Education = Trade]	.1343	.0980	.754	-.706	.975
	[Education = Industry]	0[a]				
	[Age = Up to 40 years old]	.2034	.6675	.414	-.285	.691
	[Age = 41 – 64 years old]	.1348	.4600	.498	-.255	.524
	[Age = Over 65 years old]	0[a]				

Note: a. This parameter is set to zero because it is redundant.

To have more robust results, a bootstrapping procedure is applied in the same ordinal regression. This procedure confirms the same results obtained from the ordinal regression summarized in Table 3, regarding H1A, H1B, H1C and H3. The bootstrapping procedure enables us to better understand the role of farm size in its performance. This advanced analysis demonstrates that farm performance is positively influenced by farm size (farm surface) (W =.0002, p <0.05, CI =7.6E-05; 0.0043), showing enough evidence in support of H2.

In Table 2, some key statistics of the model fitness are reported. The results indicate the overall model was statistically significant, $\chi^2(9, n = 267) = 25.45$, $p < .01$. In addition, there was a good model fit (discrimination among categories/levels) based on our used covariates, $\chi^2(975, n = 267) = 997.96$, $p > .10$, using a person criterion.

Table 2. Model fitness

Criteria	Statistics			
	-2 LL	Chi-square	df	Sig.
Model fitting	712.24	25.45	9	.003
Goodness-of-fit	Pearson	997.96	975	.298
Test of parallel lines	680.24	31.97	27	.233
Type of R-square		Pseudo R-square		
Cox & Snell		.091		
Nagelkerke		.097		
McFadden		.034		

Discussions

This study attempts to create a better understanding of the relationship between some of the agripreuner and agritourism characteristics with its performance measured in terms of the annual gross income.

The study reveals a statistically significant impact of agripreuner gender on the gross income. Hence, gender does matter for the performance of the agritourism. More specifically, it was found that compared to females, males agripreuner lead to higher gross income. This result is in line with Hollas et al. (2021), Savage et al. (2018), Barbieri et al. (2019), Barbieri and Mshenga (2008) and in contrast with Brandth and Haugen (2010), and Cánoves et al. (2004).

Contrary to the gender, it was found that agripreuner age does not influence agritourism gross income. This result was in line with previous studies wherein performance was measured in terms of profitability (Khanal et al. 2020; Lucha et al., 2016).

While Barbieri and Mshenga (2008) found that education level was not significantly associated with the amount of the gross income earned, Hung et al. (2016) concluded that there is a significant positive association with revenue. Differently to these previous studies, the education variable was measured considering the type of education. However, as in the case of the age variable, our data did not indicate any significant relationship between the type of previous education of the agripreuner and the gross income of agritourism.

It was found a strong and significant correlation between agritourism performance and offering food and beverage services. This is in contrast with Schilling et al. (2014) who concluded that small scale agritourism experiences more profits. To this, those agritourism that offer food and beverage services (restaurant, farm-gate selling products, degustation etc.) will perform better in terms of annual gross income.

Continuing to examine the role of the agritourism characteristics, it was also found that agritourism size measured in terms of the land surface is statistically significant. This is in contrast with the study of Hollas et al. (2021) who concluded that farm size does not matter for agritourism profitability. However, this is in line with Barbieri and Mshenga (2008), Lucha et al (2016) and Hung et al. (2016) where it was found that agritourism operations with

a larger acreage, are more profitable. Our analysis uncovered a significant, but relatively weak, positive relationship. Thus, the more land surface an agritourism farm, the higher gross income will have.

Conclusions

This paper contributes in terms of theory and practice. Firstly, this paper provides a more comprehensive understanding about the role of agripreuner and agritourism characteristics on its performance measured in terms of annual gross income. This is due to there was scant research on this domain, and furthermore, the analytical results of those few studies were inconclusive. Secondly, this paper practically contributes to guide practitioners as they make management decisions about agritourism destination development and investment. Thirdly, due to the importance of agritourism as a strategy for rural development, and more specifically, in the case of Tuscany, this study has also policy implications.

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