

Article

# Rural Tourism: Development, Management and Sustainability in Rural Establishments

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**Abstract:** Tourism is one of the economic driving forces of Spain: the consolidation of existing tourist destinations and new market niches encourage an upward trend of tourism. The economic impacts produced by tourism are one of the major concerns of the authorities; the question is whether it is possible to continue growing without compromising our environment. This work attempts to answer this issue by analysing one of the tourism segments with higher growth in recent years: rural tourism. Using a model of partial least squares (PLS), we will analyse the environmental impacts from the point of view of the supply and its relationships with the environmental management conducted. We will also analyse the rural establishments from a global point of view and, depending on their category, explain the factors which determine the sustainable behaviour of providers, and identify that the establishments of low categories have a more sustainable conduct.

**Keywords:** rural tourism; environment; environmental impact; PLS

## 1. Introduction

Tourism has become one of the main economic driving forces of many developed countries. Within the different tourist typologies, rural tourism is one which has seen greater growth in recent decades [1]. Rural tourism is an alternative of great interest for different segments of tourists [2], whose preferences include the sustainability of tourist spaces as one of the differential elements when planning their trips. This respect for the environment and the differentiation of destinations involves one of the main pillars of the growth of the sector [3,4].

In this context, it is essential to analyse the sector from the perspective of the supply in order to guarantee its sustainability [5], on the basis of the importance that natural resources have in their multiple figures of protection.

In terms of diversification of activities, rural tourism is a complementary alternative in certain areas to other traditional works, such as agriculture, livestock, and other primary industries [6,7]. The planning of activities in nature opens up a wide range of possibilities to complement the traditional accommodation in enclaves with great landscape and environmental attraction [8].

In this sense, tourism management faces many challenges that may influence its activity in the future. The proper management and planning of tourism companies, as well as their integration in the rural economy, must be two of the most important tools applied in order to achieve the sustainability of rural tourism [9,10].

There are many studies which analyse the sustainable behaviour of hotel establishments [11,12]; most of the research on environmental management has focused on two main areas: cost policies and

business competitiveness. To a lesser extent, environmental protection has been analysed, and in many cases, is based only on the compliance with the environmental legislation at a given time.

From the point of view of the demand, tourists have access to an ever-increasing number of proposals that include environmentally responsible experiences [13,14]. Moreover, in terms of the supply, there is not a lot of scientific literature, fundamentally caused by the small size of many of the companies operating in this sector. Therefore, energy-saving or water consumption policies are among the most highly valued preferences, although there are no clear guidelines for measuring their efficiency [15]. The main research in this sector has focused on the principles of sustainable tourism in small and medium companies [16,17], family business attitudes [18], appropriate environmental practices [19], and prediction of factors in rural areas [20].

Other authors have analysed this behaviour with a multidisciplinary approach, trying to define the features of “green entrepreneurs” (also called “ecopreneurs”) versus other type of entrepreneurs [21], analysing the different motivations of entrepreneurs taking into account the impact of economic and social structures [22], addressing issues related to the reasons why companies focus on sustainability, and even considering different behavioural, attitudinal or cognitive variables [23,24].

The objective of this study is the analysis of the sustainable environmental management of small rural tourism companies, which has been previously analysed from different perspectives [25]. This approach is used in the present study, where we will aim to analyse the environmental management of the entrepreneurs. The study of rural tourism in different areas is widely studied in the literature [26–28]. Our empirical work has been conducted in the Spanish region of Castilla y León, which is the largest region in the whole country and offers more than 18% of the rural tourism destinations in Spain, with more than 3000 accommodations in this area and more than 27,000 hotels. This generates more than 4000 direct jobs to satisfy more than 150,000 overnight stays [29].

## 2. Materials and Methods

The questionnaire used in the empirical work is based on previous studies in the literature [25], which show the importance of environmental perceptions from the point of view of the supply [30]. We analyse five dimensions regarding the management strategy of rural tourism entrepreneurs as follows:

### *Environmental Perceptions Questionnaire:*

- M1. It is useful to implement a code of environmental best practice.
- M2. Application of ecological criteria in investments, purchases, etc.
- M3. Need for staff training and motivation regarding environmental goals.
- M4. Information for customers, workers and suppliers on sustainable environmental conduct.
- C1. Customers’ environmental attitudes are satisfactory.
- C2. There are economic incentives for encouraging best environmental practice.
- C3. My customers appreciate best environmental practice.
- C4. Respect for the environment helps to attract new customers.
- S1. In rooms and communal toilets there is information on water-saving measures, asking customers to cooperate in this.
- S2. Importance of introducing water-saving systems.
- S3. Water-saving toilet cisterns have been installed (e.g., with two buttons or short flush).
- S4. We regard the energy rating of domestic appliances as important.
- S5. We regard the installation of energy-saving measures as important.
- S6. We have energy control systems (thermostats, timers, etc.)
- S7. Bulbs that stay on for more than two hours are of the low-energy type.
- S8. We regard the use of solar energy in our business as necessary.
- E1. Need to use non-polluting climate control systems.

- E2. We make sure to buy biodegradable detergents and, generally, cleaning products with a low environmental impact.
- E3. We regard the separation of waste as important.
- E4. We regard the treatment of toxic waste as important.
- E5. We sort containers and packaging, separating glass, plastic, metal and paper.
- E6. We separate special waste (batteries, toner, etc.) and hand it over to an authorized waste manager.

The questionnaire includes 24 questions that were answered by a total of 396 entrepreneurs of the sector, distributed in the nine provinces that constitute the autonomous community, which implies a maximum error of less than 5% for a statistical confidence level of 95%. The selected geographical framework was based on the importance of rural tourism in the region (as has been shown previously) and the close relationship with its natural resources and landscapes, against more traditional tourism models (for example, the sun and beach models).

The working hypotheses are in line with previous studies in the literature [25], which analyse how environmental concern affects the business management strategy of rural tourism establishments.

H1: The environmental factor has a position influence on the customer factor.

H2: The water-saving factor is influenced by the environmental variable (H2.1) and the customer factor (H2.2).

H3: The energy-saving factor is influenced by the environmental variable (H3.1) and the customer factor (H3.2).

H4: The managerial factor is influenced by the environmental factors (H4.1), the customer variable (H4.2), the water-saving factor (H4.3) and the energy-saving (H4.4).

The estimation of the model for confirming these hypotheses is based on a structural model using partial least squares (PLS), since the available data are best fit the starting requirements [31,32], especially the exploratory stages or predictive models [33].

An analysis has been conducted at two levels: firstly, the general model has been estimated and, secondly, this model has been analysed according to the categories. Establishments have one to five stars, so two different models have been made: 1 to 3 stars, and 4 to 5 stars.

### 3. Results

For the estimation of the structural equation model based on the PLS method [34], we used the SmartPLS 3.0 software [35]. The submodel structure based on five latent factors is also founded on the previous literature [25], which allows us to contrast the posed hypotheses (Figure 1).

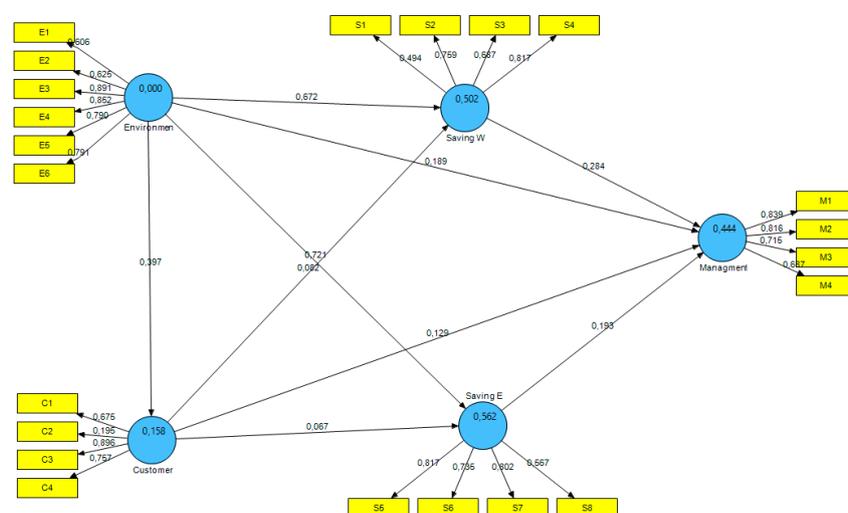


Figure 1. Estimation of the structural equation model.

The results obtained confirm both the validity of the items as the goodness of fit and the internal consistency (Cronbach's alpha). The good performance of composite reliability indexes and convergent validity (Average Variance Extracted, AVE) support the use of this model (Table 1).

**Table 1.** Reliability measurements.

	AVE	Composite Reliability	R Square	Cronbach's Alpha	Communality	Redundancy
Customer	0.4674	0.7493	0.1579	0.6225	0.4674	0.0667
Environment	0.5881	0.8936	0.0000	0.8539	0.5881	0.0000
Management	0.5883	0.8502	0.4444	0.7639	0.5883	0.0465
Saving Energy (E)	0.5432	0.8237	0.5621	0.7115	0.5432	0.0232
Saving Water (W)	0.4900	0.7884	0.5024	0.6502	0.4900	0.0250

The results obtained from the statistical  $R^2$  are higher than 0.1 [36]. The following table (Table 2) shows the correlations between the latent variables under study.

**Table 2.** Matrix of correlation between latent variables.

	Customer	Environment	Management	Saving E	Saving W
Customer	1.0000				
Environment	0.3974	1.0000			
Management	0.3712	0.5846	1.0000		
Saving E	0.3532	0.7472	0.5912	1.0000	
Saving W	-0.4866	0.5062	0.6247	0.6936	1.0000

The results of direct and indirect effects among latent variables are discussed in Table 3:

**Table 3.** Direct and total effects between latent variables.

	Direct Effects				Total Effects			
	Customer	Management	Saving E	Saving W	Customer	Management	Saving E	Saving W
Customer		0.129	0.0669	0.0821		0.1649	0.0669	0.0821
Environment	0.3974	0.189	0.721	0.672	0.3974	0.5846	0.7472	0.7048
Management								
Saving E			0.1932			0.1932		
Saving W			0.2838			0.2838		

All the hypotheses are confirmed, considering the nine proposed relationships (Table 4), except for the relationship between clients, which is partially accepted (customers and management are confirmed, but on the contrary, energy-saving and water-saving are not confirmed).

**Table 4.** Tests of hypotheses for direct effects between latent variables.

	Direct Effects	Standard Error	T-statistic
Customer > Management Customer	0.1287	0.0594	2.1660 *
Customer > Saving E	0.0669	0.0427	1.5653
Customer > Saving W	0.0821	0.0541	1.5176
Environment > Customer	0.3974	0.0650	6.1088 *
Environment > Management	0.1891	0.0948	1.9935 *
Environment > Saving E	0.7206	0.0498	14.4852 *
Environment > Saving W	0.6721	0.0501	13.4172 *
Saving E > Management	0.1932	0.0942	2.0505 *
Saving W > Management	0.2838	0.0913	3.1086 *

Note: \* Significant values at the 5% significance level.

Figures 2 and 3 and Table 5 shows the direct effects of both types of establishments and the significance of the model for each one of the starting hypotheses. In light of the results, we can see how the lower-category establishments obtain better results. In the case of higher-quality establishments (4–5 stars), neither customers nor savings (water and energy) hypotheses are confirmed.

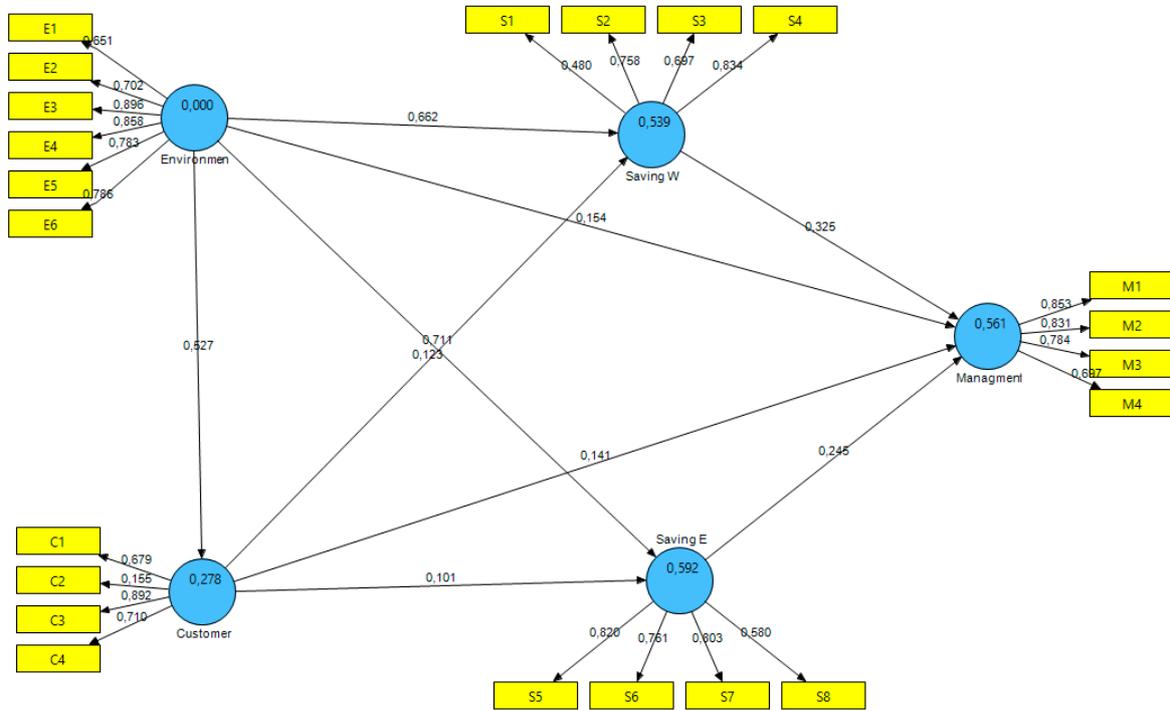


Figure 2. Estimation of the structural equation model (1–3 Stars).

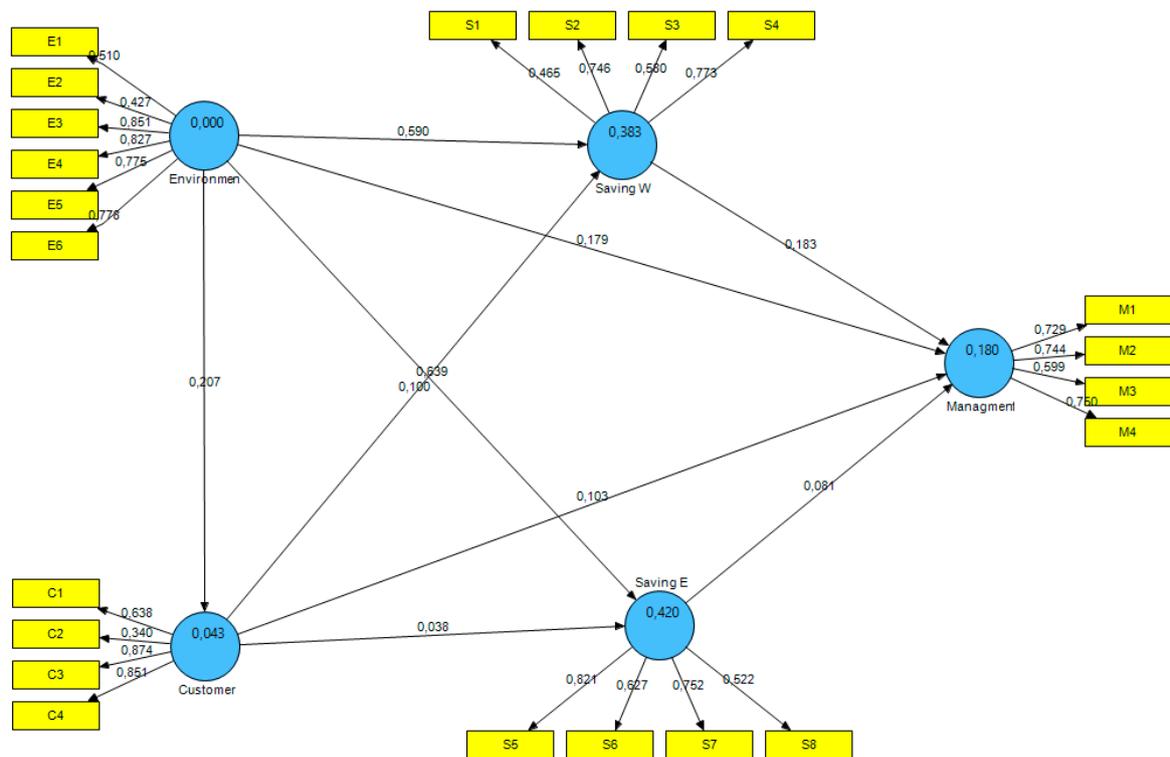


Figure 3. Estimation of the structural equation model (4–5 Stars).

**Table 5.** Tests of hypotheses for direct effects between latent variables.

	1–3 Stars		4–5 Stars	
	Direct Effects	T-statistic	Direct Effects	T-statistic
Customer > Management Customer	0.141	2.4882 *	0.1029	1.2546
Customer > Saving E	0.101	2.3797 *	0.038	0.6766
Customer > Saving W	0.1226	2.2513 *	0.0999	1.5724
Environment > Customer	0.5271	9.7669 *	0.2066	2.6621 *
Environment > Management	0.1545	1.6556 *	0.1788	1.9922 *
Environment > Saving E	0.7112	15.6662 *	0.6394	9.0624 *
Environment > Saving W	0.662	13.5993 *	0.5905	10.005 *
Saving E > Management	0.245	2.6185 *	0.0809	0.6885
Saving W > Management	0.3251	3.7587 *	0.1827	1.9187

Note: \* Significant values at the 5% significance level.

#### 4. Conclusions

This work aims to study the integration of the environment in rural tourism management. In addition, it is combined the analysis taking into account the classification of the establishment according to its category. The five latent factors previously used in the literature give rise to nine hypotheses to be contrasted: seven of them are accepted in the general model. However, if we take into account the category of establishments, we can observe that all hypotheses are confirmed for establishments from 1 to 3 stars, as their environmental sensitivity leads them to energy- and water-saving decisions, basing their business management on the efficient use of resources. This fact can be encouraged by the provision of fewer financial resources, offering their services at a much lower price than the other segment of higher quality accommodation.

However, in the case of 4- and 5-star accommodation, five of the proposed relationships are rejected. This factor can be motivated, in terms of supply, because entrepreneurs have more resources and charge the customers a higher price. Their environmental motivations are not directly related to their customers, as they show a lower environmental sensitivity, partly because of the rating of excellence of their establishments, which in terms of image implies the need to make minor efforts to retain customers.

Finally, the environmental awareness of all rural tourism entrepreneurs is evident, although there are significant differences depending on the segment analysed: thus, entrepreneurs who manage higher quality establishments show less environmental sensitivity, while those of the lower category pay more attention to environmental issues related to energy and resources saving.

Taking into account the degree of seasonality, particularly high in the case of the demand for rural tourism, this fact motivates that some of these companies are complementary economic activities for their owners, who are forced to combine their management with other functions.

In short, it is necessary to take into account the importance of planning in the business management of establishments with the aim of achieving the environmental sustainability of these activities. A limitation of the study is the geographic area chosen; future research can expand the analysis to the whole country. Undoubtedly, it would be interesting to analyse in future research both the training of entrepreneurs and their sociodemographic variables (age, for example), which can condition their environmental perception.

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**Conflicts of Interest:** The authors declare no conflict of interest.

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