

An institutional approach to the environmental practices of golf courses

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Abstract

As it is well known, the number of golf courses has increased exponentially in many tourist destinations, which has generated a public debate about its environmental impact. In many Spanish destinations such as Andalusia, this sport has become one of the products with greater pull in their tourism offer, with significant economic impact in this territory. All this has prompted the generation of a highly institutionalized context.

This paper attempts to analyze this context in a sample of golf courses located in the Spanish region of Andalusia and to test empirically the relationships between environmental practices and institutional context with its corresponding coercive, normative and mimetic mechanisms. Finally, its relationship with the performance of these organizations is established, testing if a direct or indirect relationship exists through the search for legitimacy, as suggested by the Institutional Theory.

Key words: Institutional Theory, golf, tourism, environmental management

1 Introduction

The practice of golf is a phenomenon that goes beyond the merely sporting and carries implications of great significance for tourism. It has given rise to an entire tourism industry revolving around golf, and Andalusia has become the leading region of Spain in the reception of tourists of this type, with the consequent increase in the number of golf courses.

However, there is an open debate in society on the environmental impact of this type of installation. This debate has led to a series of actions being undertaken, in most the cases imposed by legal regulation, aimed at reducing the negative effects that golf courses can have on the natural environment. As a consequence of this situation, we have opted to take Institutional Theory as our reference framework.

The great majority of theoretical institutionalists agree that the three pillars supporting this theory are the regulatory, normative and cognitive approaches, as it is display in the following table.

The regulatory institutionalists interpret legitimacy as conformity with standards. Thus, legitimate organisations will be those that act in accordance with the legal requirements, carrying out actions rationally and subject to a legal, rational and consciously constructed order. The agents act in their environment in response to diverse restrictions and incentives that they believe will serve their own interests.

The normative pillar considers legitimacy as moral obligation, which goes beyond mere legal requirements. It is argued that normative controls will be more interiorised than regulatory controls and compliance with those controls will bring both intrinsic and extrinsic rewards. Actions carried out are rooted in their social context and are orientated by the moral dimension provided by obligations and relationships with others in each situation (Navarro & Ruiz, 1997).

Lastly, in the cognitive pillar it is stated that organisations seek legitimacy by adopting structures and behaviours of reference already accepted as correct which are designated “socially-constructed acceptations” (Navarro & Ruiz, 1997). Organisations operate in accordance with “rational myths”, which are the institutionalised beliefs or rules of the game (Scott, 1995).

2 Research model

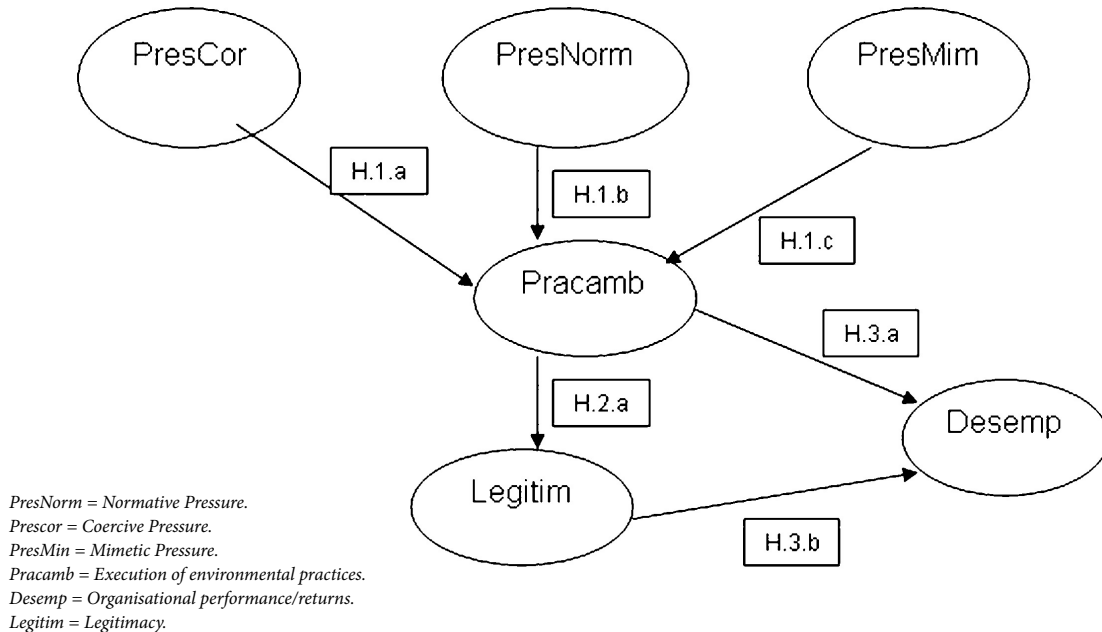
The research model proposed is based on the configuration of the institutional context of the golf courses of Andalusia. The different systems that we have described previously translate to the three institutional mechanisms (normative, coercive and mimetic) that will exert pressure on their environmental practices. On these lines we present the research model:

Table 1: Differences of emphasis of the three institutional pillars

INSTITUTIONAL ELEMENTS	REGULATORY	NORMATIVE	COGNITIVE
BASIS OF COMMITMENT	Convenience	Social obligation	What is accepted
MECHANISMS	Coercive	Normative (Standards and Values)	Mimetic
LOGIC	Instrumental	Appropriation	Orthodoxy
INDICATORS	Rules, laws, sanctions	Accreditation	General, isomorphism
BASIS OF LEGITIMACY	Legal sanction	Moral government	What is conceptually correct

Source: Scott, 1995

Fig. 1: Graphic representation of the model



Source: Authors' own compilation

The following research hypotheses are put forward:

H1a: Coercive pressure produced by the laws and other regulations applicable to the activities carried out in the golf courses of Andalusia have a positive influence on the adoption of sustainable environmental practices by these organisations. (+)

H1b: The acceptance of values and standards that originate from the normative pressures applicable in the context of the golf courses in Andalusia have a positive influence on the adoption of sustainable environmental practices by these organisations. (+)

H1c: The imitation of environmental practices employed by other organisations perceived as successful by the golf courses in Andalusia has a positive influence on the adoption of sustainable environmental practices by these organisations. (+)

H2a: The implementation of environmental practices by the golf courses in Andalusia is principally motivated by the search for social legitimacy, more than by the increase of business performance or returns. (+)

H3a: The implementation of responsible environmental management practices by the golf courses in Andalusia has a positive influence on the business performance of these organisations. (+)

H3b: A positive direct relationship exists between the social legitimacy sought by the golf courses in Andalusia and their business performance or returns. (+)

From the preceding hypotheses, it can be inferred that our model aims to measure the degree of influence that the mechanisms of institutional pressure (Scott, 1995; DiMaggio & Powell, 1983; North, 1990; Berger & Luckman, 1967; D'Andrade, 1984) have on the employment of sustainable environmental practices by the golf courses in Andalusia. In addition, we aim to corroborate the propositions of the classic institutionalists (Meyer & Rowan, 1977), in the sense that the final objective of practices of this type is more to gain legitimacy and social acceptance than to increase economic efficiency or organisational performance/returns.

Table 2: *Technical specifications of the sampling*

Research field	Golf courses located in the Autonomous Region of Andalusia
Geographic location	Andalusia
Methodology	Structured questionnaire
Universe	96 golf courses in Andalusia
Size of the sample	Sample = universe, 96 golf courses
Valid responses	31 (32.29% of response rate)
Sampling error	7.42%
Level of confidence	95%, $p = q = 0.5$; $Z = 1.96$
Period of data collection	Pretest: September 2008. First mailing: December 2008. First re-mailing: January 2009. Second re-mailing: February 2009. Treatment of data: February and March 2009.

3 Methodology and sample

The instrument of measurement utilised to obtain the data was a structured questionnaire directed towards the greens keepers and/or managers of the golf courses of the Autonomous Region of Andalusia since these are believed to be the individuals who have the most direct information on the topics studied.

A first version of the questionnaire was tested by several faculty members, with experience in this type of research, and managers of golf courses. Our objective was to ensure the validity of content of the instrument of measurement. Once the questionnaire had been sent, and after waiting one week, we interviewed these initial recipients to analyse their suggestions which were incorporated in the definitive questionnaire.

Having thus validated the questionnaire, we were then ready to apply it to the population being studied, that is, to the population consisting of the 96 golf

courses in Andalusia that were in active operation during the year 2009. In continuation we present the principal characteristics of the sample.

The scale utilised to measure the key factors of the research model is a Likert scale of five points. For the three pressure mechanisms argued under the Institutional Theory the type of measurement used has been utilised before, in the studies of DiMaggio and Powell (1991), Kostova and Roth (2002), and Llanas (2005). For the performance of environmental practices we have taken the indicators designed by Romero et al. (2005) as the basis. The measurement of legitimacy has been made based on Deephouse (1996). Lastly, we have utilised the scale proposed by Powell and Dent-Micallef (1997) to measure the organisational performance, utilising the respondents' perceptions of their own organisation's performance in comparison with its competitors.

Table 3: *Latent variables of the model and indicators*

HYPOTHESES	HYPOTHESES	INDICATORS	ABBREVIATIONS
H2a	Legitimacy (Legitim)	Social recognition.	Recosoci
		Organisational values.	Valorg
		Legitimacy, Public Administration.	Admolegi
		Legitimacy, employees.	Emplegi
		Legitimacy, citizens.	Ciulegi
		Legitimacy, communications media.	Maslegi
		Legitimacy, customers.	Clielegi

HYPOTHESES	CONSTRUCTS	INDICATORS	ABBREVIATIONS	
H2a	Legitimacy (Legitim)	Legitimacy, suppliers.	Provlegi	
		Legitimacy, associations of ecologists.	Asoclegi	
		Legitimacy, professional associations.	Proflegi	
		Legitimacy, business sector.	Sectlegi	
		Relationships with pressure groups.	Relagrup	
H1a	Coercive pressure (Prescor)	Knowledge of laws.	Conoley	
		Compliance with laws.	Cumpley	
		Regulatory authorities.	Orgregul	
		Existence of agreements.	Exacuerd	
H1b	Normative pressure (Presnor)	Moral obligation.	Obligmor	
		Congruence with values of the context.	Congrval	
H1c	Mimetic pressure (Presmim)	Social norms.	Normsoci	
		Knowledge from experience.	Conoexp	
		Models to follow.	Modelseg	
		Imitation practices.	Imiprac	
H3a H3b	Environmental management practices (Pracamb)	Knowledge of successful experience.	Conoexit	
		Number of environmental proposals.	Numprop	
		Proposals put into practice.	Propract	
		Proposal achieves objectives.	Probjct	
		Cost of environmental actions.	Costemed	
		Number of environmental legal proceedings.	Expedmed	
		Employees in environmental training activities.	Emplefor	
		Hours of environmental training activities.	Horafor	
		Awarded environmental certification.	Provcert	
		Purchases from suppliers with environmental certification.	Compcert	
		Expenditure on disseminating environmental achievements.	Diflogro	
		Expenditure on campaigns to increase awareness.	Campconc	
		Business performance or returns (Desemp)	Economic conditions 2007.	Condeco
			Financial result 2007.	Rtdoeco
Returns 2007.	Rentbil			
Number of Green Fees 2007.	Numgren			
Market share 2007.	Cuotame			
Economic conditions 2003-2007.	Condeco3			
Financial result 2003-2007.	Rtdoeco3			
Returns 2003-2007.	Rentbo3			
Number of Green Fees 2003-2007.	Numo3			
Market share 2003-2007.	Cuota03			

The scales were reviewed utilising factorial analysis with the object of determining their uni-dimensionality. In relation to the type of indicator selected, in all cases the indicators have been of the reflective type.

4 Analysis of data using PLS

The PLS (Partial Least Squares) technique was utilised for the analysis of the data. This technique can be considered appropriate in our case for two main reasons. First, as a result of the procedure of segmentation of complex models, the PLS approach can work with small sample sizes (Barclay et al., 1992), as in our case. Second, according to Selling (1995), the use of PLS should be considered in studies of the exploratory nature.

The graphic representation of the structural model appears in Figure I. Having represented and defined the variables, a PLS model has to be analysed and interpreted in two steps, in which the measurement model and the structural model are considered.

4.1 Analysis of the measurement model

In this step we determine whether the theoretical concepts are measured correctly by the variables observed; for this their validity and reliability are studied. In a PLS model the individual reliability of the item, the internal consistency and the convergent and discriminant validity are analysed (Chin, 1998).

The individual reliability of each item for constructs with reflective indicators is evaluated by the PLS model by examining the loading or simple correlation of

each indicator with the construct that it is intended to measure. The value of the standardized loadings must be equal to or greater than 0.50 according to Falker and Miller (1992). In the scales employed, the majority of the indicators present loadings higher than 0.50; in particular, and after successive clearings we are left with 27 items, out of a total of 44 that comprised the initial scale.

The reliability of a construct allows us to check the internal consistency of all the indicators when measuring the concept; in other words, an evaluation is made of how rigorously the manifest variables are measuring the same latent variable. To measure this parameter we must look at the composite reliability, given the advantages that it presents over the Cronbach's Alpha. For this we follow Nunnally (1988), who suggests 0.7 as a modest level for the reliability in early stages of research and a stricter 0.8 for basic research. The table below gives the values of the composite reliability obtained for the reflective constructs that comprise the model proposed.

It can be seen that all the constructs have a composite reliability higher than or practically equal to 0.7.

The convergent validity is analysed by the average variance extracted (AVE), which gives the amount of variance that a construct obtains from its indicators in relation to the amount of variance due to the measurement error. For this, Fornell and Lacker (1981) recommend values higher than 0.5 since this level guarantees that at least 50% of the variance of the construct is due to its indicators. The following table presents the values of the AVE obtained in the research model proposed.

Table 4: Composite reliability of the constructs of the model

Constructs	Composite reliability
PresCoer	0.697582
PresNorm	0.802031
PresMIm	0.744143
Pracamb	0.915181
Legtimi	0.885277
Desemp	0.867587

Table 5: Convergent validity of the constructs of the model

Constructs	AVE
PresCoer	0.537966
PresNorm	0.579547
PresMIm	0.593380
Pracamb	0.576204
Legtimi	0.609760
Desemp	0.505700

Table 6: *Discriminant validity*

Constructs	PresCoer	PresNorm	PresMIm	Pracamb	Legtimi	Desemp
PresCoer	0.733					
PresNorm	-0.382	0.761				
PresMIm	-0.097	0.357	0.770			
Pracamb	-0.425	0.444	0.397	0.759		
Legtimi	-0.312	0.633	0.411	0.486	0.780	
Desemp	-0.464	0.207	0.135	0.505	0.461	0.711

As can be observed, all the constructs of the research model proposed meet the condition recommended by Fornell and Lacker (1981); therefore it is accepted that the constructs possess convergent validity.

To evaluate the discriminant validity we check whether the average variance extracted (AVE) of the construct is greater than the square of the correlations between that construct and the rest that make up the research model (Fornell & Lacker, 1981), which indicates that one construct is different from any other. To make the procedure of calculation more practical, we perform the inverse procedure, that is, to determine the discriminant validity of a construct the square root of AVE is calculated; the AVE has previously been calculated by running the data on the Visual-PLS software; the value must be higher than the correlations presented with the rest of the constructs. These values are given in the next table in which the elements of the diagonal correspond to the square roots of the AVEs.

As can be observed, all the constructs meet the condition argued by Fornell and Lacker (1981); therefore we can state that the constructs have discriminant validity.

4.2 Analysis of the structural model

The following table reflects the path coefficients between the different constructs, which tell us in each case the strength of the relationship established between two constructs:

As can be observed in this table, all the path coefficients meet the condition proposed by Chin (1998), being above 0.2.

The predictive power of the model that we have put forward can be analysed utilising the value of the variance explained (R^2) for the dependent latent variables (Chin, 1998; Falk & Miller 1992; Leal & Roldán, 2001). Falk and Miller (1992) stipulate values that are equal to or larger than 0.1 as adequate for the variance explained. In our case, as is reflected in the next table, we can conclude that the model presents an adequate predictive power.

Table 7: *Path coefficients, correlations and variance explained*

Relationships of the internal model	Path coefficients	Correlations	% of variance explained
PresCoer->Pracamb	0.3120	-0.425	13.26%
PresNorm->Pracamb	0.2220	0.444	9.86%
PresMim->Pracamb	0.2880	0.397	11.43%
Pracamb->Legtimi	0.4860	0.486	23.62%
Legtimi->Desemp	0.2820	0.461	13.00%
Pracamb->Desemp	0.3680	0.505	18.54%

Table 8: Variance explained of the dependent variables

Endogenous constructs	R ²
Pracamb	0.345
Legitmi	0.236
Desemp	0.315

In respect of the stability of the estimations offered and according to the propositions argued by Barclay et al. (1995), Tenenhaus et al. (2005) and Henseler et al. (2009), we consider appropriate to complement the analysis of the structural model estimated with the PLS technique, by means of the cross-validated redundancy index (Q²) or the Stone-Geisser test (Stone, 1974; Geisser, 1975). In our case the values of Q² are slightly higher than zero, as shown in next table; this indicates that the model has some predictive capacity or relevance, albeit weak.

In any case, the values presented by Q² in our work are not negative, which would have indicated that the model lacked any predictive power (Henseler, 2009). We agree, however, with what Barclay et al. (1995) state. They argue that the objective of the PLS analysis is to explain the variance in a sense of regression and thus R² and the level of the path coefficients are measures sufficient and indicative of how well the model performs. In our case acceptable levels in both measures are obtained, therefore we can conclude that the model does have predictive capacity.

Fig. 2: Model with the results of testing the hypotheses

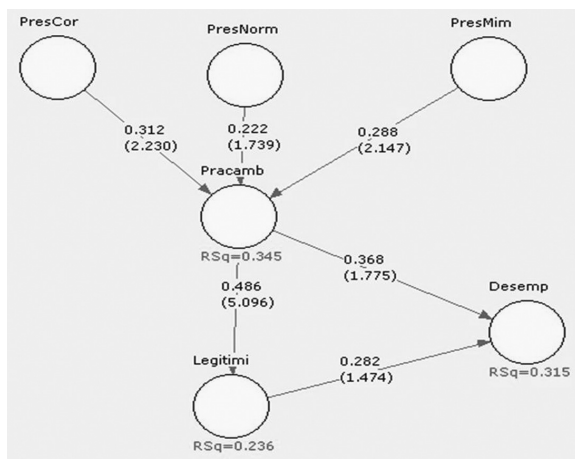


Table 9: Stone-Geisser test for the latent variables

Endogenous constructs	Q ²
Pracamb	0.005
Legitmi	0.002
Desemp	0.003

5 Testing of hypotheses

Subsequent to this testing, we executed a Bootstrap analysis in PLS to utilise a Student-T distribution of two tails, with n-1 degrees of freedom, n being the number of subsamples analysed (in our case 500), to determine that the relationships (hypotheses) are statistically significant.

The following figure shows the β coefficients and the Student-T tests (in parentheses in the figure) of all the relationships between the constructs of our model.

If we take as reference the levels of acceptance commonly argued in the scientific literature for this type of PLS technique, we can state that the hypotheses H1a, H1c and H2a would be accepted and their testing would be positive. Similarly, the hypotheses H1b, H3a and H4a would be rejected because their Student-T test values do not exceed the minimum level required of 1.96 (or alternatively we would have to lower the level of significance demanded).

6 Conclusions

The object of the present work is to analyse and study the impact of the corresponding institutional context on the golf courses of Andalusia. A series of conclusions can be drawn from this analysis, with implications for the management of organisations of this type.

First we can state that the golf courses of Andalusia co-exist with a highly institutionalised environment in which we can differentiate the classic mechanisms of pressure and isomorphism developed according to Institutional Theory and defended by authors such as Meyer and Rowan (1977), Scott (1995) and DiMaggio and Powell (1983). Thus, we can distinguish a coercive mechanism that is reflected in the broad legal tradition regulating the activities of these organisations; similarly we have been

able to identify a mimetic mechanism arising out of the experiences considered successful in environmental matters; and lastly there is a normative mechanism that arises from the various initiatives of professional associations of this field in environmental matters.

From this institutional context, which we have identified and defined, we can conclude, in function of the data of composite reliability that we have obtained, that all the constructs considered in the present study have a fairly acceptable internal consistency. Similarly, we can state that at least 50% of the variance of all the constructs is due to their indicators; therefore convergent validity is another of the characteristics to be noted, particularly with respect to the constructs that form the institutional context.

We can state that the mechanism that has the greatest incidence on the development of environmental management practices by these organisations is coercive pressure followed by mimetic pressure and in third place, normative pressure. This proposition is motivated by the great diversity of standards that exist in relation to the activities of golf course management and their relationship to the natural environment and especially by the approval of Decree 43/2008 that regulates the establishment and functioning of golf courses in Andalusia with many environmental implications.

Another of the conclusions that needs to be emphasised refers to the importance for these golf course of the concept of legitimacy, which is widely understood as social acceptance. It has been demonstrated in the study that the principal motivation for implementing practices of environmental protection is the achievement of social legitimacy, even more than the improvement of financial performance and returns. Moreover, those managers interviewed at these golf courses do not believe that a greater legitimacy necessarily generates better returns for them. They are similarly sceptical that putting environmental policies into practice represents a better organisational performance for them.

The preceding statement strengthens the importance for the golf courses of being respectful of the natural environment since this confers social acceptance upon them and, therefore, brings clients and resources that ensure their survival.

Our aim with this study is to contribute to the studies termed “environmental or green institutionalism”, but from a perspective of organisations related to tourism and we believe this study provides additional knowledge on this field of research.

Institucionalni pristop k okoljskim praksam na tečajih golfa

Povzetek

Kot je znano, se je število golf igrišč v zadnjem času v mnogih turističnih krajih izjemno povečalo, kar je sprožilo javne debate o njihovem vplivu na okolje. V nekaterih španskih pokrajinah, kot je na primer Andaluzija, je golf postal ena pomembnejših turističnih privlačnosti, ki ima nezanemarljive ekonomske učinke na okolje.

Pričujoči prispevek poskuša s pomočjo rezultatov empirične raziskave, ki je bila izpeljana na vzorcu golf igrišč, analizirati institucionalni kontekst in odnose med okoljskimi praksami nosilcev ponudbe golfa in prisilnimi, normativnimi ter mimetičnimi mehanizmi okolja. V nadaljevanju je s pomočjo institucionalne teorije obravnavana povezanost med dejanskimi praksami in neposrednimi ali posrednimi vplivi različnih mehanizmov.

Ključne besede: institucionalna teorija, golf, turizem, okoljski menedžment

References

- Barclay, D., Higgins, C., & Thompson, R. (1995). The Partial Least Square (PLS). Approach to causal modelling: Personal computer adoption and use as an illustration. *Technology Studies*, 2(2), 285–309.
- Berger, P., & Luckman, T. (1967). *La construcción social de la realidad*. Buenos Aires: Amorrortu Editores.
- Chin, W. (1998). The Partial Least Square Approach to structural equation modeling. In G. A. Marcoulides, (Ed.), *Modern methods for business research* (pp. 295–336). Mahwah: Lawrence Erlbaum Associates, Inc. Publishers.
- D'Andrade, R. G. (1984). *Cultural meaning system*. Cambridge: Cambridge University Press.
- Deephouse, D. L. (1996). Does Isomorphism legitimate? *Academy of Management Journal*, 39(4), 1024–1039.
- Di Maggio, P. J., & Powell W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality. *American Sociological Review*, 48, 147–160.
- Di Maggio, P. J., & Powell W. W. (1991). *The new institutionalism in organizational analysis*. Chicago: University of Chicago Press.
- Falk, R., & Miller, N. (1992). *A primer for soft modelling*. Akron: The University of Akron Press.
- Fornell, C., & Lacker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error: algebra and statistic. *Journal of Marketing Research*, 28, 39–50.
- Geisser, S. (1975). The predictive Sample Reuse Method with applications. *Journal of the American Statistical Association*, 70, 320–328.
- Henseler, J., Ringle, C., & Sinkovics, R. (2009). The use of partial least square path modelling in international marketing. In I. Rudolf, R. Sinkovics, & N. Pervez (Eds.), *Advance in international marketing* (pp. 277–319). Bingley: Emerald JAI Press.
- Kostova, T., & Roth, K. (2002). Adoption of fan organizational practice by subsidiaries of multinational corporations: Institutional and relational effects. *Academy of Management Journal*, 45, 215–243.
- Leal, A., & Roldán, J. (2001). Validación de un modelo de implantación de gestión de calidad total y su efecto en los resultados empresariales: un estudio causal predictivo mediante análisis PLS (Partial Least Squares). In *X International Conference, European Association of Management and Business Economics* (pp. 541–555). Vigo: AEDEM.
- Llanas, R. (2005). *Un análisis institucional de la implantación de la Agenda Local 21 por los Ayuntamientos españoles*. PhD Dissertation. Granada: University of Granada.
- Navarro, J., & Ruiz, M. (1997). Teoría Institucional y Teoría de la Organización. *Anales de Economía y Administración de Empresas*, 5, 135–152.
- North, D. (1990). *Institutions, Institutional change and economic performance. Political economic of institutions and decisions*. Cambridge: Cambridge University Press.
- Nunnally, J. (1988). *Psychometric Theory*. 2nd ed. New York: McGraw-Hill.
- Pinto, J., Fernández, R., Martínez, L., & Kauffman, G. (2006). Análisis del énfasis en la innovación en la implantación “Middle-up-down” management model: Un estudio evolutivo en las empresas manufactureras del País Vasco: Aspectos metodológicos y empíricos. *Estudios Gerenciales*, 22(10), 37–59.
- Powell, W., & Dent-Micallef, A. (1997). Information technology as competitive advantage: The role of human, business, and technology resources. *Strategic Management Journal*, 18(5), 375–405.
- Romero, Q. et al. (2005). *Modelo para la evaluación del comportamiento medioambiental: una aplicación a los campos de golf españoles*. PhD Dissertation. Place: University of Las Palmas de Gran Canaria.
- Scott, W. R. (1995). *Institutions and Organizations*. Thousand Oaks: Sage Publications.
- Selling, N. (1995). Partial least square modelling in research on educational achievement. In W. Bos, & R. H. Lehmann (Eds.), *Reflections on Educational Achievement, Papers in Honour of T. Neville Postlethwaite* (pp. 256–267). Münster: Waxmann.

- Stone, M. (1974). Cross-Validatory choice and assessment of statistical predictions. *Journal of Royal Statistical Society*, 2(36), 111–147.
- Tenenhaus, M., Vinzi, V., Chatelin, J., & Lauro, C. (2005). PLS path modelling. *Computational Statistics & Data Analysis*, 48(1), 159–205.