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ON THE VALUE RELEVANCE OF REGIONAL COMPETITIVENESS DURING ECONOMIC DOWNTURN

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Introduction

- Tourism Competitiveness is broadly accepted as one of the most investigated field by researchers and policymakers due to the rapid importance **competitiveness has acquired in order to develop countries.**
- Governments, in fact, recognize the economic significance of tourism: the latest report issued by the World Travel and Tourism Council (2013) accounts that tourism generated **260 million jobs**, contributed **\$6.6 trillion (USD) to worldwide GDP**, **\$760 billion in investments**, and **\$1.2 trillion in exports**
- As a result of the clear economic impact of the tourism industry, many researchers have attempted **to identify factors that affect destination competitiveness** in the tourism industry (Barros, 2005; Cracolici *et al.*, 2008; Gomezelj and Mihalic, 2008; Molina-Azorin *et al.*, 2010).

Literature review

Starting from the literature review, we focalize our attention over these three questions:

1

- What is destination competitiveness?

2

- How do researchers measure competitiveness?

3

- How competitiveness affects economic development of countries?

Literature review

What is destination competitiveness?

- It has been defined by **The Economist** as **“the combination of benefits owned by a particular tourism destination that differentiates it from other destinations”**
- **Porter** (1990) outlined his conceptual framework of competitiveness first in *The Competitive Advantage of Nations* defines the competitiveness of a location as **the productivity that companies located there can achieve.**
- A destination is competitive when is able to maintain a high, and increasing over time, market position (D’Hauteserre 2000).

Literature review

How do researchers measure competitiveness?

The mainstream uses tourism indices even though the relevance of various factors is weighted differently according with the aim of research.

- Kozak and Rimmington (1999) considered the quantitative outputs of competitiveness like tourist numbers and tourist revenues and the qualitative outputs as tourists' likes and dislikes.
- Crouch and Ritchie (1999) refers specifically to the level of economic, social and environmental conditions offered to residents.
- Bernini (2009) highlighted that four components are able to benefit tourism destination: demand conditions (quality of products), local factor conditions (environmentally related resources), tourism-related and supporting industries (the actors) and government policy (i.e. infrastructure).

Literature review

How do researchers measure competitiveness?

There are three general approach in building a model of tourism destination competitiveness (TDC):

1. The first derives from early studies focused on the destination attractiveness (Chon, Weaver & Kim 1991; Bramwell & Rawding 1996);
2. The second one is based on Michael Porter's (1990) framework which identify destination competitiveness advantages (e.g. De Holan & Phillips, 1997; Guo, 2000);
3. The third approach (Crouch & Ritchie 1993-1999-2003-2006) combines the theories of both comparative and competitive advantage.

Literature review



Crouch, G. I., Ritchie, J. R. B. (2006). *Destination Competitiveness*, In *International Handbook on the Economics of Tourism*,

Literature review

- In 2009 was created the **Competitiveness Monitor** which in principle is similar to that of other competitiveness indicators (Navickas & Malakauskaite 2009).
- The authors emphasized that *“the method of Competitiveness Monitor is universal; it is possible to include an unlimited number of factors and tourist destinations that need to be evaluated”*.

The original CM index was made of eight sub-index

human tourism indicators

price competitiveness

infrastructure development

environment

technological advancement

human resource

market openness

social development

Literature review

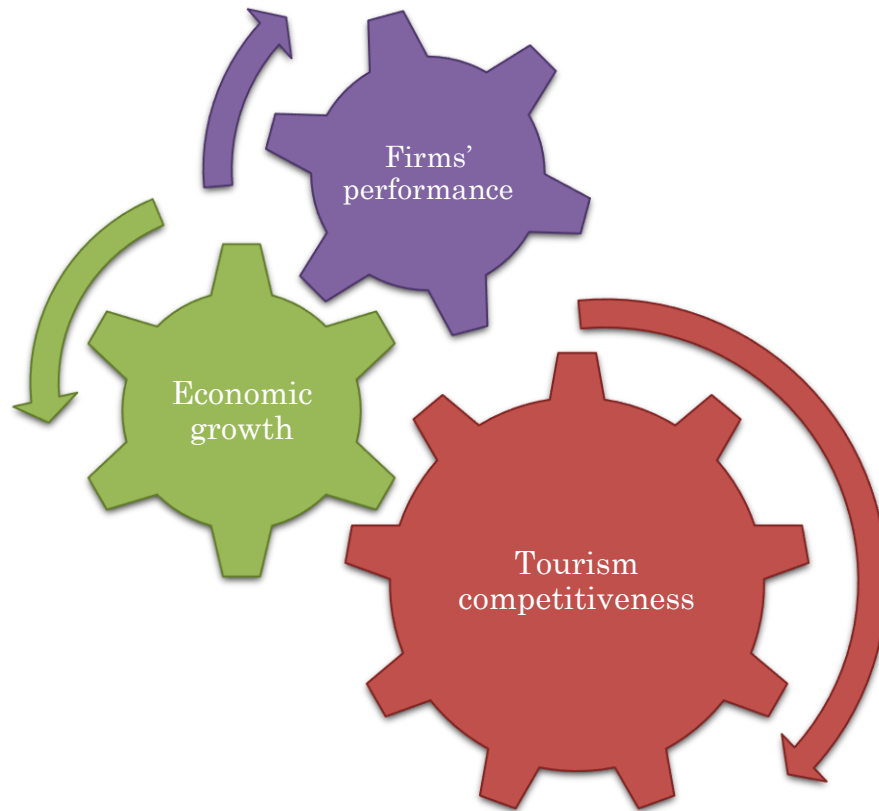
How competitiveness affects economic development of countries?

Many studies have been centred on the positive **association between tourism destination competitiveness and economic development of countries.**

Recently some studies have been conducted in order to analyse the causality between **economic conditions and performance of companies inside the tourism industry:**

1. Chen (2007) and Tang and Jang (2009) found that economic growth can significantly strengthen sales performance of hotel, airlines and restaurants;
2. Chen (2011) demonstrated that inbound tourism expansion have a direct impact on hotel companies profitability.

Research objectives



- If tourism competitiveness is positively associated with economic growth and economic growth is positively associated with firms' performance, it follows that investment in tourism competitiveness should improve firms' performance.
- In other words, the research deep the relationship between destination competitiveness and hospitality performance within the crisis.

Method and methodology

Sample selection

1. Italian companies which operates in the hospitality industry.
2. Ateco2007 code “*55.10.00 - Hotels and similar accommodation*”.
3. availability of 2005 and 2009 profitability ratio (investigate the change in profitability and competitiveness during the financial crisis);
4. no liquidation or other bankruptcy proceedings during time 0 and t+1;
5. As a result we obtain a sample made on **1.542 firms**.

Method and methodology

In order to analyze the relationship between CM score and Hotel profitability, we performed:

1

- an analysis based on the study of **correlation** between profitability ratios and regional CM index score;

2

- a **cluster analysis**, with the aim of understand if the indicator is able to “capture” differences among regions
- a **factor analysis** in order to evidence those characteristics that are predominant

3

- a **multiple regression**, in order to corroborate our hypothesis by investigating whether the competitiveness affects hotels’ profitability.

Method and methodology

Dependent variables

- Return on Assets (ROA), Return on Sales (ROS) and Return on Equity (ROE).

Independent variables

- Competitiveness indicator: (see next slide) information are available on the INIS data-warehouse.

Control variables

- Size: natural logarithm of total assets;
- Revenues: the natural logarithm of total revenues;
- Liquidity: the natural logarithm of the percentage of cash and cash equivalent held scaled by total assets;
- Solvency: the percentage of equity over total assets.

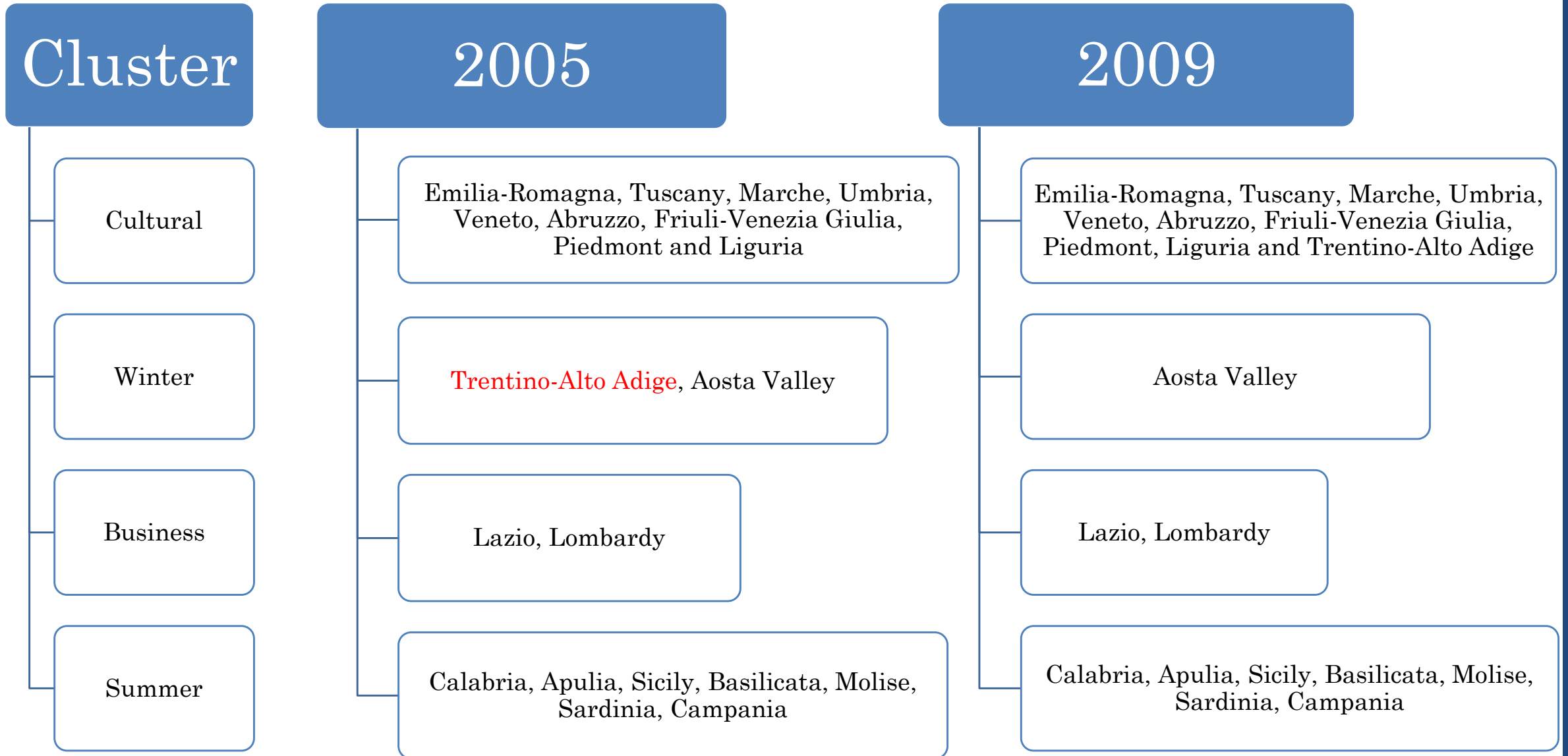
Method and methodology

Sub-Index	Sub-set	Description	
Price competitiveness indicators (A)	<i>Hotel and restaurant prices (A1)</i>	<i>Price of hotels and restaurants.</i>	
Infrastructure development indicators (B)	<i>Road index (B1)</i>	<i>N. of km per 1.000 km² of surface area.</i>	
	<i>Railroad network (B2)</i>	<i>N. of km per 100 km² of surface area.</i>	
	<i>Airlines communication (B3)</i>	<i>N. of passengers on domestic and international flight per regions.</i>	
	<i>Public service transportation (B4)</i>	<i>N. of public transport network per 100Km of local surface area.</i>	
Ecology (environment) related indicators (C)	<i>Energy consumption (C1)</i>	<i>N. of kWh per citizen.</i>	
	<i>Population (C2)</i>	<i>N. of citizen.</i>	
	<i>Other related indicators (C3)</i>	<i>Percentual of Urban Forestry on local surface area per region.</i>	
	<i>Education Index (D1)</i>	<i>N. of citizen which almost obtained a diploma over the population.</i>	
Human resource indicators (D)	<i>Tourism participation index (E1)</i>	<i>N. of tourists over the number of local citizens.</i>	
Human tourism indicators (E)	<i>Tourism and trade openness (F1)</i>	<i>Amount of tourist expenditure as a percentage of GDP.</i>	
Market openness indicators (F)	Technological advancement indicators (G)	<i>Impact of R&D on GDP (G1)</i>	
Technological advancement indicators (G)		<i>Internet index (G2)</i>	<i>Amount of research and development expenditure as a percentage of GDP.</i>
		<i>Phone index (G3)</i>	<i>N. of computers with active access to the World Wide Web.</i>
		<i>Mobile index (G4)</i>	<i>N. of phone lines per 100 households.</i>
		<i>High-tech export (G5)</i>	<i>N. of mobile phone users per 100 households.</i>
	<i>Social development index (H1)</i>	<i>Value of high-tech products exported.</i>	
Social development indicators (H)	<i>TV sets (H2)</i>	<i>Fruition of Mass-Media.</i>	
		<i>N. of television per 100 households.</i>	

Main results – correlation analysis

	Panel A			Panel B		
	ROA	ROS	ROE	ROA	ROS	ROE
Competitiveness Score	0.136***	0.0905***	0.0591**	0.0023	-0.0167	-0.0178
Hotel and restaurant prices	-0.1408***	-0.1031***	-0.0813***	0.0441*	0.03019	0.02708
Road index	0.0709***	0.0545**	0.004	0.0379	0.0031	-0.024
Railroad network	0.1045***	0.0753***	0.03161	-0.0393	-0.044*	-0.073***
Airlines communication	0.1492***	0.1048***	0.08248***	-0.049*	-0.014	-0.0352
Public service transportation	0.0072	0.0207	-0.0344	-0.04243*	-0.0225	-0.0626**
Population	-0.078***	-0.0757***	-0.0231	0.08784***	0.0378	0.076***
Energy consumption	0.044*	0.0136	0.02404	0.025156	0.0253	-0.0007
Environmental indicator	0.0971***	0.0505**	0.0654**	0.08595***	0.056**	0.08399***
Education Index	0.1275***	0.0704***	0.06704***	0.01627	-0.01707	-0.0025
Tourism participation index	0.0029	0.01307	-0.02061	0.001067	0.00208	-0.00008
Tourism and trade openness degree	0.0242	0.0227	0.00403	0.0317	0.03901	0.0248
Impact of R&D on GDP	0.1116***	0.0632**	0.06084**	-0.03564	-0.03897	-0.0312
Internet index	0.0447*	0.0507**	0.00234	-0.0317	-0.0593**	-0.0416
Phone index	0.07041***	0.0581**	0.02406	-0.0072	-0.032	-0.0178
Mobile index	0.0863***	0.0623**	0.05675**	0.0123	0.0074	0.00937
High-tech export	0.1033***	0.0727***	0.0448*	-0.0705***	-0.0408	-0.05732**
Social development index	0.0304	0.03	0.0066	0.01017	0.00551	0.00248
TV sets	0.0854***	0.0457*	0.0546**	0.0133	-0.035	0.0163

Main results – Cluster analysis



Main results – regression analysis

Variable	2005			2009		
	ROA	ROS	ROE	ROA	ROS	ROE
Constant	-0.02757 0.02443	-0.18948*** 0.04258	-0.09164 0.05991	0.02876 0.02492	-0.05507 0.04881	-0.05107 0.0571
Asset Size	-0.03101*** 0.00234	-0.00127 0.00447	-0.02431*** 0.00592	-0.01645*** 0.00258	-0.0127*** 0.00457	-0.01859*** 0.00562
Revenues	0.03516*** 0.00225	0.01608*** 0.00565	0.03303*** 0.0062	0.01911*** 0.0024	0.02404*** 0.00559	0.02747*** 0.00609
Solvency ratio	0.03902*** 0.00756	0.00482 0.01306	0.0304* 0.01608	0.00197 0.00643	-0.02828** 0.0137	0.03079* 0.01574
Liquidity ratio	0.00186** 0.00092	0.0003646 0.00165	0.00679*** 0.00245	0.00326*** 0.00077872	0.00569*** 0.00185	0.00846*** 0.00198
Comp. Score	0.00048392*** 0.00014273	0.0007948*** 0.00025731	0.00038188 0.00036	-0.00024273* 0.00014126	-0.00044461 0.00028186	-0.000589* 0.0003154
R ² Adjusted	0.214	0.0259	0.0445	0.1041	0.0383	0.0474
F-Fischer	82.82***	8.99***	14.99***	36.53***	13.17***	16.20***
N	1542	1542	1542	1542	1542	1542

Main results – Factor analysis

2005

2009

2005		2009	
Factor 1	Pattern	Factor 1	Pattern
Social development index (H1)	0.88749	Tourism participation index (E1)	0.91966
Tourism participation index (E1)	0.87164	Tourism and trade openness (F1)	0.90621
Tourism and trade openness (F1)	0.85737	Social development index (H1)	0.86777
Factor 2	Pattern	Factor 2	Pattern
Airlines communication (B3)	0.89817	Airlines communication (B3)	0.90223
High-tech export (G5)	0.87361	High-tech export (G5)	0.88256
Population (C2)	-0.92735	Population (C2)	-0.91726
Factor 3	Pattern	Factor 3	Pattern
Phone index (G3)	0.86706	Phone index (G3)	0.93168
TV sets (H2)	0.81756	Education index (D1)	0.78793
Education index (D1)	0.7755	TV sets (H2)	0.63233
Factor 4	Pattern	Factor 4	Pattern
Road index (B1)	0.88763	Road index (B1)	0.84246
Railroad network (B2)	0.76315	Railroad network (B2)	0.80171
Factor 5	Pattern	Factor 5	Pattern
Other related indicators (C3)	0.77486	Other related indicators (C3)	0.67921
Hotel and restaurant prices (A1)	-0.61069	Hotel and restaurant prices (A1)	-0.5583

Main results – regression analysis

Variable	2005			2009		
	ROA	ROS	ROE	ROA	ROS	ROE
Constant	0.00902	-0.13275***	-0.06498	0.00774	-0.08495*	-0.09975*
	0.02345	0.04075	0.05457	0.02247	0.04572	0.0535
Asset Size	-0.03151***	-0.00161	-0.02453***	-0.01656***	-0.01338***	-0.01961***
	0.00233	0.00444	0.00588	0.00263	0.00462	0.00563
Revenues	0.03492***	0.01564***	0.03255***	0.01972***	0.02488***	0.02929***
	0.00224	0.00561	0.00617	0.00241	0.00563	0.00608
Solvency ratio	0.03894***	0.0038	0.03021*	0.00241	-0.02726**	0.03311**
	0.0076	0.01304	0.01604	0.00649	0.0137	0.01562
Liquidity ratio	0.0016*	0.0001039	0.00638***	0.00312***	0.00539***	0.00787***
	0.000913	0.00167	0.00245	0.00078418	0.00186	0.00197
Factor 1	0.0028	0.00418	-0.00235	0.00015734	0.00521	-0.00104
	0.00182	0.00407	0.00556	0.00254	0.00588	0.00694
Factor 2	0.00627***	0.00779***	0.00674*	-0.00539***	-0.00499*	-0.00864**
	0.00175	0.00264	0.00391	0.00159	0.00287	0.00364
Factor 3	0.000338	0.00317	0.00305	0.00030591	-0.00631	0.00007766
	0.00172	0.00321	0.00471	0.00201	0.00436	0.00467
Factor 4	-0.00023	0.0032	-0.00805	-0.00211	-0.00434	-0.01196***
	0.00193	0.00318	0.00545	0.00188	0.00312	0.00385
Factor 5	0.00551***	0.00583*	0.01277***	0.00428*	0.0058	0.01341***
	0.00209	0.00324	0.00462	0.0022	0.0039	0.00501
R ² Adjusted	0.2182	0.0265	0.0478	0.1153	0.041	0.0593
F-Fischer	47.61***	5.55***	9.39***	23.13***	8.25***	11.69***
N	1542	1542	1542	1542	1542	1542

Conclusion

- During economic downturn the positive effect of ecological and environmental indicators reveal that an increase in these characteristics still positively influence hotel profitability.
- However, the negative influence of factor 2 (number of airplane passengers on domestic and international flight per regions), which was positive during 2005, reveal something unexpected.
- The high portion of fixed costs makes firms extremely sensitive to business conditions and economic downturns (Chen, 2010), regardless of changes in local destination competitiveness.
- This allow us to imagine that this loss of profitability could be linked to hotel managers' price discount policies. Even if it remain a theory hence not confirmed by empirical measures, the higher the number of tourists (measured by the number of airplane passengers on domestic and international flight per regions) the higher the industry competition the higher the "*price war*" with the result in a lower level of profitability.
- Therefore, in accordance with Dwyer et al. 2010, despite increases in revenues, profitability is damaged.

Conclusion

- Our results are useful because they can help practitioners, hotel managers and policy makers to identify those attributes that influence hotel profitability during normal years and economic downturn.
- Especially, we consider that the negative result of factor 2 (which is strictly related to tourism demand) can help hotel managers in considering that during economic downturn price discount policies can badly affect hotel profitability nullifying benefits from the increasing of regional competitions.
- Taken together, our results provide evidence of why local authorities should increase local competitiveness in order to generate long-term destination attractiveness.