PROFITABILITY AND FINANCIAL STRUCTURE OF BATHING ESTABLISHMENTS: AN INITIAL INTERNATIONAL COMPARISON[*]

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Abstract. Actuality: The pandemic has had a devastating effect on tourism, although it has subsided during the summer months. The sector is economically important in many countries, where bathing is a major attraction. Purpose: The research analyses the economic and financial dynamics of bathing establishments over the last decade in three European nations where bathing tourism is widespread: Italy, Spain, and Portugal. Research Methods: The financial statements of a sample of 5,382 bathing establishments, mainly Italian, for the decade 2012-2021 were analysed, illustrating the average trend in Profit Margin and Financial Leverage. The data were subjected to statistical processing. The ANOVA and Tukey-Kramer methods were used for cross-country comparisons. Results: The companies analysed are all small in the number of employees. They have an uneven profit margin, especially in the Iberian nations. Spain was most affected by the pandemic. There are no significant differences between the different geographical areas concerning profitability, which has a more constant trend in Italy. The financial situation is unstable over the decade considered, as the leverage values, expressed in percentage terms, show excessive indebtedness. There are evident significant differences between the countries examined, with Spain being the area most different. Implications: This study implements the modest economic literature on these companies. Quantitative research highlights the high profits that justify proliferation. Public policies should be attentive to the sector that implements the national GDP. The Italian situation, where establishments are more widespread than in the other two countries, can be a useful reference for all countries that want to exploit their coasts for tourism.
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Introduction. Europe's coastlines total about 89,000 km, and their

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[*] This paper is the result of collaboration between the two authors. It is however possible to attribute the paragraphs "Literature review", "Research methodology" and "Conclusions" to Guido Migliaccio. The other paragraphs are by Miriam Meninno.

combination with man-made elements has developed beach tourism. It significantly affects the production of economic wealth and can be traced back to the "blue economy."

The need to preserve the beauty of coasts and waters has also increased the focus on sustainable tourism.

This paper analyzes the economic and financial performance of beach establishments, influenced by various factors and especially by the changing needs of tourists.

Using balance sheet data from a rich sample of enterprises from Italy, Spain, and Portugal, it aims to answer mainly one research question:

RQ1: What is the economic and financial performance of beach businesses?

Over the decade 2012–2021, the average performance of "Profit Margin" and "Financial Leverage" is illustrated. The financial statement data are subjected to numerous statistical elaborations.

Companies are small relative to the number of employees. Especially the Iberian nations show uneven profit margins; Spain was the most affected by the pandemic. There are no significant differences between geographic areas in profitability, which has a more constant trend in Italy. The financial situation is uneven.

Literature review. The sea and the coast are unique elements of tourist attractions, regardless of the season. The coolness of the water and the comfortable beaches are the main reasons for beach tourism, which is concentrated, on the other hand, mainly in the warmer months. It has spread mainly thanks to bathing establishments that have the merit of providing useful ancillary services to bathers.

International scholarship has mainly focused on beach tourism, while there are few contributions to the economic and financial analysis of beach businesses.

Preliminary to any reading is the contribution of Walton (2011), who outlined the evolution of beach tourism in Europe, focusing on its history. For a valid analysis, however, it is also necessary to consider the impact of the flow of tourism on all residents and not only on the owners of vacation homes (Mottiar & Quinn, 2003). The entire local community must be actively involved in the planning and management of the industry so that most of the proceeds are equitably distributed among residents (Figini et al., 2009). Only in this way can the understandable resistance of indigenous peoples be prevented. It is precisely the systemic nature of tourism products that generates the need for extensive involvement of destination stakeholders in the organization and management of hospitality (Pechlaner et al., 2010). This also generates profitable linkages within the host community and between these locations and their hinterlands (Agarwal, 2012).

It was therefore logical that most scholars have analyzed concrete realities to study the dynamics of the contexts involved in beach tourism.

The Italian city of Rimini, for example, has been considered a typical example of a service-based economy with significant transformations in its socioeconomic

structure (Battilani & Fauri, 2009). This has required, over time, the progressive involvement of its citizens in the development of the sector (Figini et al., 2009). In this locality, the problem of diversification of tourism offerings has also arisen, especially to encourage depersonalization and preserve active facilities even during colder periods. Therefore, efforts have been made to invest in business and cultural tourism (Figini & Vici, 2012; Rabbiosi & Giovanardi, 2016). A similar experience is also seen in England (Watts, 2009), where collaborative implementation network structures are highlighted.

Also contributing to the success of seaside resorts is the tourist enhancement of piers (Chapman et al., 2021) and lighthouses, as well as spas (Alexandrova et al., 2019; Bacon, 1997; García et al., 2013) located near beaches. Also to be considered are the rarer cases of the construction of amusement parks in seaside locations that increase the attractiveness of places (McCarthy, 2022).

The field, therefore, is diverse and has long required innovative classifications and evaluations (Micallef et al., 2004) that also consider, of course, the new stimuli arising from the principles of sustainability and the growing need to encourage bathing for people with disabilities as well (Migliaccio, 2019; Poli, 2020).

This quick and concise review highlights the absence of quantitative studies on beach businesses based on balance sheet data. This gap is intended to be addressed by this research, which tends to test three hypotheses:

H1: The profitability of bathing establishments is high everywhere but has declined as a result of the pandemic;
H2: self-financing normally favors a balanced financial structure;
H3: There are no substantial differences among major coastal-rich European nations.

Research Methodology. From the Bureau van Dijk company's Orbis database (www.bvdinfo.com), a sample of enterprises with NACE Rev 2 code: 93.29.20 "Operation of bathing establishments: maritime, lake, and river" was taken, which falls under "Other amusement and recreation activities."

Financial statements for 5,382 beach businesses were, therefore, analyzed for the decade 2012–2021, relating to Italy, Spain, and Portugal. The sample shows a clear predominance of Italian firms (Table 1).

**Table 1: The nationality of the enterprises in the sample**

Italy	5.099
Spain	252
Portugal	31

Source: Our elaboration

The bathing and business traditions, as well as the regulatory framework, significantly affect the different usability of beaches in the three nations.

First, the size of these enterprises was analyzed concerning the number of employees, resulting in the data shown in Graph 1.

Graph 1: The employees - Trend
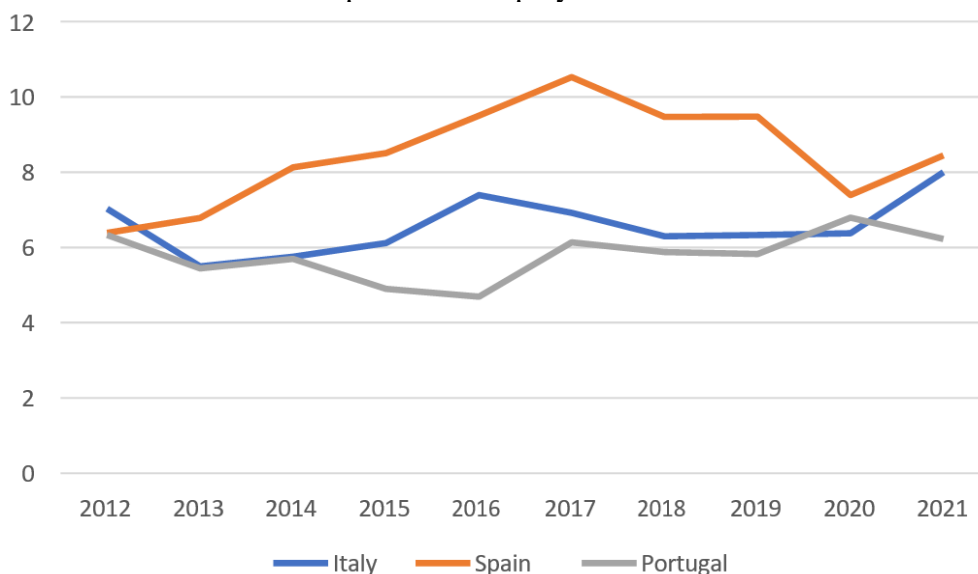
These are therefore small-scale enterprises. The largest are in Spain, although there are fewer of them.

Next, the 10-year trend of profit margin and financial leverage was analyzed for the same period.

Graphing the trend of the annual average data for each index also required the determination of the interpolating curve, using, as a rule, the polynomial equation of degree 6 that maximized the value of R^2.

ANOVA (with a significance level of 0.05) and the Tukey-Kramer test were used for cross-country comparisons.

Each result is illustrated and commented on.

Main results. **Profit margin** is an index for quantifying the percentage of profit earned by a company concerning its revenues. Expressed as a percentage, it indicates how much profit the company makes for each euro of revenue. The formula is thus: (Net income/Net sales) * 100

Table 2 shows the trend of Profit Margin over the decade 2012-2021.

Table 2: Profit Margin - Trend (Data)

	2012	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*
Italy	-1,02	-2,14	-1,80	0,57	0,63	2,09	1,75	0,93	1,62	5,60
Spain	-5,42	-1,32	-5,13	-0,69	-0,89	-0,35	4,46	1,96	-5,36	10,06
Portugal	-6,27	4,37	-2,64	-2,22	-6,64	-6,55	-6,88	2,27	2,02	-3,51

An analysis of profit margin reveals an industry with sufficient gain between revenues and costs in some years, albeit with uncertain trends.

To plot the trend graph of annual average values, we preliminarily determine the interpolation equation that maximizes the R2 value (Table 3).

Table 3: Profit Margin - Equations of interpolating curves

	Equation	R^2
Italy	y = 0,0002x6 - 0,0049x5 + 0,0644x4 - 0,6112x3 + 3,4251x2 - 8,0428x + 4,1557	0,978
Spain	y = 0,0061x^6 - 0,1745x^5 + 1,8697x^4 - 9,4082x^3 + 22,642x^2 - 22,684x + 2,5859	0,892
Portugal	y = -0,0036x6 + 0,1207x5 - 1,6394x4 + 11,678x3 - 44,97x2 + 83,356x - 54,575	0,831

Source: **ORBIS data processing**

The R2 value of Italy, Spain, and Portugal is close to 1. This shows that the trend depicted in Graph 2 below is statistically valid.

Graph 2: Profit Margin - Trend (Graphic illustration)
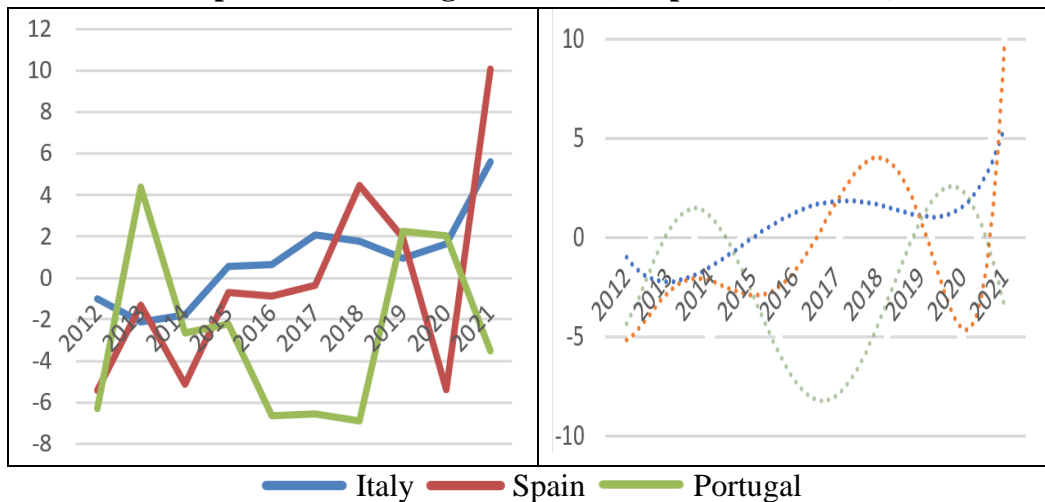
Source: ORBIS data processing

The 10-year profit margin of the Spanish and Portuguese beach sectors is fluctuating, as shown by the lines alternating between negative and positive values. Italy has steady growth, even in years characterized by COVID. Only Spain seems to have been affected by the pandemic in 2020. A reduction in profitability is also seen in Portugal in 2021.

To check for any statistically significant differences between geographic areas, the values were subjected to the ANOVA test (Table 4).

Table 4: Profit Margin – ANOVA Test

SUMMARY

Groups	Count	Sum	Media	Variance
Italy	10	8,2244	0,82244	5,006696
Spain	10	-2,6871	-0,26871	23,55754
Portugal	10	-26,0594	-2,60594	17,6019

VARIANCE ANALYSIS

Origin of variation	SQ	dof	MQ	F	Significance value	F crit
Between groups	61,35689	2	30,67845	1,993568	0,155762	3,354131
In groups	415,4953	27	15,38871			
Total	476,8522	29				

Source: ORBIS **data processing**

The variance of the profit margin has an F-value of 1.99, lower than F (3.35); this indicates no statistically significant differences between the averages of the three areas considered. While not necessary, the Tuckey Kramer Test in Table 5 confirms.

Table 5: Profit Margin - Tukey Kramer test

Media Italy	0,82244
n Italy	10
Media Spain	-0,26871
n Spain	10
Media Portugal	-2,605942267
n Portugal	10
MQ	15,38871461
Q Statistic	3,53
Comparison between Italy and Spain	
Absolute difference	1,09115
Standard error of difference	1,24051258
Critical Range	4,379009407
Average between Italy and Spain is	Not different
Comparison between Italy and Portugal	
absolute difference	3,428382267
standard error of the difference	1,24051258
Critical range	4,379009407
Average between Italy and Portugal is	Not different

Comparison between Spain and Portugal	
Absolute difference	2,337232267
standard error of the difference	1,24051258
Critical Range	4,379009407
Average between Spain and Portugal Groups is	Not different

Source: ANOVA data processing

Financial Leverage. Financial leverage is the ratio of debt capital to equity capital. It expresses how much the firm depends on external sources.

$$\text{Financial Leverage} = \frac{Debt\ Capital}{Equity\ Capital} * 100$$

The data obtained from the processing of ORBIS data are shown in Table 6.

Table 6: Financial Leverage – Trend (Data)

	2012	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*
Italy	128,09	138,39	127,98	130,47	115,98	112,39	115,14	116,37	121,95	114,52
Spain	88,65	101,69	102,81	65,34	68,46	79,90	75,66	77,85	120,72	99,43
Portugal	205,42	91,60	98,50	388,14	110,55	117,01	214,68	274,95	85,84	87,21

*Source***: ORBIS data processing**

The nation with the biggest overhang is Portugal, as it recorded a value of 288.14 in 2015, compared to Spain's 65.34 and Italy's 130.47.

Italy and Spain increased debt in 2020, a pandemic year.

Table 7 shows the equations needed to obtain the interpolating trend curves and, with R2, their representative effectiveness.

Table 7: Financial Leverage– Equations of interpolating curves

	Equation	R^2
Italy	y = -0,0032x6 + 0,098x5 - 1,2539x4 + 8,8012x3 - 35,478x2 + 68,992x + 87,226	0,9064
Spain	y = -0,0289x6 + 0,9486x5 - 12,298x4 + 80,082x3 - 271,25x2 + 431,96x - 142,14	0,7851
Portugal	y = 0,2762x6 - 9,3651x5 + 124,08x4 - 810,47x3 + 2694,4x2 - 4170,1x + 2385	0,5989

Source: **ORBIS data processing**

The equations show that Italy's R^2 value is close to 1; the trend depicted in Graph 3 is statistically significant. For Spain and Portugal, however, it is less expressive.

Graph 3: Financial Leverage - Trend (Graphic illustration)
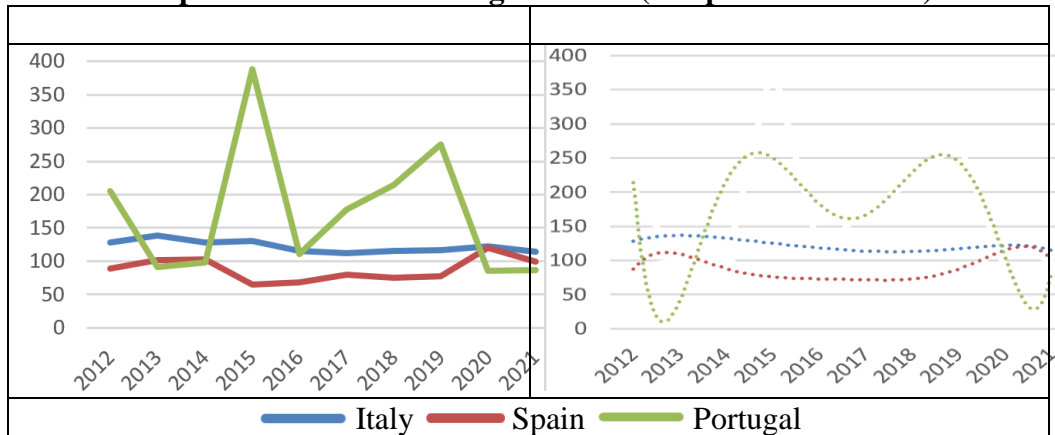
The trend is similar for Italy and Spain, almost parallel, with Italian firms being more indebted. Portugal's trend, on the other hand, is up and down, and while it almost always has higher values than the other geographic areas, it has been less dependent on external sources in recent years.

Testing for significant differences between geographic areas is done with the ANOVA test shown in Table 8.

Table 8: Financial Leverage– ANOVA Test

SUMMARY						
Groups	*Count*	*Sum*	*Media*	*Variance*		
Italy	10	1221,279	122,1279	75,17145		
Spain	10	880,5154	88,05154	313,8124		
Portugal	10	1733,903	173,3903	10057,1		
VARIANCE ANALYSIS						
Origin of variation	*SQ*	*dof*	*MQ*	*F*	*Significance value*	*F crit*
Between groups	36905,75	2	18452,88	5,299464	0,011443	3,354131
In groups	94014,72	27	3482,027			
Total	130920,5	29				

Analysis of variance reveals significant differences, in that the F value (5.30) is greater than the critical F value (3.35), thus requiring the Tuckey-Kramer test (Table 9).

Table 9: Financial Leverage - Tuckey Kramer Test

Media Italy	122,12788
n Italy	10
Media Spain	88,051539
n Spain	10
Media Portugal	173,390262
n Portugal	10
MQ	3482,026838
Q Statistic	3,53
Comparison between Italy and Spain	
Absolute difference	34,076341
Standard error of difference	18,66018981
Critical Range	65,87047004
Average between Italy and Spain is	Not Different
Comparison between Italy and Portugal	
Absolute difference	51,262382
Standard error of the difference	18,66018981
Critical range	65,87047004
Average between Italy and Portugal is	Not Different
Comparison between Spain and Portugal	
Absolute difference	85,338723
Standard error of the difference	18,66018981
Critical Range	65,87047004
Average between Spain and Portugal Groups is	Different

Source: **ANOVA data processing**

The statistically different differences were mainly generated in the comparison between Spain and Portugal.

Conclusions. The study of the economic and financial performance of seaside businesses has prompted an analysis related to a sector critical to the economies of many coastal countries.

Making use of a decade's worth of financial statements from a sample of 5,382 enterprises with NACE Rev 2 code 93.29.20 "Operation of bathing establishments: maritime, lake, and river", trends in two indexes expressive of profitability and dependence on debt capital were outlined.

Appropriate statistical computations supported the analysis.

The first hypothesis (H1) can be considered only limitedly confirmed because profitability turns out to be high only occasionally. The pandemic reduced it in Spain in 2020 and in Portugal in 2021. Italy, on the other hand, has had steady growth, even in years characterized by COVID.

The second hypothesis (H2) can relatively be confirmed only for Spain, which has almost always optimal values. Italy has gradually improved its financial performance, although debt remains prevalent. Portugal shows fluctuating values.

The third hypothesis (H3) is confirmed for only profitability, for which there are no statistically significant differences among the three nations.

These are the conclusions of a purely quantitative study that does not consider qualitative aspects. In addition, the analysis would require other indices and a correlation with market prices, the cost of money, and any supportive public policies.

However, the representation of trends is useful to the management of enterprises, which can compare their situation with the average one to identify possible gaps.

It also provides information to guide public development policies.

Such analyses would not be possible without balance sheet data drawn from the valuable balance sheet archives.

The major limitation of this study is the anomalous composition of the sample, with the clear predominance of Italian firms.

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