

The Tourism Distribution System in Portugal and Spain: an approach to its performance evaluation

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Abstract

This study aims to strengthen knowledge about the tourism distribution system, using the calculation and analysis of indicators and financial ratios, as part of this sector companies' performance evaluation. In this case, return on equity (ROE) was used as this ratio measures how effectively management is using shareholders' investment to create profits. Using the Dupont model, the main objective is to identify which financial factors influence travel company's ROE from the shareholder viewpoint (Lopes et al., 2014; Pratt, 2011, Rodrigues and Simões, 2008). To this end, an Iberian study involving 7528 travel companies (travel agencies, tour operators and other reservation services and related activities) was conducted. The ROE was calculated for the years 2007 and 2017 for 2065 Portuguese companies and 5463 Spanish. The ROE calculation in those two years identifies an increase of 5 p.p. for Portugal and 11 p.p. for Spain. In Spain, the Tour Operators sub-sector is the one with the highest ROE increase in 2017 (15p.p. between 2007 and 2017), while in Portugal it is the Travel Agencies subsector (5p.p.). This increase in ROE in 2017 is positively determined by net income after taxes and earnings before taxes and interest (EBIT) in both countries. Moreover, in Spain, this ratio also has a positive influence of turnover and headcount. Thus, Portugal and Spain reveal two different realities in this highly competitiveness sector. What lessons can be drawn from these two countries reality? What should managers do to be proactive regarding the issues which influence performance evaluation?

Keywords: Return on Equity (ROE), performance evaluation, travel agencies and tour operators

1. Introduction

This study focuses on the distribution tourism system because of the huge challenges it has been experiencing particularly in the last three decades. The disintermediation and re-intermediation processes have transformed the entire tourist distribution chain, leading to the closure of many traditional intermediaries, the need for adaptation to an increasingly competitive and dynamic market by those who have remained and the emergence of new intermediaries. In addition, in the last decade, this has occurred in parallel with a period of crisis, on the two countries being studied, that has marked all sectors of economic activity, including tourism. The option of analysing and comparing two distinct and specific years – 2007 and 2017 – has the intention to understand the changes and fluctuations in the tourist distribution chain when the economic crisis was at its onset, for these two particular countries, and also when these economies were showing signs of recovery. Also, 2017 correspond to a year of growing on the tourism sector.

The decision to study the performance evaluation of this sector is related to the small number of studies that focus on this theme. National and international tourism statistics and observatories present several indicators that allow us to characterize the sector very broadly and consistently, however, it is more difficult to find more specific studies with financial data of this type of enterprises.

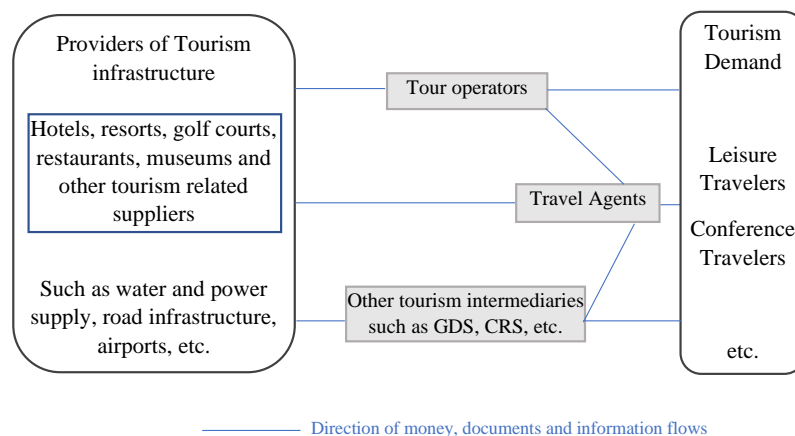
Thus, we have chosen the performance evaluation to better understand the tourism distribution system financial reality. For that were used profitability ratios to answer to three hypotheses, which were formulated based on the literature review and which will help to perceive if there is some relation between the tourism intermediaries profitability and a set of variables as size (turnover, asset, and headcount), activity of the enterprise and return on sales. The study uses secondary financial data available on the SABI database, for a sample of 7 528 Portuguese and Spanish tourism intermediaries and covers the years of 2007 and 2017.

After characterizing the sample by type (travel agency, tour operator and other reservation and related services) and size of the enterprise (micro, small, medium and large), for both countries and the two years under study, it is developed a set of calculations to evaluate the profitability of the sector through the Return on Equity, by type and size of enterprise, in both countries and in both years. Following, the descriptive statistics are presented for the variables and the chosen ratios (Return on Equity and the Return on Sales) and the Hypothesis are tested. The last section develops the main conclusions of this study and presents some considerations regarding future studies.

2. Literature Review

The tourism distribution system is directly associated with the process of organizing the trip and the tourist experience, particularly when using intermediaries for this purpose. Its main function (figure 1) is to create channels through which consumers (tourists, travelers) have access to the different tourism producers (tourism supply) through organized trips (where the main tourism services, such as accommodation, transport, food, tourist attractions among other suppliers may be included). The enterprises that usually have this task of articulate all the producers in order to conceive organized travel experiences are known as tourism intermediaries.

Figure 1. The tourism distribution system – the traditional distribution channels



Source: Adapted from Sigala (2008)

The traditional enterprises that work as tourism intermediaries, identified on the Figure 1, are: the travel agencies, the tour operators, the Global Distribution Systems - GDSs (as Amadeus and Galileo, etc.) and the Computer Reservation Systems (CRSs).

However, the emergence of the Internet and the evolution of Information and Communication Technologies (ICTs) in the tourism sector has changed the way the entire tourism sector works, including the way tourist companies communicate, advertise and sell their products and, consequently, the alternatives that arise from booking and buying online between consumer (tourist) and producer. This process, where many large hotels and airlines have successfully utilized the Internet and website as a direct channel to sell to their customer, has become increasingly intense in the tourism industry, particularly on the late 90's and on the first decade of this century, and is known for the disintermediation (Viljoen et al., 2015; Kaewkitipong, 2010). The disintermediation on the tourism sector had a huge impact on the distribution system with the elimination of many travel agencies and tour operators.

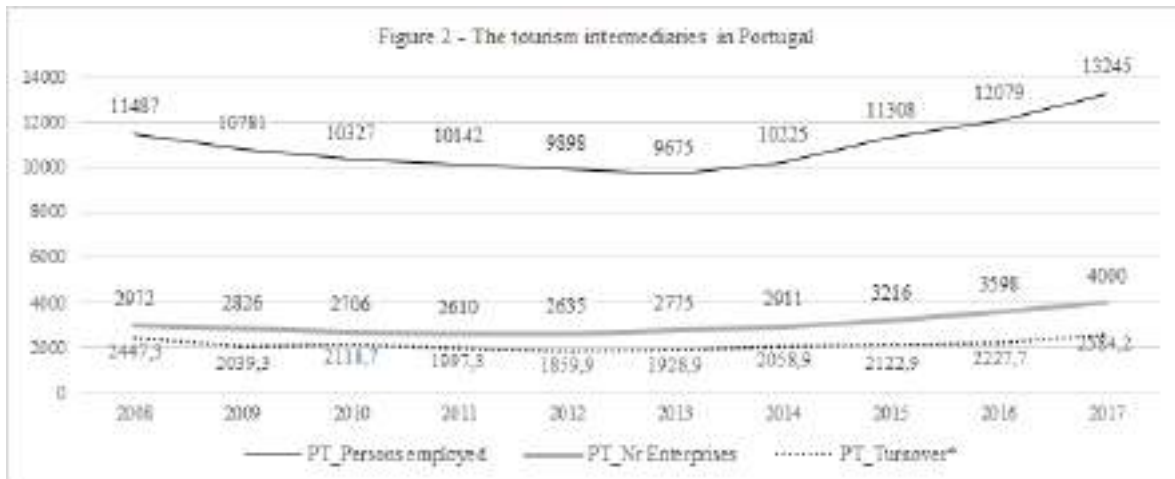
In turn, the Tourism Distribution System also had to adapt and reinvent its business, and a set of online distribution channels emerged, considered the new tourism intermediaries: as the Reservation Systems and the Online Travel Agencies, the Search engines and the Online Booking Engines, Destination Management Companies (DMC), the social networks, multiple price comparison websites and also the tourism providers' websites (Camilleri, 2018; Arán & Molinillo, 2014; Buhalis & Law, 2008). This reaction from the tourism sector and the tourism distribution system is called reintermediation.

Thus, with respect to traditional travel agents and tour operators, many eventually closed their doors - and some of these returned in an online format - some did not leave the market and were able to adapt to the online market, others feature both service versions, and finally another group is still on the market in its original version. For instance, in Spain, the competitiveness of the sector, the need to adjust to new technologies and adapt to new patterns of demand and booking of tourism services has led to a 16% reduction in travel agencies since 2007 (Muñoz et al, 2013). However, this decrease has not been accompanied by a proportional reduction in the turnover volumes of the distribution sector. It could be said that a large part of the market share of those agencies that have disappeared has been absorbed by the agencies that have survived the restructuring.

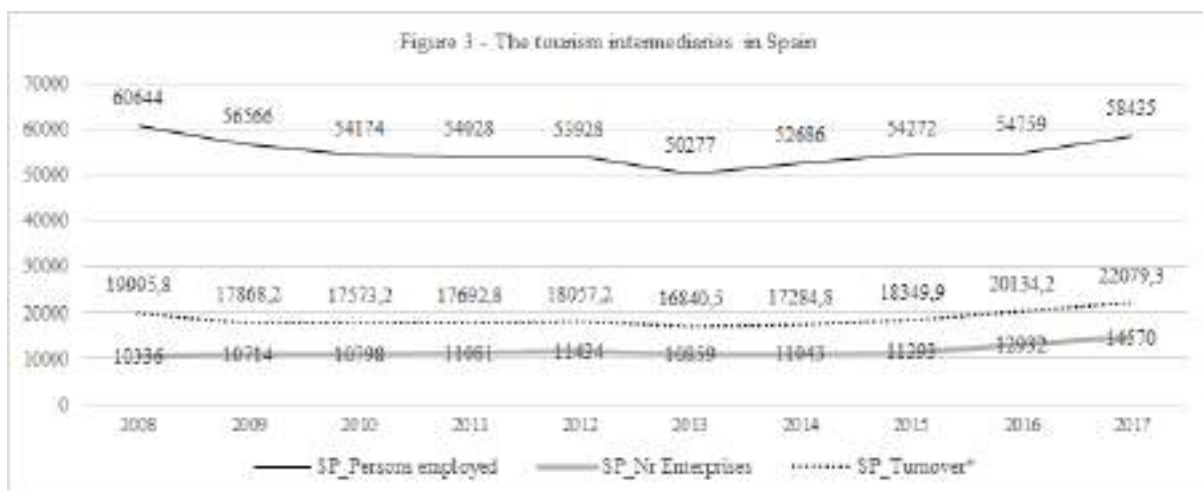
Despite these changes and, for example in relation to the Spanish population, the main distribution channel in 2018 is the online Travel Agencies (with 32%), supplanting the physical or traditional Travel Agencies (23%), the fact is that the intermediary sector in Spain is in a growing recovery. According to a 2019 study by the Sector Observatory (DBK Informa, 2019), turnover of travel agencies and tour operators increased by 3.1% and 2.5% respectively between 2017 and 2018. In absolute terms, for 2018, physical travel agencies invoiced 4,950 million euros, tour operators, 14,200 million euros and online travel agencies and booking centers invoiced 4,650 million euros, an increase of 7.5% compared to 2017 (DBK Informa, 2019). The same study also reveals that the tourism distribution sector in Spain has a steady influx of new companies but maintains a high degree of concentration as the top five tour operators represents a market share of 43%, in 2018, while the top five travel agencies represents 38%.

Also, in Portugal, the tourism intermediary sector is recovering, with the aggregate turnover of travel agents and tour operators growing by 3% in 2016, with the tour operators market representing 325 million and travel agencies. 1,520 million euro. The sector is experiencing a growing trend of larger intermediary groups, with the market share of the first five tour operators representing 57% and the top five travel agencies being 45%, according to 2016 (DBK Informa, 2017).

In fact, when we analyse the Eurostat annual enterprise statistics for special aggregates of activities (NACE Rev. 2) with respect to the Spanish and the Portuguese tourism intermediaries (according to Table 1) we understand that, in fact, we are in a growing period (see Figure 2 and 3) but recovering from a period of readjustments, slow growth or even a decrease in some indicators (comparing the values of 2008 and 2017).



Source: Authors (based on the Annual enterprise statistics for special aggregates of activities (NACE Rev. 2))



* Turnover or gross premiums written - million euros

Source: Authors (based on the Annual enterprise statistics for special aggregates of activities (NACE Rev. 2))

It is in this context of readjustment, reinvention and recover of the tourism distribution system that the interest in studying it from the point of view of performance evaluation arises.

Performance evaluation

Performance evaluation is determinant in profit-making and non-profit-making services enterprises (Adams, 1997). This is corroborated by Subaciene & Senkus (2013), as they focus the pertinence of evaluation of the operating effectiveness and of financial position of an enterprise. Manager has to know what and why is happening in his enterprise, as it is vital to adopt future decisions to improve the performance (Adams, 1997). In the service sector, more and more enterprises are using financial and non-financial measures for the performance evaluation, but they depend on the nature of the enterprise (Adams, 1997; Braga & Braga, 2009). Financial and non-financial measures are complementary in terms of information Braga & Braga (2009). Adams (1997) referees six groups of performance measures: financial performance, competitiveness, resource utilization, quality of service, innovation and flexibility. Inside of financial highlights profitability. Sellers-Rubio & González (2009) compared different approaches when evaluating performance of travel agencies. Nevertheless, it cannot be said that one is better than the others. For example, industry and services cannot use the same measures if the productivity is the measure in discussion.

Ratio analysis has been widely used in studies about enterprises financial performance and its use has been highlighted by accounting and finance textbooks. However, it should be considered that a ratio is a value of a relation and it is essential to know the parts of this relation. According to Kim & Ayoun (2005), there is not an agreement about ratios denomination and estimation. Then it is important in

addition of the denomination, how its estimation was done. It should be highlighted that a weakness of the use of ratios depends on the nature of the accounting information (Adams, 1997).

Ratios are subdivided into five categories such as: profitability, liquidity, capital structure, asset management and market value (Adams, 1997; Kim & Ayoun, 2005). Profitability ratios show the capacity of an enterprise to use equity, sales and assets. Return on equity indicates the stockholders' return (Kim & Ayoun, 2005). The return on equity has been used for several authors such as Lopes et al. (2014) who determined indicators and ratios that influence the return on equity. Bondoc & Dumitru (2018) used return on asset, return on equity and return on sales for the performance analyses of tourism enterprises.

One of the most publicized models to assess the economic situation of the company is the multiplicative model, known as Dupont model (1), which seeks to demonstrate the factors that influence the company's profitability from the shareholder viewpoint (Rodrigues & Simões, 2008; Lopes et al., 2014; Subaciene & Senkus, 2013). It presents a decomposition of return on equity, where it can be found determinants of profitability.

Dupont model is presented by Lopes et al. (2014) like:

$$\text{Return on Equity} = \frac{\text{net income}}{\text{sales}} \cdot \frac{\text{sales}}{\text{total assets}} \cdot \frac{\text{total asset}}{\text{equity}} \quad (1)$$

Subaciene & Senkus (2013) used return on equity to evaluate travel agencies and tour operators' enterprises. This ratio presents the advantage of evaluate all the revenues, all the costs including the profit tax of an enterprise. Sellers-Rubio & González (2009) consider as traditionalist profitability measures: return on asset, return on investment and return on capital employed.

There are many studies that analyse factors which influence enterprises profitability such as enterprises' size which is analysed by several authors. However, sometimes they do not reach the same conclusions. The profitability (ratio between operational results and total assets) is higher if the companies are large, by others words, there is a positive relation between size and profitability (Majumdar, 1997; Nunes et al., 2009; Serrasqueiro & Nunes, 2008). Risseuw (1997) refers that small enterprises differs from the large ones because usually have worse performance rates (when compared with the larger). Subaciene and Senkus (2013) corroborate this idea since they found out a negative return on equity (average) in micro travel agencies. Nevertheless Goddard et al. (2005) contradicts this line of thought claiming the existence of a negative relation between size (asset) and profitability (return on assets). Adams & Buckle (2003) say that the size of enterprises it isn't significant in terms of profitability. A lower level of fixed assets becomes in a bigger profitability (Serrasqueiro & Nunes, 2008; Nunes et al., 2009). However, Subaciene and Senkus (2013) concluded that structure of total asset and current asset do not influence return on equity.

If the enterprises have a range of diversified services, it will imply a greater level of innovation what determines a bigger profitability (Nunes et al., 2009). Akbaba (2013) refers that subsectors of tourism sector have got different performances, then the industry should be divided into subsectors. As an example, food and beverage enterprises and tourism attractions has higher performance than lodging industry.

An increase in return on sales implies an increase in return on equity (Lopes *et al.*, 2014). It was also found a strong positive correlation between return on assets, return on equity and return on sales (Herciu *et al.*, 2010). Net income and turnover influence positively return on equity, return on sales and return on assets (Bondoc & Dumitru, 2018).

In short, there are many variables that influence the profitability of companies. However, the type of influence varies according to the studies. It may depend of the type of company, of the profitability ratio calculation or even of the analysis sector that belong the enterprise. From the literature three hypotheses were formulated having in consideration the following variables: size (turnover, asset, and headcount), activity of the enterprise and return on sales.

Hypotheses

According to the literature review the following hypotheses were formulated:

- H1: There is a positive relation between size of tourism intermediaries' enterprises and their return on equity;
- H2: The return on equity differs according to the primary NAEC of tourism intermediaries' enterprises;
- H3: The return on sales of tourism intermediaries influences positively their return on equity.

These hypotheses are going to be tested on Portuguese and Spain travel agencies enterprises for the years of 2007 and 2017.

2. Methodology

Adopting a quantitative approach, it was used secondary data that characterizes the tourism intermediaries' sector in Portugal and Spain. The time period of the study covers two years: 2007 and 2017. The sample used in this study was selected from a population consisting of tourism intermediaries in Portugal and Spain with the corresponding National Economic Activity Codes (NAEC), according with Table 1. The sample was obtained from the SABI (The Iberian Balance Sheet Analysis System), from Bureau van Dijk, which is a database with data of companies in Spain and Portugal. We used it to obtain financial detailed information from balance sheet and profit and loss statement. The time period of the study covers the years 2007 and 2017, and it was obtained a sample of 7 528 enterprises after we had eliminated all the enterprises that had no activity in 2007 and/or 2017, that were temporarily inactive in dissolution process. Also, a mandatory requirement of the sample was to be composed by enterprises whose primary NAEC must be one of the Table 1; The ones with primary NAEC 7990, they must had a secondary NAEC equal to 7911 or 7912 to remain on the sample.

Table 1 - National Economic Activities Codes (NAEC) for the intermediary tourism enterprises, in Portugal and Spain

79 Activities of travel agencies and tour operators, reservation services and related activities
791 Travel agencies and tour operators' activities
7911 Travel agencies activities
7912 Tour operators' activities
799 Other reservation services and related services
7990 Other reservation services and related services

Source: Real Decreto 475/2007 (Spain) and Decreto-Lei nº 381/2007 (Portugal)

The data was processed using IBM SPSS (Statistics Packages for Social Sciences), Version 26 software. Descriptive statistics was used to characterize the variables and the Spearman's Rho bivariate analysis tested the relation defined in the hypotheses, which were formulated according to the literature review. To study the normality of all variables we used the Kolmogorov-Smirnov test, but because the normality was rejected for all variables, it was selected Spearman's Rho. According to Pestana and Gageiro (2008), Spearman's Rho measures the intensity of the relation among variables and is commonly used to describe the relation among two ordinal variables or one ordinal and other scale variable. Considering that this coefficient is not sensitive to asymmetric distributions, it does not require normal populations.

Kruskal-Wallis's nonparametric test was applied in H2 to compare the return on equity among NAEC of travel agencies and tour operators' enterprises clusters (Pestana and Gageiro, 2008). Variables are presented in the following Table and their corresponding measurement.

Table 2 –Measurement of variables

Variables	Measurement
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Net income after taxes (2017, 2007)	Net income after taxes
Net income before taxes (2017, 2007)	Net income before taxes
Headcount (2017, 2007)	Number of employees
Turnover (2017, 2007)	Sales and services/net turnover
Asset (2017, 2007)	Asset
Return on equity (2017, 2007)	Ratio between net income after taxes and equity
Return on sale (2017, 2007)	Ratio between net income after taxes and sales

Source: elaborated by the authors

3. Results

The time period of the study covers the years 2007 and 2017, and it was obtained a sample of 7 528 enterprises. In relation to Portugal, the sample consists of 2 065 enterprises: 991 enterprises for 2007 and 1657 concerning 2017 (Table 3). The tourism intermediaries' sector shows a great volatility in the tourism distribution market, as only 583 enterprises from 2007 remained in 2017. There were 408 enterprises which went out from the sector, with an entry of 1 074. In Spain the situation remains, since only 1 762 enterprises of 2007 kept in the market in 2017 and 1 801 enterprises left the market while 1900 have entered. The Spanish sample consists of 5 463 enterprises, 3 563 enterprises concerning to 2007 and 3 662 from 2017 (Table 3).

Featuring the sample by size and considering the definition presented by European Commission Communication (Annex 1) in the year of 2011, it was found that the sample consists mainly of micro-enterprises in both countries (Table 3). However, comparing the two years under analysis, there was an increase of 5% in this type of enterprises in Portugal, in 2017, while in Spain there was a decrease of almost 15% (directly impacting the growth of medium-sized enterprises in 13.2%).

Table 3 – Size of enterprises in Portugal and Spain

Size	Portugal		Spain	
	2017	2007	2017	2007
Micro	1 547 (93.4%)	877 (88.5%)	2 842 (77.6%)	3 290 (92.3%)
Small	91 (5.5%)	94 (9.5%)	256 (7.0%)	199 (5.6%)
Medium	18 (1.1%)	17 (1.7%)	535 (14.6%)	50 (1.4%)
Large	1 (0.1%)	3 (0.3%)	29 (0.8%)	24 (0.7%)
Total	1657	991	3662	3563

Source: elaborated by the authors

Featuring the sample by the National Economic Activities Codes (NEAC), the category of Travel Agency activities (79110) is the prevailing one in both countries (Table 4). Although Portugal shows a drop of 6.5% in the representation of travel agencies among all tourism intermediary companies, in fact, in absolute terms, there was an increase of more than 500 travel agencies between 2007 and 2017.

Table 4 – NEAC of enterprises in Portugal and Spain

NEAC	Portugal 2017	Portugal 2007	Spain 2017	Spain 2007
79110 - Travel Agencies	1 421 (85.8%)	919 (92.3%)	3 527 (96.3%)	3 472 (97.4%)
79120 - Tour Operators	213 (12.9%)	57 (5.8%)	102 (2.8%)	66 (1.9%)
79900 - Other reservation services	23 (1.4%)	15 (1.5%)	33 (0.9%)	25 (0.7%)

Source: elaborated by the authors

The enterprises were also clustered geographically, and in both countries, the two largest cities are those that concentrate the largest number of enterprises under study: in Portugal, the cities of Lisbon and Porto concentrate between 24.8% (2017) and 26.9% (2007), and in Spain, the cities of Madrid and Barcelona bring together 22% of the enterprises (in the two years under study).

Characterizing the sector's overall performance, it was found out an increase of 5 p.p. for Portugal and 11 p.p. for Spain, if it was considered the return on equity. In Portugal, between 2007 and 2017 sales growth rate was negative (-8.40%), headcount growth rate was 13.64% and net income growth rate

was 123%. In Spain, between 2007 and 2017 sales growth rate was positive 17.88%, headcount growth rate was 8.35% and net income growth rate was 296%.

Calculating the average profitability on each subsector, travel agencies (79110) highlight in Portugal with an increase of 5 p.p, and tour operator (79120) report an increase of 15 p.p. Portugal and Spain show different features: Spain presents a higher growth in profitability in the sector compared to Portugal and the subsectors with higher profitability are different between Spain and Portugal. In Spain, travel agencies are highlighted, while in Portugal tour operator and other reservation service activities are emphasized (Table 5).

Table 5 - Return on Equity by NEAC, in Portugal and Spain, in 2007 and 2017

NEAC	Return on equity - Portugal		Return on equity - Spain	
	2017	2007	2017	2007
79110	11.21%	5.81%	20.20%	10.64%
79120	15.58%	20.34%	12.20%	-3.09%
79900	26.37%	21.71%	6.91%	9.67%
Total	12.01%	6.61%	19.56%	8.29%

Source: elaborated by the authors

Table 6 presents the average profitability for each cluster of enterprises, defined by size, and where the data for Portugal is highlighted with an increase of 12 p.p in micro enterprises. Also, the Spanish small enterprises stand out with an increase of 31 p.p.. In 2017, the highest ROE is verified for the small enterprises, on both countries.

Table 6 - Return on Equity by size, in Portugal and Spain, in 2007 and 2017

SIZE	Return on equity - Portugal		Return on equity - Spain	
	2017	2007	2017	2007
Micro	9%	-3%	5,42%	7,77%
Small	19%	11%	34,18%	3,12%
Medium	9%	7%	23,26%	29,97%
Large	6%	31%	19,25%	16,95%

Source: elaborated by the authors

Table 7 and 8 provides the descriptive statistics, for Portugal and Spain, respectively, for the variables analysed in this study. Through these Tables can be analysed that on average travel agency, tour operator and other reservation service enterprises present positive net income after taxes. It must be underlined that these variables show some volatility because standard deviation is above the mean, for both Spain and Portugal. Concerning turnover and asset results, these two variables present different performances: Portugal reveals a decrease between 2007 and 2017, while in Spain there is an increase in the average values. Regarding the number of employees, the tourism intermediation sector presents relative low values: an average of about 11 employees, in Spain, and between 5.8 (2017) and 8.5 (2007), in Portugal.

Table 7- Descriptive statistics Portugal

Variables	Observations	Mean	Standard deviation	Minimum	Maximum
Net income before taxes 2017	1 657	30.2802	189.88583	-1 447.086	4 021.83
Net income before taxes 2007	991	25.9427	297.97888	-3 421.88	3 864.33
Net income after taxes 2017	1 657	21.9761	161.42465	-1 170.37	3 788.37
Net income after taxes 2007	991	16.4567	245.58376	-3 706.35	3 139.09
Headcount 2017	1 656	5.77	32.616	0	1 187
Headcount 2007	989	8.5	30.984	0	726
Turnover 2017	1 656	1 477.9675	10 566.97354	0	391 673.98
Turnover 2007	989	2 701.8050	12 048.26605	0	231 565.35

Asset 2017	1 656	619.1242	3 455.52111	.01	104 426.44
Asset 2007	984	981.1050	4 314.61225	0	72 565.05

Source: elaborated by the authors

Comparing the two years for the Spanish case (Table 8), all the variables present a relative increase, except for the headcount that had slight decrease. For both cases – the Portuguese and the Spanish – and considering all the analyzed variables there is a high dispersion of values, revealing great volatility in the financial context of the companies that characterize the tourism distribution sector.

Table 8- Descriptive statistics Spain

Variables	Observations	Mean	Standard deviation	Minimum	Maximum
Net income before taxes 2017	3 584	138.4356	2 309.47076	-	82 624.62
Net income before taxes 2007	3 547	73.8482	1633.39583	-10 169	86 474.51
Net income after taxes 2017	3 566	118.9750	2 054.45697	-11 840.88	73 762.00
Net income after taxes 2007	3 531	44.0816	1 114.61889	-9 713.39	58 458.03
Headcount 2017	3 106	10.90	102.193	1	4 696
Headcount 2007	3 341	11.06	111.948	1	4 768
Turnover 2017	3 543	5 528.8845	57 808.62752	0	2 276 265.15
Turnover 2007	3 301	5 034.0901	4 257 155.29	0	68 990 860.70
Asset 2017	3 661	2 110.1529	24 220.80667	0	901 681.35
Asset 2007	3 563	1 797.4609	18 835.64198	0	543 921.87

Source: elaborated by the authors

Table 9 presents the average values for both ratios - Return on Equity and Return on Sales - considering all enterprises. Due to missing values some enterprises were excluded from the calculations. There is negative profitability on average across the time horizon under consideration, making this sector unattractive. The profitability ratios calculated in these two years has been volatile despite being always negative, thus, it becomes emergent to detect the factors that drive return on equity.

Nevertheless, it is important to refer differences between the averages. At the sector level, for Portugal and Spain, return on equity was calculated by the sum of net income of all the enterprises divided by the sum of equity of all enterprises. So, the return of equity is positive for the sector. However, if the mean of return on equity of each enterprise is calculated, a negative value is obtained in Portugal and for 2007 in Spain (Table 9 and Table 10). It shows that certain enterprises have a negative return on equity (minimum value in the Table 9) which leads to a negative mean. Therefore, there are enterprises that present a high return on equity (maximum value in Table 9). As standard deviation is higher than mean, the ROE and ROS are volatile among the enterprises in both Portugal and in Spain.

Table 9- Descriptive statistics of ratio variables Portugal

Variables	Mean	Standard deviation	Minimum	Maximum
Return on equity 2007	-3.82%	1.75944	-3 001%	998%
Return on equity 2017	-3.41%	5.66297	-12 852%	3 813%
Return on sales 2007	-64.11%	8.46376	-23 743%	486%
Return on sales 2017	74.61%	63.26225	-23 362%	251 344%

Source: elaborated by the authors

Even though the Spanish case (Table 10) present also enterprises with negative values for both ratios, in fact regarding the average values they are positive, except for the 2007' return on sales. The very high average values of the ROS in 2017 are also evident, and they may very likely be explained by the maximum values presented (which are quite higher than the ones of 2007), having a direct impact on the standard deviation (considering that the minimum values for 2017 are quite less negative than in 2007).

Table 10- Descriptive statistics of ratio variables Spain

Variables	Mean	Standard deviation	Minimum	Maximum
Return on equity 2007	28.77%	7.51904	-7 006%	38 191%
Return on equity 2017	20.62%	12.054	-31 610%	48 871%
Return on sales 2007	-35.74%	10.94709	-38 437%	26 407%
Return on sales 2017	174.58%	20.08781	-23624%	672 800%

Source: elaborated by the authors

This evolution of ROE in 2017 is positively determined by net income after taxes and earnings before taxes and interest (EBIT) in both countries, according to Spearman’s Rho of the return on equity (2007 and 2017) with net income before taxes (2007 and 2017) and net income after taxes (2007 and 2017). Certain moderate significant associations were obtained since the correlation coefficient is between 0.487 and 0.131 ($p=0.007$).

To test the hypotheses defined in the literature review, several statistical tests were used. Regarding *H1: There is a positive relation between size of tourism intermediaries' enterprises and their return on equity*, it is intended to assess whether size influences return on equity. To classify an enterprise by size, usually three variables are used: turnover, headcount and asset. So, these variables were used to measure their association with return on equity and test H1.

When analysing Spearman’s Rho of the return on equity (2007 and 2017) with variables that characterize the size (turnover, headcount and asset), it was found some significant weak associations for Portugal (Table 11) since the correlation coefficient is between 0.22 and -0.07 (Table 11). In 2007, there is a positive association, in opposition to the negative association existing in the year 2017. Large travel agencies and tour operators' enterprises tend to achieve greater profitability in 2007, but the situation changed in 2017.

Table 11 - Association between profitability, turnover, asset and staff headcount Portugal

Spearman’s Rho		Turnover per year	Headcount per year	Asset
Return on equity 2007	Correlation coefficient	0.223	0.138	0.169
	Sig. (2-tailed)	0.000	0.000	0.000
Return on equity 2017	Correlation coefficient	-0.07	-0.092	-0.188
	Sig. (2-tailed)	0.004	0.000	0.000

Source: elaborated by the authors

Regarding Spain (Table 12), there is no significant association with asset. Nevertheless, the association is significant and positive in relation to turnover and headcount. Large tourism intermediaries’ enterprises tend to achieve greater profitability in 2007 and in 2017.

Table 12 - Association between profitability, turnover, asset and staff headcount Spain

Spearman’s Rho		Turnover per year	Headcount per year	Asset
Return on equity 2007	Correlation coefficient	0.047	0.040	-0.020
	Sig. (2-tailed)	0.007	0.021	0.229
Return on equity 2017	Correlation coefficient	0.135	0.078	0.009
	Sig. (2-tailed)	0.000	0.000	0.586

Source: elaborated by the authors

Then, H1 is inconclusive. The answer varies by year and country. Concerning *H2: The return on equity differs according to the primary NAEC of tourism intermediaries' enterprises*, three clusters of enterprises were compared considering return on equity. Kruskal-Wallis test were used to test H2, where H0: The distribution of variables is equal in the NAEC clusters. Once again, the interpretation is confusing because it differs depending on the country and year. It was found that there are differences among NAEC clusters in 2007 considering Portugal ($p=0.009$) and in 2017 considering Spain ($p=0.007$).

The remaining has got the same distribution among clusters. Then the median of return on equity is different among travel agencies, tour operators and other reservation services in Portugal 2007 and in Spain 2017. So, H2 is inconclusive.

In relation to H3: *The return on sales of tourism intermediaries' enterprises influences positively their return on equity*, it was calculated Spearman's rho coefficients between return on equity and return on sales (Table 13). All the associations are positive and significant, for Portugal and Spain. In 2007, a moderate association was found out in Portugal. So, H3 is not rejected, and it can be stated that the higher the return on sales the higher the return on equity.

Table 13 - Association between return on equity and return on sales in Portugal and Spain

Spearman's Rho		Return on sales Portugal	Return on sales Spain
Return on equity 2007	Correlation coefficient	0.445	0.229
	Sig. (2-tailed)	0.000	0.000
Return on equity 2017	Correlation coefficient	0.110	0.324
	Sig. (2-tailed)	0.000	0.000

Source: elaborated by the authors

4. Conclusions

The described context of increasing competitiveness and renewal in the tourism distribution system is partially matched by the data analyzed, which indicates some volatility on the Portuguese and Spanish tourism intermediaries. In Portugal, only 35.2% of the enterprises analyzed on 2017 already existed in 2007 and in Spain these enterprises represent 48.1%. In both countries, and for the both years, the Travel Agencies are the intermediaries more representative with a market share over 85%. And, concerning the enterprises size, the distribution market is characterized by micro enterprises with a market share of 93.4% in Portugal and 77.6% in Spain (for the year 2017).

In terms of the sector's overall performance the ROE for the Spanish intermediaries presents an increase higher (11%) than Portugal (5%). Regarding the analyzed variables the most evident difference is that Portugal presents a negative sales growth rate (-8.40%) while Spain reveals a growth of 17.88% between 2007 and 2017. In terms of the headcount and the net income, both countries present growth rates and regarding the number of employees, the tourism intermediation enterprises present relative low values: an average of about 11 employees, in Spain, and between 5.8 (2017) and 8.5 (2007), in Portugal. The volatility is also verified regarding the net income after taxes, which is positive in both cases, but presents a standard deviation above the mean, for both Spain and Portugal.

In this research the impact of three variables is analysed: size (turnover, headcount and asset), activity and return on sales regarding tourism intermediaries' ROE. The results corroborate several studies' outputs. There is a positive relation between the turnover, headcount and asset of Portuguese tourism intermediaries' enterprises and their return on equity in 2007, which confirms the ideas referred by Majumdar (1997), Nunes *et al.* (2009) and Serrasqueiro & Nunes (2008). Nevertheless, in 2017 the situation has changed, as there is a negative association. Regarding Spain, there is a significant positive association between return on equity and turnover and headcount. As in the literature review the same conclusions are not reached.

Comparing the return on equity among the three subsectors of the tourism intermediaries' enterprises to evaluate the performance, the answer is dubious as it differs by country and year. From time to time there are differences, being pertinent to determine the causes of each of the subsector's performance, corroborating with Akbaba (2013). It was found a positive association between return on equity and return on sales, which is in line with the conclusions of Lopes *et al.* (2014) and Herciu *et al.* (2010).

In conclusion, the variables analysed and the relation among them, the tourism distribution sector in Spain presents a more solid situation in terms of turnover, headcount, ROE and ROA, comparing the values between 2007 and 2017. As already mentioned, these results have effects on performance evaluation. On the other hand, Portugal has certain weaknesses, since a decrease on turnover was

verified and the mean of ROE of each enterprise maintains negative. If the sector is compared as a whole it seems to have some recuperation, therefore there are some enterprises which presents certain issues.

Although the consistency of the set of determinants studied, according with the literature there are more factors that can influence the enterprises' profitability. Thus, future research projects should focus in that other factors in order to obtain a more complete perspective regarding the specific case of the tourism intermediaries' enterprises. Beyond that, a more refined study about each of the three types of enterprises within the tourism intermediary sector (to understand for example, for the travel agencies, whether it they are exclusively traditional travel agencies or if already offer online services and/or if they are associated to reservation centres) may help to better explain some of the profitability results.

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Annex

The main factors determining whether an enterprise is an SME are:

1. **Number of employees** and
2. Either **turnover** or **balance sheet total**.

Enterprise category	Employees	Turnover	or	Balance sheet total
Medium-sized	< 250	≤ € 50 m		≤ € 43 m
Small	< 50	≤ € 10 m		≤ € 10 m
Micro	< 10	≤ € 2 m		≤ € 2 m

Source: Recomendação da comissão de 6 de maio de 2003, Jornal Oficial nº L 124 de 20/05/033 p. 0036-0041.