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Variability of Income Flows of Tourism Companies during a Nine-Year Period

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ABSTRACT

The global financial crisis has affected all countries during the period 2007-2014. Tourist companies, especially in Italy, play a significant role in the economy of a country. The performance of tourism companies, and in particular hotels and travel agencies and tour operators, will be analysed in this paper, relative to the period of the crisis. The aim of this paper is to analyze profitability dynamics of the aforementioned tourist companies, to check whether they have suffered the effects of the global crisis. To this end, data from AIDA database relating to Italian companies in the sector were used. The profitability of these companies has been analyzed using the main profitability ratios, ROI and ROS ratios. An analysis of the trends and ANOVA of these ratios was carried out for the period 2007-2015. In this way, it has been verified whether the global crisis has affected profitability dynamics of hotels and travel agencies and tour operators in Italy. There is a parallelism in the trends of the main operators' indices in the three Italian macro-regions. The best performance is in the South, in a less developed economic context. The crisis has reduced the income indices in the first three years, even if the figure remains positive. Since 2012 there is a clear recovery, especially for hotels; intermediaries, on the other hand, suffer from competition from websites. However, the indices confirm the close relationship between travel agencies, tour operators and hotels. ROI mainly rewards first, while ROS intermediaries.

KEYWORDS

Tourism; Crisis; Profitability; Performance; Ratio

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1. Introduction

The global financial crisis has had an impact that has affected all the countries of the world. This led to the development of extensive literature on the subject in order to understand its distinctive features and its effects on tourism.

Studies have verified the effect of the economic and geopolitical crisis on Turkey's tourism businesses (Terhorst, P., Erkus-Ozturk, H., 2019), on co-movements between oil prices and sector stock markets (Mensi, W., 2019), the impacts of hotel rooms' demand in developing economies (Kubickova, M., Kirimhan, D., Li, HY, 2019), the effects of unexpected nonmacroeconomic factors (Zopiatis, A., Savva, CS, Lambertides, N., McAleer, M., 2019).

These studies and those subsequently indicated highlight the opportunity to carry out further analyzes. These analyzes conducted in this paper will relate to the situation in Italy during and immediately after the period of the global financial crisis. The object of analysis will be two markets, that of hotels on one side and that of travel agencies and tour operators on the other side. The analysis will be conducted for the 2007-2014 period. A distinction will be made between the different geographical areas in which Italy and the two markets under investigation are distinguished.

To respond to the research questions, two ROI and ROS ratios will be used. The period considered is the 2007-2014 period and a trend analysis and ANOVA (one-way) will be carried out.

The research questions that will be asked are;

(1) What was the trend of the two profitability ratios in the various geographical areas and in the various markets analyzed?

(2) Is it possible to identify differences between the different markets analyzed and the different geographical areas?

(3) Are any differences present statistically significant?

The following hypotheses are posed to these research donmands:

(H1) the financial structure of the tourism businesses analyzed was not significantly conditioned by the crisis due to their resilience;

(H2) it is possible to identify differences between the different geographical areas and the different markets analyzed;

(H3) these analyzed differences are significant from a statistical point of view.

In the following sections, a review of literature on tourist companies is presented. After the methodology, results and implications, conclusions are discussed.

2. Literature Review notes

Several studies have investigated aspects that affect the redemption of tourism businesses.

Carvajal-Salgado, A.L. and Carvajal-Salgado, M.B. (2018) analyze the financial strategies of hotels and restaurants in Ecuador. The financial statements deposited in the 2013-2015 period were used and financial debt and profitability ratios were analyzed. The results show that there is mainly short-term financing. Furthermore, there is a negative relationship between debt and profitability.

Verdet, A.P., and Sanchez, P.L., (2018), analyze the economic impact of cruise tourism in 4 different Spanish destinations. Data from the EGOTOUR statistics and from the balance sheets of the tourist companies of the chosen destinations were used. The study individual a correlation, albeit not significant, between cruise traffic and the profitability of the tourism businesses analyzed.

Camison, C., Fores, B., Puig-Denia, A., (2016) aim to investigate the return on capital and its determinants in Spanish family and non-family businesses. Profitability ratios are analyzed on the basis of financial statements of

Spanish tourism companies, deriving from two databases of Spanish companies, SABI and INFORMA D&B. The paper shows that the deterioration in the Spanish tourist situation has led to a reduction in the financial returns of Spanish tourism companies. The worst results are reported by companies that are not familiar to family ones.

Al-Najjar, B., (2014) study verifies the relationship between corporate governance and the financial performance of tourism businesses. The study uses a sample of companies listed in five countries in the middle east. The independence of board members has a positive effect on the financial performance of these companies. The size of the board has no unique effects. In fact, large boards have increased the profitability of the performances. Smaller board sizes ensure a better return on shares.

Zhang, J., Cheng, L., (2019), verify if, after earthquakes, tourism businesses can still develop economic growth. 36 Wenchuan earthquake-affected counties are examined in the 2008-2016 period. The firm analysis shows a positive effect of these companies on economic growth.

Podhorodecka, K., (2018) analyzes the effects of the global economic crisis on island tourism enterprises. The results show different effects in the 17 analyzed islands. The variations and the different effects concern, in particular, changes in tourist movement, employment in tourism, and expenditure by foreign tourists.

Dogru, T., Bulut, U., (2018) verify the relationship between the development of tourism and economic growth. The analysis is conducted for seven European countries. The results show a two-way relationship between the growth of tourism in terms of revenue and economic growth. There is therefore a positive effect of tourism on economic growth.

Bremser, K., Alonso-Almeida, MD, Llach, J., (2018) try to understand the kind of strategies most appropriate that owners and managers of tourism businesses must adopt in order to adequately overcome periods of crisis. The results show that the prospectors were the most prepared to overcome the crises, while the worst results were reported by the reactors.

Beirman, D., (2018) analyzes the resilience of Thai tourism during the period 2002-2018. The results demonstrate the capacity of Thai tourism companies to overcome the periods of crisis due to different elements. Among them it is possible to include the great collaboration with the private interests and tourist associations of the Asian and Pacific area.

Lu, CL, Chen, ST, Kuo, HI, (2018) verifies the effects of the US financial crisis on seven different Asian tourist destinations in the period 2004-2014. The results show a drastic reduction in the revenue of all the analyzed locations both during and after the crisis, in this way the study shows a strong sensitivity of tourists to the financial crisis.

3. Methodology

3.1. Collected data and specification of sample

Secondary data downloaded from AIDA dataset have been employed to achieve our aims. Two ratios, ROI (return on investments, EBIT/Total assets) and ROS (return on sales, EBIT/Sales) have been used to understand the profitability situation of the analysed companies. Nine years, i.e. 2007-2015, have been analysed.

The sample was composed of Italian hotels and tour operators and travel agencies. The total number of those tourist companies was 6,465. Then we considered from that sample only the companies for which the data in all 9 analysed years were available. In this way the final sample is made up of 794 companies. A deeper analysis has been conducted by means of two discriminating factors, the business market and the geographic area.

Using the geographic area, three clusters have been identified according to a conventional classification of the Italian regions. Those clusters are: north, centre and south. The Northern regions are:

Valle d' Aosta, Piemonte, Liguria, Emilia-Romagna, Lombardia, Trentino-Alto Adige, Veneto and Friuli-Venezia

Giulia; the central regions are: Toscana, Umbria, Marche, Lazio and Sardegna; the southern regions are: Campania, Abruzzo, Molise, Puglia, Basilica and the islands Sicilia. The geographic distribution of the sample was the next: 52,14% in the North group, 30.35 % in the Centre and 17.51 % in the South ones (fig. 1). Then the sample has been divided into two parts using the belonging market according to the statistical classification of economic activities in Italy (NACE rev.2 codes). Thus the groups are: hotel market on one hand and tour operator and travel agency on the other hand (). Following the second classification the sample is made up of 87.15% hotel firms and 12.85% tour operator and travel agency firms (fig. 2).

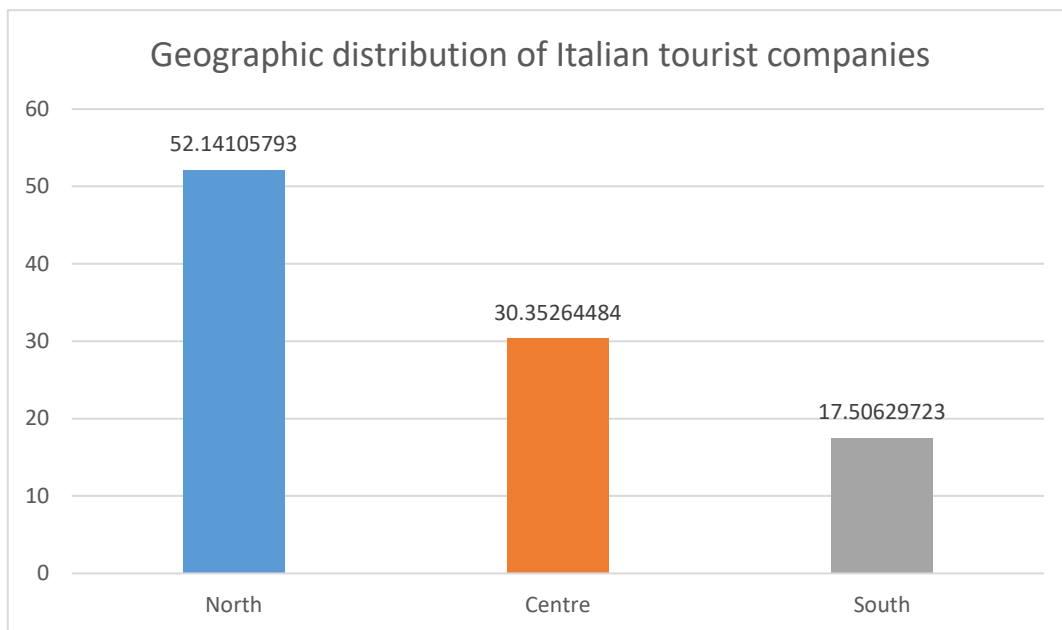


Figure 1. Source: our elaboration - geographic distribution of Italian tourist companies.

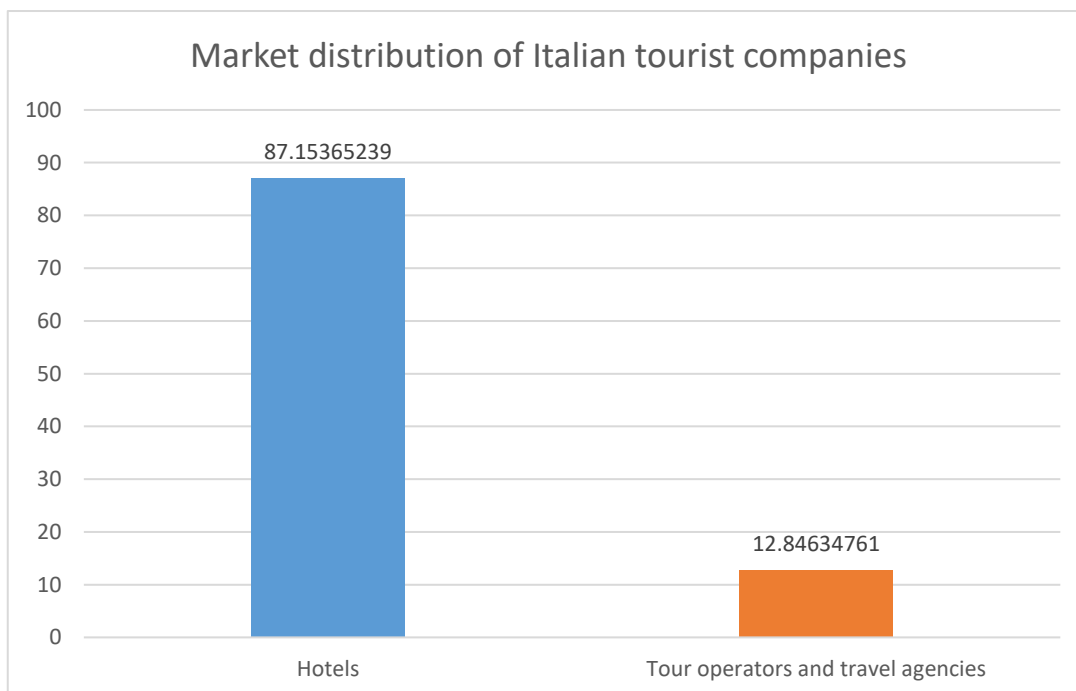


Figure 2. Source: our elaboration - market distribution of Italian tourist companies.

3.2. Method

First of all, a trend analysis has been performed on the data related to the period 2007-2015 for each ratio and group. Then, an ANOVA (one-way) has been employed to analyse the differences between the two groups. Thus, this type of analysis has been chosen, because the two factors have been considered separately (Saunders, 2009). The null hypothesis states that all factor level means are equal, while the alternative hypothesis highlight that there is at least a difference. According to the main assumption of ANOVA the value of each datum must be independent. This condition is satisfied in the analysed sample (Hays, 1994: Dancey, Reidy, 2008). The other two assumptions to perform an ANOVA (one-way) are: the data in each group are normally distributed; the data have to have the same variance. Nevertheless, these two types of conditions are negligible, because the used sample is made up of a fairly large number of cases (Saunders et al., 2009) The main advantages of ANOVA (one-way) are that it is a very simple method and the opportunity of identified the presence of any differences when the number of analyses group is higher than 2. This is a limitation of this paper, because the number of groups are exactly two. To go over that one a t-test parred two sample for means post-hoc has been used to test which groups are significantly different from each other (Saunders, 2009) In this way, an independent group t-test has been chosen to compare the difference in the means of geographic groups.

The profitability indices chosen are ROS and ROI, that is operating profit/net sales and operating profit/operating assets. These indices are a high potential to give an overview of the profitability of the core activities of a business. In fact, ROS shows the percentage of the revenues that is operating profit, after having deducted total operating expenses. ROI indicates the percentage of operating investments that return in the form of operating income after having subtracted all operating expenses from operating revenues.

4. Trend analysis and ANOVA

ROI (return on investments) indicates the profitability of the typical management of the company and therefore of the core business. It is given by the ratio between operating income and operating net invested capital. Its value should therefore be as high as possible. Within the sample the nine year's ratio between 1.84 and 6.65, if we consider the geographic localization as discriminating factor, and between 1.87 and 9.25, if we consider the belonging market. Figures 3 and 4 show that the mean over the nine years decrease considerably between 2007 and 2009 with the beginning of the crisis and then go back to starting from 2012. The trend of ROI in the nine years is the same in all geographical areas. With respect to geographical areas, ROI has the lowest values in 2009 and 2012 respectively 1.84 and 1.9, while the highest values are in 2007 before the crisis, with 6.65 and in 2015 after the crisis with a value of 4.9. Market-based ROI trend also looks similar in the nine years. ROI values of travel agents and tour operators are higher than those of hotels, due to several factors including the greater weight of property, plant and equipment. Also according to the market of belonging, the values of ROI fell considerably between 2007 and 2009, the years of the crisis, going from a maximum of 9.25 to a minimum of 1.87. Subsequently, the values of ROI increase with the exit from the crisis, although recording a new decrease in 2012.

ROS measures the profitability of sales. It therefore relates operating income to sales. ROS should take as high a value as possible. Trend analysis highlights a situation of good profitability (Figure 5-6) both according to geographic localization and according to market. ROS throughout the nine years has always been between 7.58, 2007, and 1.61, in 2012, according to geographical location, and 7.58, in 2007, and 0.64, in 2012, according to the market. The trend of ROS in the nine years is substantially the same in all geographical areas. In fact, there has been a reduction in ROS from 2007 to 2009, at the beginning of the crisis, with a slight increase in the following years and a new minimum in 2012. In the following years the ROS increases progressively reaching pre-crisis values, with the exception of the center.

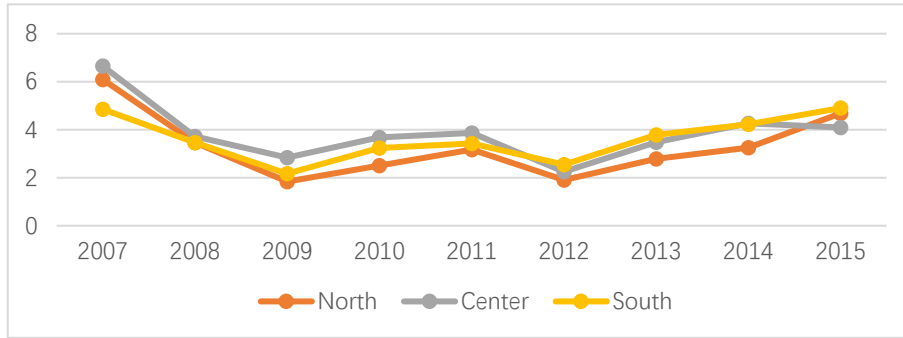


Figure 3. Trend of ROI according to geographic localization (our elaboration).

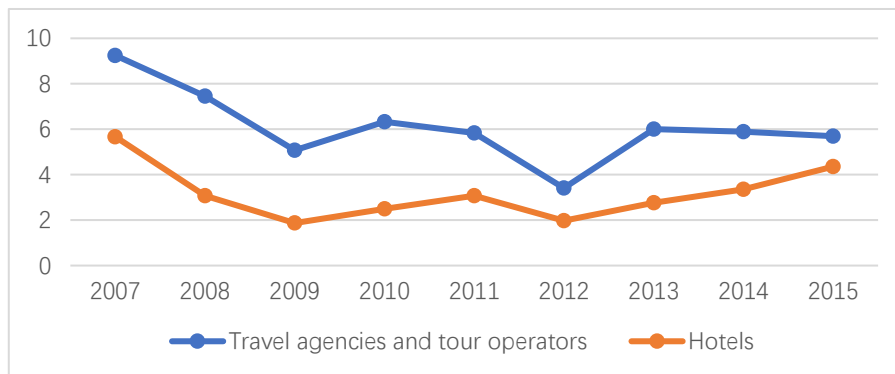


Figure 4. Trend of ROI according to market (our elaboration).

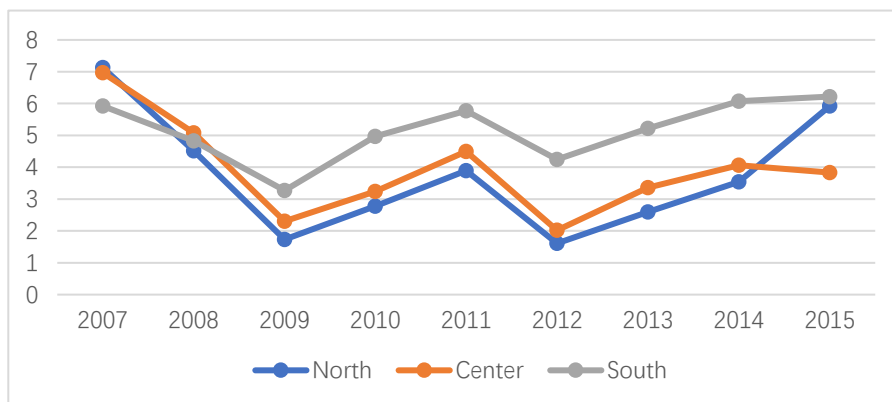


Figure 5. Trend of ROS according to geographic localization (our elaboration).

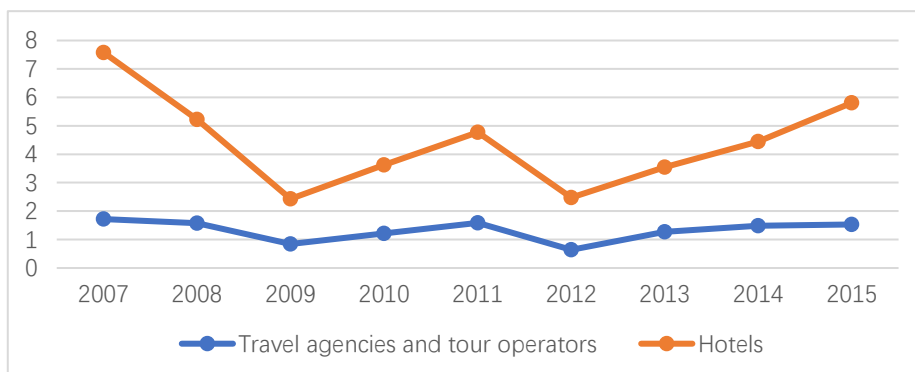


Figure 6. Trend of ROS according to market (our elaboration).

While we consider the classification by business market (Figure 6), the trend is overall stable for travel agencies and tour operators, while it is strongly negative for hotels. In fact, between 2007 and 2015 the ratio decreased from 7.58 to 2.43, with a reduction of 67.94%. Ratio values range between 1.72 and 0.64 in the travel agency. The values of the hotels ROS remain steadily higher throughout the period considered. The trend according to the relevant market shows that ROS of travel agencies and tour operators suffered less the effects of the crisis than hotels, for which ROS recorded the lowest values in 2009, with 2.49 and in 2012, with 2.48. These values tend to increase with the exit from the crisis, although at 5.81 in 2015. This value is similar to that at the beginning of the crisis. In general, we can verify that there are no significant deviations from 2008 values, when the crisis started. However, in the course of the crisis hotels have a ROS trend with greater fluctuations than travel agencies and tour operators. Different conclusions are for ROI. In fact, it is a more drifting trend. There is therefore a same trend in the different geographical areas and therefore there are no differences. While for the two markets analyzed there is a certain difference in trends for both indices. Therefore the hypothesis H1 is partially validated. About the hypothesis H2, we are related to geographic areas. Thus the crisis seems to be on the profitability, especially on the sales, differently for the hotels. Businesses have been substantially affected by the crisis.

4.1. Analysis of businesses and geographical factors

About ROI, Table 1 shows the results of the analysis, assuming the geographic area as independent variable. There is no a statistically significant difference between groups ($F(2,24) = 0.529897$, $p = 0.595394635$), in fact $F < F_{crit}$ ($p \text{ value} > 0.05$).

Table 1. ROI - Analysis of variance with geographical localization as independent variable.

Source of variation	SQ	gdl	MQ	F	Sig.	F crit
Between groups	1,482289	2	0,741144	0,529897057	0,59539463	3,402826
Within groups	33,56778	24	1,398657		5	
Total	35,05007	26				

Significant level at 0,05

Table 2. ROI - Analysis of variance with belonging sector as independent variable.

Source of variation	SQ	gdl	MQ	F	Sig.	F crit
Between groups	38,39800556	1	38,39801	19,27287	0,000456543	4,493998
Within groups	31,87735556	16	1,992335			
Total	70,27536111	17				

Significant level at 0,05

The null hypothesis must not be reject and the alternative ones must not be accept. While if the business market is considered as independent variable the results, set out in Table 2, indicate a statistically significant difference between groups ($F(1,14) = 4,773$, $p = 0,000456543$), in fact $F > F_{crit}$ ($p \text{ value} < 0.05$).

The results of ANOVA applied to ROS show that we have to accept the null hypothesis if it is considered geographic localization as independent variable, while we have to reject the null hypothesis if we consider the market as independent variable. Therefore, only, in this last case, there is a statically significant difference between

groups (see tables 3 and 4), which is already highlighted by the trend analysis (Iovino, F., 2019).

Table 3. ROS - Analysis of variance with geographical localization as independent variable.

Source of variation	SQ	gdl	MQ	F	Sig.	F crit
Between groups	10,79832	2	5,399159	2,43558784	0,10888329	3,402826
				2	8	
IWithin groups	53,20269	24	2,216779			
Total	64,00101	26				
Significant level at 0,05						

Table 4. ROS - Analysis of variance with belonging market as independent variable.

Source of variation	SQ	gdl	MQ	F	Sig.	F crit
Between groups	43,64894	1	43,64894	30,52557166	4,61447E-05	4,493998
Within groups	22,87862	16	1,429914			
Total	66,52756	17				
Significant level at 0,05						

The results of statistic analysis show that the hypothesis H3 of this research, previously described, is partially tested with regard to ROI and ROS if we consider both geographic localization and business market, while it is fully tested if we consider only business market. In fact, there is a relevant difference between hotel business and travel agencies and tour operators business regard to infrastructural factors which have a considerable role in the profitability of hotels.

4.2. Post-hoc analysis: t-test

T-test confirms ANOVA according to which there are differences between the two businesses for both indexes analysed. For geographical areas instead, the results are not unique. Indeed, ANOVA highlights that there are no statistically significant differences. However, the t-test carried out for couples in relation to the three geographical areas shows inconsistent results. For the ROI, there is a significant difference between the North and the Centre, but not in the other couples analysed, namely North-South and Centre-South (table 5). Instead, for the ROS, a situation clearly opposite occurs, that is, between the couples of the North-South and Central-South areas there are significant differences, while such differences do not exist in the comparison between North and Centre (table 6).

The H2 hypothesis can therefore be said to be partially verified. There are certainly differences in the results of profitability in the two analysed businesses, hotels and tour operators and travel agencies. Instead, in the different geographical areas there are some differences. However, they are less clear and cannot be uniquely identified.

Therefore, the variable that tends to affect the profitability of the tourism businesses analysed is the different business to which they belong. Instead, belonging to different geographical areas of the country appears to have a less significant influence on the results in terms of the profitability of hotels on one side and of tour operators and travel agencies on the other side.

Table 5. t-Test: Paired Two Sample for Means. ROI.

	North	Centre	North	South	Centre	South
Mean	3.298888889	3.871111111	3.298888889	3.62333	3.871111111	3.623333333
Variance	1.840361111	1.479111111	1.840361111	0.8765	1.479111111	0.8765
Observations	9	9	9	9	9	9
Pearson Correlation	0.919788353		0.886578785		0.79201218	
Hypothesized Mean Difference	0		0		0	
df	8		8		8	
t Stat	3.219032935		1.427629653		1.00047541	
P(T<=t) one-tail	0.006128484		0.095623272		0.17318857	
t Critical one-tail	1.859548038		1.859548038		1.85954803	
P(T<=t) two-tail	0.012256968		0.191246544		0.34637714	
t Critical two-tail	2.306004135		2.306004135		2.30600413	
Correction of Bonferroni	0.0167		0.0167		0.0167	
	Significant	TRUE	Significant	FALSE	Significant	FALSE

Table 6. t-Test: Paired Two Sample for Means. ROS.

	North	Centre	North	South	Centre	South
Mean	3.746666667	3.928888889	3.746667	5.17	3.928889	5.17
Variance	3.46415	2.252736111	3.46415	0.93345	2.252736	0.93345
Observations	9	9	9	9	9	9
Pearson Correlation	0.881544102		0.722094		0.621333	
Hypothesized Mean Difference	0		0		0	
df	8		8		8	
t Stat	-0.614408916		-3.18212		-3.16472	
P(T<=t) one-tail	0.278005705		0.006478		0.00665	
t Critical one-tail	1.859548038		1.859548		1.859548	
P(T<=t) two-tail	0.55601141		0.012956		0.0133	
t Critical two-tail	2.306004135		2.306004		2.306004	
Correction of Bonferroni	0.0167		0.0167		0.0167	
	Significant	FALSE	Significant	TRUE	Significant	TRUE

5. Conclusions

Tourism is one of Italy's leading sectors. It represents a substantial share of GDP. Therefore analyzing the income performance of hotels and tour operators and travel agencies is certainly a significant analysis. In particular,

verifying the ability to react and overcome the global financial crisis represents a further element that, as seen from the analyzed literature, contributes to representing the resilience capacity of this type of company with respect to the different types of crisis that can affect businesses, but also the same tourist destinations.

The analysis carried out shows how for both the indexes, both companies and hotel operators as well as travel agencies have suffered the global financial crisis. Both indexes have significant repercussions with respect to this global event. In fact, there is a tendential reduction in the values of both indices in both analyzed businesses. The greatest reduction is recorded by the hotels which therefore show a greater sensibility with respect to the phenomenon of the crisis. The index that records the greatest decline is ROS. This is very significant because it directly expresses the profitability deriving from sales. Therefore, it signals in particular for hotels a more substantial reduction in the profitability deriving from the provision of the tourist service provided to the customer. The differences between the two businesses are also significant from the standpoint of standpoint. This is confirmed not only by the ANOVA, but also by the t-test. This indicates a clear difference in the overall characteristics of these two types of tourism businesses. Consequently also the relative profitability and reaction to the financial crisis and therefore the resilience capacity are different. What characterizes the travel agencies and tour operators and in Italy the most frequent reduced size. This is a significant element that can lead to dealing with the phenomena of serious financial crisis with greater ease and flexibility). One of the characterizing aspects of these companies when they are smaller and "certainly the relational one, which allows for greater customer engagement (Iovino, F. 2015). Furthermore, all the types of companies analyzed are, however, benefiting from the great opportunities offered by the new digital tools, which make it possible to reach a larger number of customers (Iovino, F. 2014).

From a geographical point of view, the differences are less significant. There are therefore no differences in the results reported by the two profitability ratios analyzed for both indices. The differences are not significant from a statistical point of view. This is highlighted by the ANOVA, and it is confirmed even if not in a univocal way also by the t-test.

The significant element is therefore the type of business. However, both are affected by the crisis.

The search has several limitations. First of all, only two indexes of the possible profitability have been considered. Furthermore, these are only income indices. Further analysis is the analysis only of the companies of which the values of both indices are available for all the years taken into consideration. They tend to be tourism businesses that have such a profitability that it has allowed them to survive over time. These limits also clearly indicate future research directions. First of all, the analysis of several indexes taken from the budgets of tourism businesses. It is advisable to analyze both financial indices and profitability ratios. Furthermore, it appears significant to make comparisons with other countries, not only Europeans, but also from other continents. Among them it is certainly important to consider the situation in the U.S. and in Asian countries, characterized by crises of different kinds and entities. Also important is the verification of the impact of cultural type variables on the capacity to overcome crises by this type of company.

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Conflict of interest

The author claims that the manuscript is completely original. The author also declares no conflict of interest.

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