



Universitat
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*Impact of part-time and fixed-term labour contracts on
productivity in Tourism Destinations. The case of the
accommodation industry in the Balearic Islands*

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ABSTRACT

Part-time and fixed-term contracts were introduced in Spain in 1984, in order to give more flexibility to the labour market as a response to the high unemployment rate that Spain faced in that period. These types of contracts have been getting increasingly popular, peaking at an outstanding 34% of total contracts in Spain in 2006. Marchante et al. (2017).

The objective of this study is to empirically determine whether non-traditional contracts (part-time and/or fixed-term) in the accommodation industry have the same impacts on productivity compared to the other sectors in the Balearic Islands.

The results of this study show that, in the Balearic Islands, firms with the high rate of fixed-term contracts are less productive than firms with the high rate of fixed-term contracts operating in different industries. This study also shows that the partiality of contracts has no impact on the productivity of firms in the Balearic Islands.

INTRODUCTION

In the last few decades the importance of tourism has increased exponentially for all the economies worldwide. Tourism is a sector that is very special for its characteristics and therefore it is harder to study its behaviour compared to other industries. It is exceptionally interesting to study Spanish tourism trends because Spain has been recently considered, by the UNWTO, the most competitive tourism destination in the world and therefore. As such, its behaviour might be used to predict the behaviour of other tourism destinations.

As we have learned in the Master of Economics of Tourism at UIB, tourism is heterogeneous, intangible, and indivisible. This complex nature makes it particularly difficult to accurately measure tourism activity. Accommodation is arguably the most representative sector of tourism activity because of its homogeneity and, for this reason; it is the sector that has been chosen for this research to represent tourism. We could cautiously extrapolate the results of the accommodation sector to the entire tourism industry.

Fixed-term contracts were introduced in Spanish labour market in the 80's in order to give more flexibility to the labour market. These types of contracts, which have been increasingly popular in recent years, might provide non-optimal working conditions for the workers. Firms are quite keen on using these types of contracts because they entail a lower employment cost and a lower level of commitment to keep the worker for longer than desired. Fixed-term contracts are commonly used in the tourism sectors due to the high seasonality of several tourism destinations.

Many researches have been trying to find out whether fixed-term labour contracts have had a positive or a negative impact on productivity. Some researchers claim that, since these types of contracts reduce labour costs for the firm, it must have a positive effect on productivity. Other studies claim that, since these types of contracts do not provide job security and are they mainly aimed at non-skilled employees, the overall productivity of the company is negatively affected.

If a negative relationship between productivity and non-traditional contracts is proven, it could be a very important finding. This is because employees that have non-traditional contracts would be provided with traditional contracts by companies in order to increase productivity, obtaining a win-win situation for both the firm and the employees (the traditional contract would reduce the precarious situation of workers with non-traditional contracts), enhancing productivity, turnover, and employees' satisfaction.

The purpose of this research is to provide empirical evidence to prove that temporality and partiality of labour contracts have higher negative impact on productivity in tourism companies compared to the rest of the sectors. It is expected to have the aforementioned result because the Balearic Island, as a

mass tourism destination, it engages in cost-reducing strategies and very often employees' salaries are less than optimal. Low salaries might cause demotivation and consequently, reduced productivity. In this study, three samples of firms of the Balearic Islands were analysed (years 2006, 2009 and 2015).

The results of this study can provide very useful insights for accommodation firms in order to select the best possible combination of labour contracts which will likely provide higher productivity. This information can also be useful to evaluate if labour contract regulations need adjustments from the government as suggested by Pou (2012):

LITERATURE REVIEW

Martin (2000), Sanchez and Tahoria (2002), and Diaz-Mayanas and Sanchez (2004) studied the relationship between the productivity and temporary contracts in the Spanish manufacturing industry and they all concluded that temporality rate has a negative effect on productivity. Lotti and Viviano (2011) and Boeri and Garibaldi (2007) also conducted a similar research focused on the manufacturing sector in Italy and again they found a negative relationship between temporality and productivity. Bardazzi and Duranti (2012), who also analyzed firms in Italy, found the same negative relationship results when analyzing Industry, Construction, and Service sectors.

Arvantis (2005) and Roca-Puig et al. (2015) studied firms operating in secondary sector of the economy. The former found a negative relationship between productivity and partiality rate in Swiss firms; the latter found a negative relationship between productivity and temporary rate in Spanish firms.

Nevertheless, Morikawa (2010) finds a positive relationship between non-standard contracts and productivity. The research was based on Japanese companies of all sectors. Nelen et al. (2009) also found a positive relationship between part-time contracting and productivity.

Very little research was found in the literature about the relationship between part-time contracts and productivity and fixed-term contract and productivity in the tourism sector. The only relevant paper that was found was written by Marchante et al. (2017) which looked at the lodging sector of the Spanish region of Andalusia. However, as opposed to this study, Merchant et al. look at the lodging sector without comparison with the rest of the economy.. Furthermore this study, in contrast to the study of Marchante et al. (2017), will analyze the evolution of the impact of partiality and temporality on productivity because three different samples are analyzed, corresponding to three different years (2006, 2009, and 2015). Moreover, the results about the accommodation industry will be compared with the rest of the economy of the Balearic Islands.

METHODOLOGY

A representative sample was selected to represent the totality of the firms in the Balearic Islands. The sample was selected using a privately owned database that has information about Spanish and Portuguese companies. A very large database was built including 12377 observations in 2006, 13436 in 2009, and finally 12363 in 2015. A total of 38176 observations were analyzed.

These three particular years were selected to exemplify the economic spectrum in the Balearic Islands Before (2006) during (2009) and after (2015) the economic crises.

The selection criteria included all the firms of the Balearic Islands which simultaneously reported information about their financial standing and about the contracts of their employees.

The data that was used for this paper comes from secondary data sources. Financial data, at firm level, was collected using SABI (Sistema de Análisis de Balances Ibéricos). The free use of this database was possible thanks to the "Dirección General de Economía - Govern de les Illes Balears." Labour market data will be collected from Spain National Labour Force Survey (EPA). This data is collected through the portals: IBESTAT (Institut d'Estadística de les Illes Balears) and INE (Instituto Nacional de Estadística).

A detailed description of the data base is provided for each of the years under consideration. The three years are later compared to each other. Finally an economic model is elaborated to determine the relationship between productivity and non-traditional contracts.

The model used for this research is based on the Cobb-Douglas production function, which states that production is a function of Labour and Capital.

Different regressions are performed to compare data from different years and to compare the industries.

Hierarchical multiple regressions are performed, where the dependent variable is the productivity in terms of Gross Value added with no negative values (GVA_Max_zero), the explanatory variables are the partiality coefficient and the temporality coefficient, and as for control variables non-current assets, operating revenue were included.

Finally a multiple regression for each year is run including simultaneously variables of all the industries of the economy of the Balearic Island and the accommodation sectors.

Depending on the coefficients that we obtain, we can see whether partiality and temporality affects more the accommodation sector compared to all industries of the economy.

The average labour productivity is calculated for each firm as Gross Value Added.. GVA will be approximated as EBIDTA (Earnings before interest, taxes, depreciation, and amortization) + Labour

costs. Productivity per employee will be then calculated dividing GVA by the number of employees of each firm.

Correlation between key variables will be observed applying the Ordinary Least Squares regression using the statistical software SPSS.

We need to understand that the both financial and labour data might not be completely accurate; however they do provide a very good approximation for this study.

In order to prepare the database for the regression we have changed all the missing value to zero, using the recode function on SPSS.

The variables that were divided by sex were unified. For instance, the variable “contrato formativo” was computed by adding “contrato formativo hombres” and “contrato formativo mujeres”.

A partial coefficient was calculated the name of the variable is (PC_TOTAL).

PC_TOTAL is calculated by adding the variables “contrato indefinido parcial” + “contrato temporal parcial” + “contrato formativo parcial” and then divide all by the total number of contracts.

The same is done is we want to calculate the partial coefficient by sex.

A temporary coefficient was calculated, the name of the variable is TC_TOTAL.

TC_TOTAL is calculated by adding the variables “contracto temporal” and “ contracto formativo” and then dividing everything by the total number of contracts.

A productivity variable is calculated. The name of the variable is “productivity_GVA”.

“productivity_GVA” is calculated by adding the variables “P_L_before_tax”, wich represents EBIDTA + “cost of employees” divided by the number of employees of the firm.

GVA_Max_zero was created to eliminate those company that had a negative productivity, which makes no sense. The negative values were transformed in zeros.

Some companies operating in more than one CNAE and in order to avoid bias only one CNAE is chosen for each firm. The CNAE chosen is the one with the higher number of employees. The variablee Employee_at_CNAE was created which reports the number of employees of the company in the industry with the higher number of employees.

The following example was included to understand the concept:

For example company number 21 operates at three different CNAE. 1222 (with 4 employees), 50200 (with 1 employee), 55400 (with 14 employees), 93010 (with 61 employees). The company under its NIF employees 80 workers, but for the sake of our research we will considered 61, which corresponds with the CNAE with the higher number of workers.

Variables included in the database

We can group the variables in 3 different groups: the firs group involves company’s general information, the second group describes the company financial standing, and finally the third group provides information about the firm’s labour contracts.

Variable Name	Description
ISLAND	NAME OF THE ISLAND
COMPANY NAME	NAME OF THE COMPANY
NIF CODE	FINANCIAL ID NUMBER
NACE Rev. 2 Primary Code	INDUSTRY ID NUMBER AFTER 2009
CAE Rev.3 Primary Code	INDUSTRY ID NUMBER BEFORE 2009
CITY	HEADQUARTER CITY
Date of Establishment	Date of Establishment
Total assets	Total assets
Current assets	Current assets
Non-Current assets	Non-Current assets
Operating revenue / turnover	Operating revenue / turnover
Net income	Net income
P/L before tax	P/L before tax
Cost of employees	Cost of employees
Number of employees	Number of employees
GROSS VALUE ADDED	GROSS VALUE ADDED
GROSS VALUE ADDED PER EMPLOYEE	GROSS VALUE ADDED PER EMPLOYEE
GVA MAX zero	GVA without negative values
GVA Max zero per employee	GVA/employee without negative values
CONTRATO FORMATIVO Hombres	APPRENTICESHIP CONTRACT men
CONTRATO FORMATIVO Mujeres	APPRENTICESHIP CONTRACT women
Contrato formativo a tiempo completo Hombres	APPRENTICESHIP FULL TIME CONTRACT men
Contrato formativo a tiempo completo Mujeres	APPRENTICESHIP FULL TIME CONTRACT women
Contrato formativo a tiempo parcial Hombres	APPRENTICESHIP PART TIME CONTRACT men
Contrato formativo a tiempo parcial Mujeres	APPRENTICESHIP PART TIME CONTRACT Women
CONTRATO INDEFINIDO Hombres	PERMANENT CONTRACT men
CONTRATO INDEFINIDO Mujeres	PERMANENT CONTRACT women
Contrato indefinido a tiempo completo Hombres	PERMANENT FULL-TIME CONTRACT men
Contrato indefinido a tiempo completo Mujeres	PERMANENT FULL-TIME CONTRACT women
Contrato indefinido a tiempo parcial Hombres	PERMANENT PART-TIME CONTRACT men
Contrato indefinido a tiempo parcial Mujeres	PERMANENT PART-TIME CONTRACT women
Contrato indefinido fijo-discontinuo Hombres	PERMANENT FRACTIONAL CONTRACT men
Contrato indefinido fijo-discontinuo Mujeres	PERMANENT FRACTIONAL CONTRACT women
CONTRATO TEMPORAL Hombres	FIXED TERM CONTRACT men
CONTRATO TEMPORAL Mujeres	FIXED TERM CONTRACT women
Contrato temporal a tiempo completo Hombres	FIXED TERM FULL-TIME CONTRACT men
Contrato temporal a tiempo completo Mujeres	FIXED TERM FULL TIME CONTRACT women.
Contrato temporal a tiempo parcial Hombres	FIXED TERM PART-TIME CONTRACT men
Contrato temporal a tiempo parcial Mujeres	FIXED TERM PART-TIME CONTRACT women
TOTAL Hombres	TOTAL MEN
TOTAL Mujeres	TOTAL WOMEN

RESULTS

Description of the database:

YEAR 2006

When analysing the year 2006 it can be seen that in the Islands, object of study, existed 12377 companies of which 14% belonged to the Accommodation Sector. These firms represent over 26% of the total companies in the Balearic Islands, as it can be seen on the charts which are presented below:

If these data is statistically analysed it can be clearly seen that in the Accommodation Sector:

8 companies account for 35% of the totality of employees (considering that one company has 930 employees, another one 1044, another one 5711 and another one 7099.).

1036 companies, which represent the 59%, have hired up to 10 employees and as a whole, which is 10% of the workforce.

Regarding the rest of the companies in different industries, which we can label as NOT Accommodation Sector, the 7 companies with greater number of employees account for only 11% of the workforce.

Most of the company have 10 or less employees. 7831 companies, which represent the 73%, have hired up to 10 employees that represent the 24% of the total amount of employees. 7588 companies that represent the 71% have hired from 1 to 5 employees.

It is also useful to know firms' income, cost and added value contributed by each employee in all companies

The mean of the productivity for the year 2006 is set to be of 33.91 Euros and the average cost that represents for each company their employees it is of 473.88 Euros;

We have identified the following contracting typologies:

- Full-Time and Part-Time Training contracts

- Full-Time and Part-Time Fractional contracts
- Full-Time and Part-Time Temporary contracts

It can be seen that the tourism sector equally hires men and women as far as training and permanent contracts, but women are predominantly chosen for temporary contracts.

Therefore, when analysing the entire workforce, here it can be seen that men are better off as they count with higher amount of job positions and better working conditions.

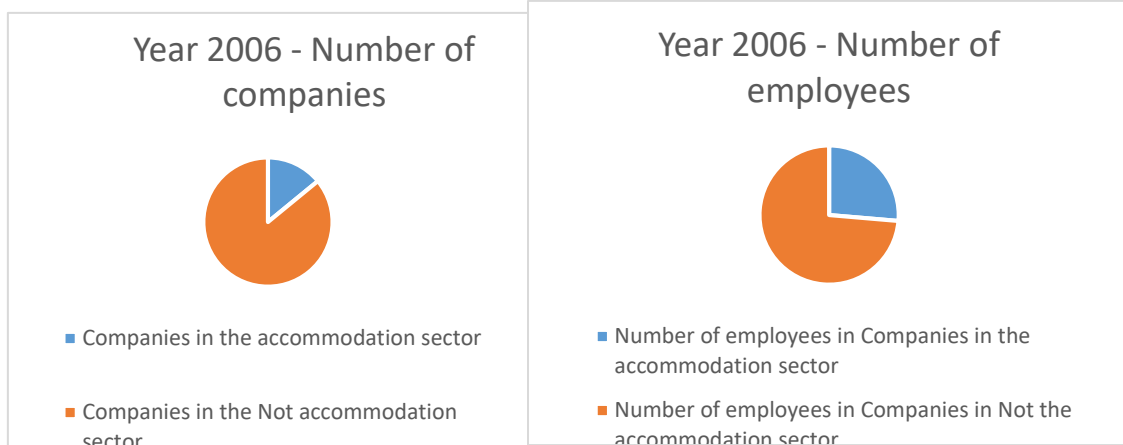
By disaggregating the values on Accommodation and NOT Accommodation it can be clearly seen how in the NOT Accommodation Sector men are hired by over 70% above women.

Analysis by Islands:

Our results show that out of all of the employees of the Accommodation Sector, 80% of them are concentrated in Mallorca

	Year 2006	Percent
Companies in the accommodation sector	1.752	14,07%
Companies in the Not accommodation sector	10.703	85,93%
Total Companies	12.455	

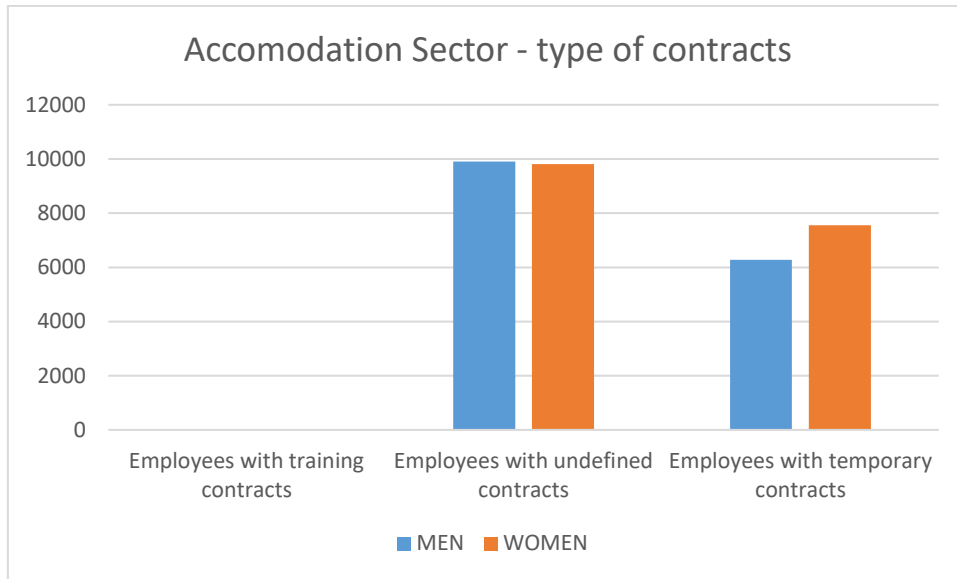
	Year 2006	Percent
Number of employees in Companies in the accommodation sector	49.578	26,36%
Number of employees in Companies in Not the accommodation sector	138.526	73,64%
Total Employees	188.104	



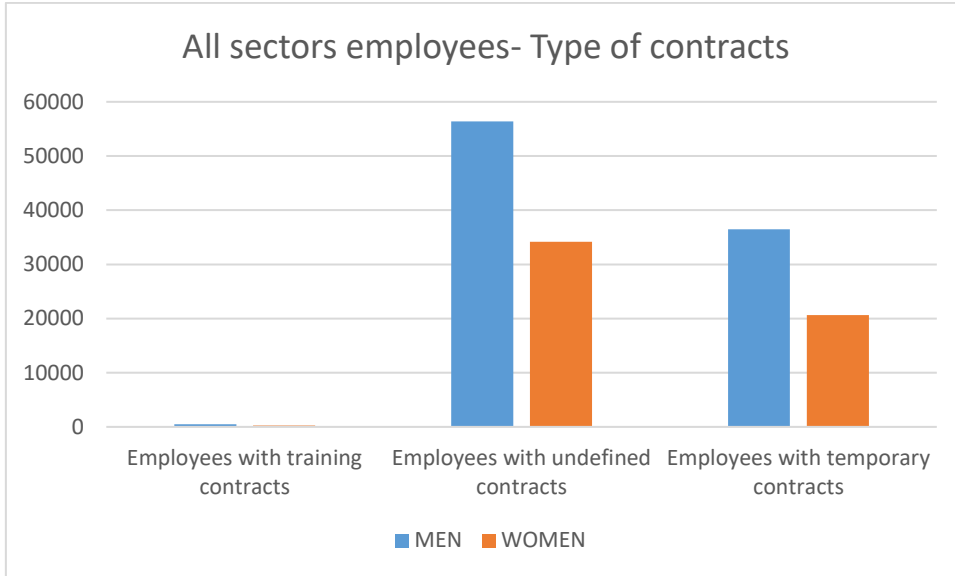
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	GVA/EMPLOYEE	Cost_employees	Net_income
Mean	33.91	473.88	113.59

ACCOMMODATION SECTOR	MEN	WOMEN
Employees with training contracts	20	20
Full Time training contracts	20	20
Part Time training contracts	0	0
Employees with permanent contracts	9906	9815
Full Time permanent contracts	5058	3067
Part Time permanent contracts	264	468
Permanent fractional contracts	5142	6280
Employees with temporary contracts	6274	7560
Full Time temporary contracts	5634	6508
Part Time temporary contracts	640	1052



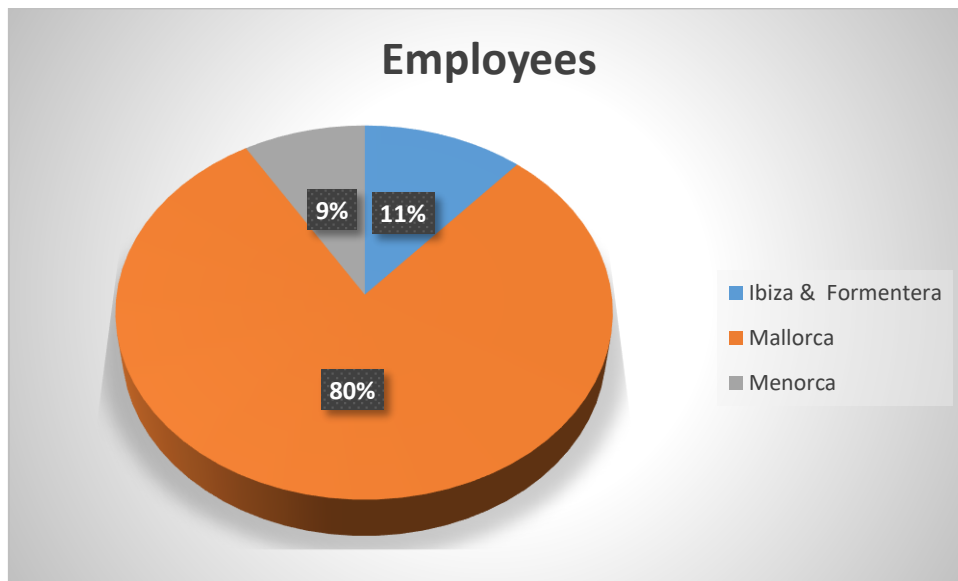
	MEN	WOMEN
TOTAL HIRING		
Employees with training contracts	475	239
Full Time training contracts	459	217
Part Time training contracts	16	22
Employees with permanent contracts	56362	34173
Full Time permanent contracts	47031	20913
Part Time permanent contracts	2142	4728
Permanent fractional contracts	7745	8625
Employees with temporary contracts	36472	20652
Full Time temporary contracts	33658	15982
Part Time temporary contracts	2814	4670



Employed People	MEN	WOMEN
Accommodation Sector	15968	16635
Not Accommodation Sector	78742	46012
T O T A L	94710	62647



Accommodation Sector - Year 2006	Ibiza & Formentera	Mallorca	Menorca
Companies	247	1304	201
Employees	2856	19948	2167
Average employees	11,56	15,30	10,78
Minimum	1	1	1
Maximum	218	3096	287

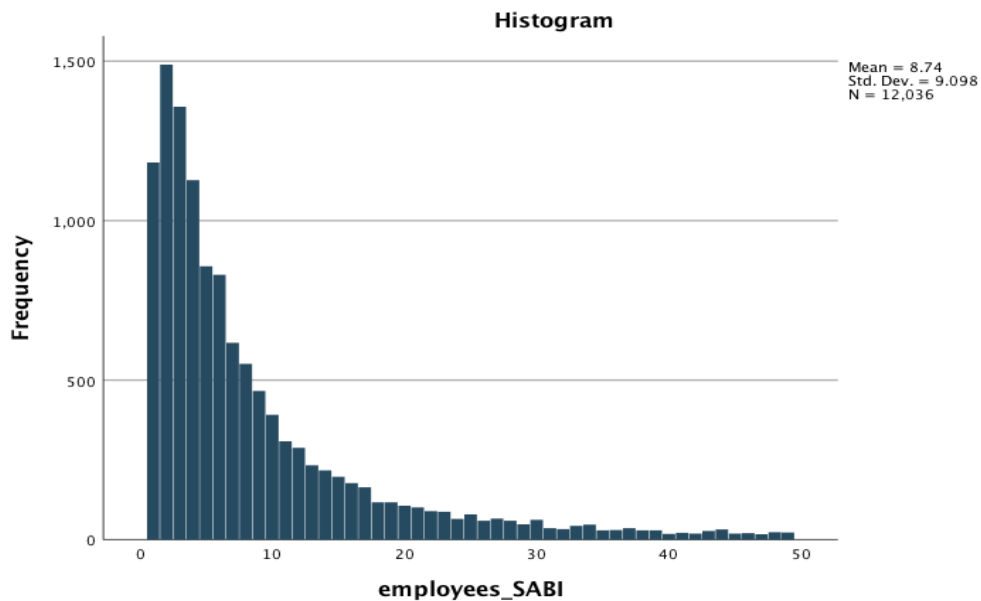


	Year 2006 Accommodation Sector	Year 2006 Not Accommodation Sector	Year 2006 All Sectors
Ibiza & Formentera			
Companies	247	1267	1514
Employees	2856	14747	17603
Averages employees	11,56	11,64	11,63
Minimum	1	1	1
Maximum	218	649	649

	Year 2006 Accommodation Sector	Year 2006 Not Accommodation Sector	Year 2006 All Sectors
Mallorca			
Companies	1304	8389	9693
Employees	19948	137992	157940
Averages employees	15,30	16,45	16,29
Minimum	1	1	1
Maximum	3096	7099	7099

	Year 2006 Accommodation Sector	Year 2006 Not Accommodation Sector	Year 2006 All Sectors
Menorca			
Companies	201	1000	1201
Employees	2167	9993	12160
Averages employees	10,78	9,99	10,12
Minimum	1	1	1
Maximum	287	152	287

ANALYSIS FOR COMPANIES WITH NUMBER OF EMPLOYEES WITH LESS THAN 50 EMPLOYEES – Year 2006



YEAR 2009

It can be observed that in the year 2009 in the Islands object of this investigation exists in our sample 13436 companies of which almost 7% belonged to the Accommodation Sector. These firms account for over 26% of the totality of the companies in the Balearic Islands, as it can be seen on the charts shown below:

When looking at the information obtained, it can be highlighted that in the Accommodation Sector, 7 companies account for 40% of the employees, considering that one company has 6072 employees, another one 5223 and another one 1113.

408 companies, that is to say, the 46%, have hired up to 10 employees which represent the 4.56% of the employed workforce.

We can pinpoint 7 companies with a greater amount of employees. These firms only account for 10.20% of the workforce (7 companies have 14,137 employees)

9953 companies (that is to say, the 79%) have hired up to 10 employees; they all mean the 29% of the employed workforce.

We can observe below the distribution of the employees in the companies of the NOT Accommodation Sector regarding the Accommodation Sector.

As far as costs, added value contributed by each employee. as it is shown in the chart, the GVA average per employee in the accommodation sector is 36.82 euros, and in the not accommodation sector is 28.76 euros.

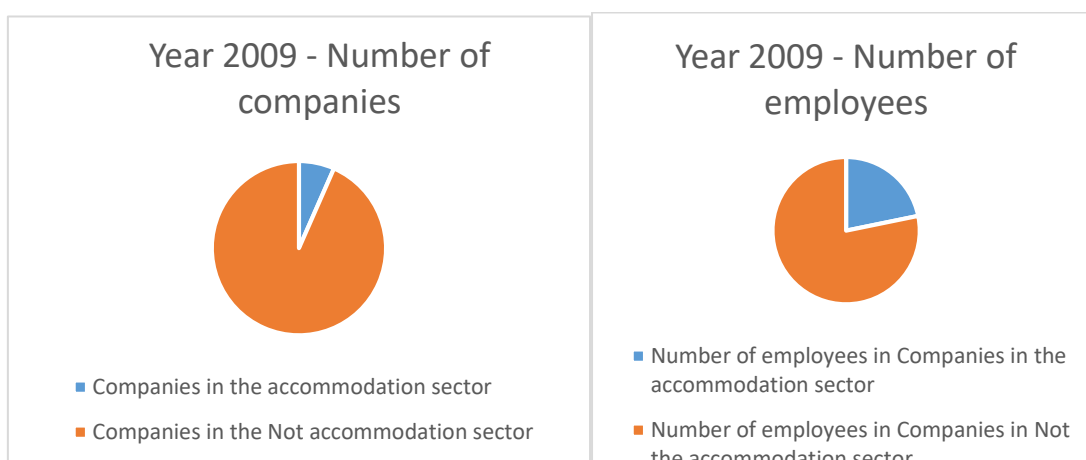
It can be seen that the Accommodation Sector in 2009 favoured women in terms of number of contracts. .

With we look at the entire workforce, it can be seen that men are most benefited, as they count with a greater amount of job positions and better working conditions when compared with women.

As it was previously explained, when comparing the hiring levels in the totality of the Islands between men and women, it can be seen that men are hired at a 60% more than women.

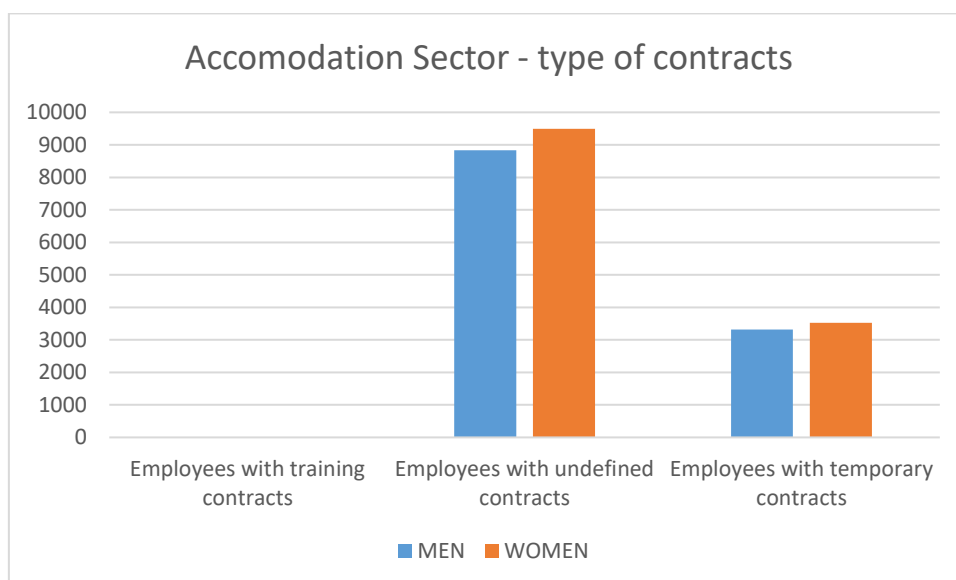
	Year 2009	Percent
Companies in the accommodation sector	890	6,59%
Companies in the Not accommodation sector	12.607	93,41%
Total Companies	13.497	

	Year 2009	Percent
Number of employees in Companies in the accommodation sector	38.604	21,78%
Number of employees in Companies in Not the accommodation sector	138.603	78,22%
Total Employees	177.207	

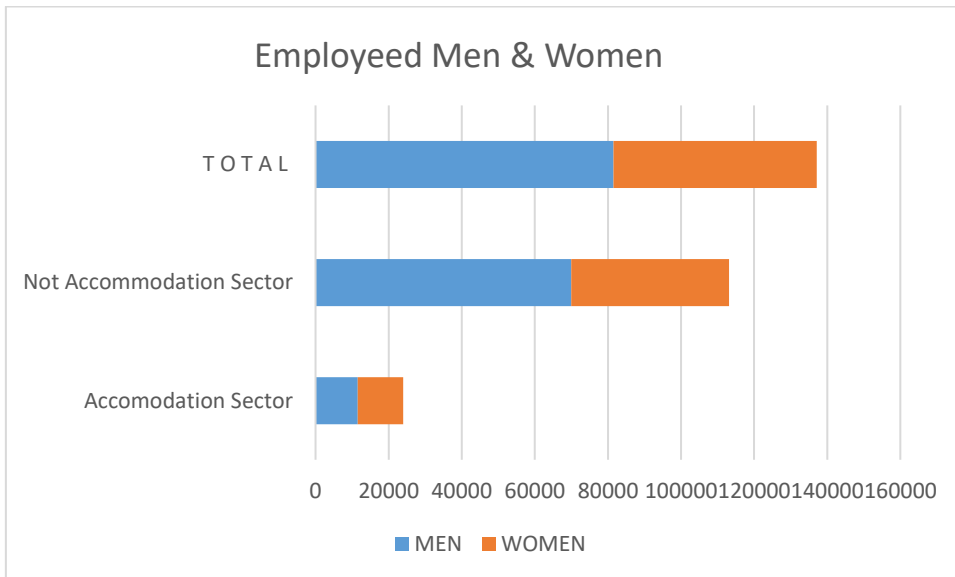
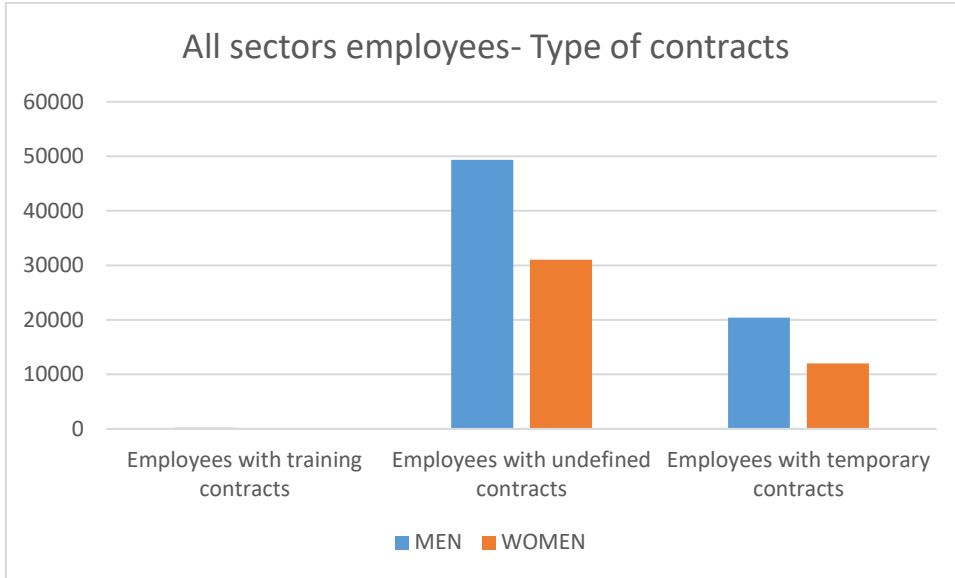


	Year 2009
GVA average per employee in Accommodation Sector	36.82
GVA Average per employee in not accommodation sector	28.76

ACCOMMODATION SECTOR	MEN	WOMEN
Employees with training contracts	8	6
Full Time training contracts	8	6
Part Time training contracts	0	0
Employees with permanent contracts	8837	9492
Full Time permanent contracts	3342	1992
Part Time permanent contracts	92	186
Permanent fractional contracts	5403	7316
Employees with temporary contracts	3318	3529
Full Time temporary contracts	3000	3120
Part Time temporary contracts	318	409



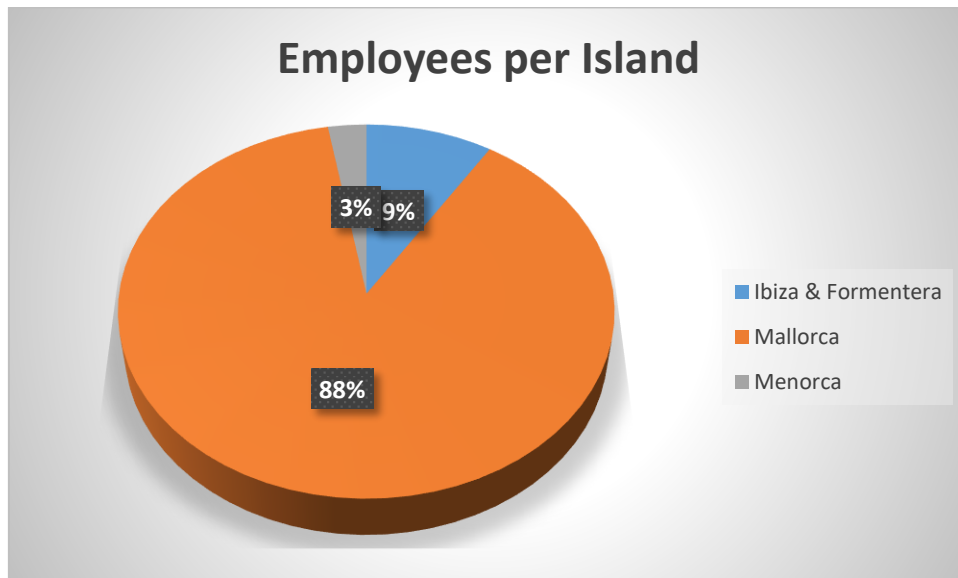
TOTAL HIRING	MEN	WOMEN
Employees with training contracts	206	107
Full Time training contracts	190	91
Part Time training contracts	16	16
Employees with permanent contracts	49372	31041
Full Time permanent contracts	42838	21694
Part Time permanent contracts	2580	5829
Permanent fractional contracts	3954	3518
Employees with temporary contracts	20381	11991
Full Time temporary contracts	17172	7532
Part Time temporary contracts	3208	4450



Analyses by Island:

It can be seen that out of the entire amount of employees of the Accommodation Sector, the 88% is concentrated in Mallorca

Accommodation Sector - Year 2009	Ibiza & Formentera	Mallorca	Menorca
Companies	171	644	72
Employees	3494	34053	1057
Average employees	20,43	52,88	14,68
Minimum	1	1	1
Maximum	565	6072	90



Analysing each of the Islands the following results are obtained:

	Year 2009 Accommodation Sector	Year 2009 Not Accommodation Sector	Year 2009 All Sectors
Ibiza & Formentera			
Companies	171	1428	1599
Employees	3494	12446	15940
Averages employees	20,43	8,72	9,97
Minimum	1	1	1
Maximum	565	229	565

Mallorca	Year 2009 Accommodation Sector	Year 2009 Not Accommodation Sector	Year 2009 All Sectors
Companies	644	9789	10433
Employees	34053	115655	149708
Averages employees	52,88	11,81	14,35
Minimum	1	1	1
Maximum	6072	2776	6072

Menorca	Year 2009 Accommodation Sector	Year 2009 Not Accommodation Sector	Year 2009 All Sectors
Companies	72	1351	1423
Employees	1057	10502	11559
Averages employees	14,68	7,77	8,12
Minimum	1	1	1
Maximum	90	177	177

YEAR 2015

It can be observed that in the year 2015 in the Balearic Islands existed 12363 companies, 8% of which belong to the Accommodation Sector. These firms account for almost the 25% of the active workforce as it can be seen on the charts shown below:

After examining the information obtained, it can be highlighted and analysed in the Accommodation Sector that:

7 companies hired 45% of the totality of employees, considering that one company has 1201 employees, another one 1228, another one 3663 and another one 5327.

472 companies (that is 46.54%) have hired up to 10 employees that represent the 4.46% of the employed workforce. As for the rest of the companies of the NOT Accommodation Sector, it can be said that the 7 companies that have a greater amount of employees, account for 10.75% of the totality of employees (7 companies have 13,915 employees).

9062 companies (that is to say, the 78%) have hired up to 10 employees; they all mean the 27% of the employed workforce.

We can see below the distribution of the employees of the NOT Accommodation Sector regarding the Accommodation Sector.

As far as costs, added value contributed by each employee, it can therefore be observed, that the mean of the productivity for the year 2015 is set to be of 55.29 Euros and the average cost that represents for each company their employees it is of 466.68 Euros.

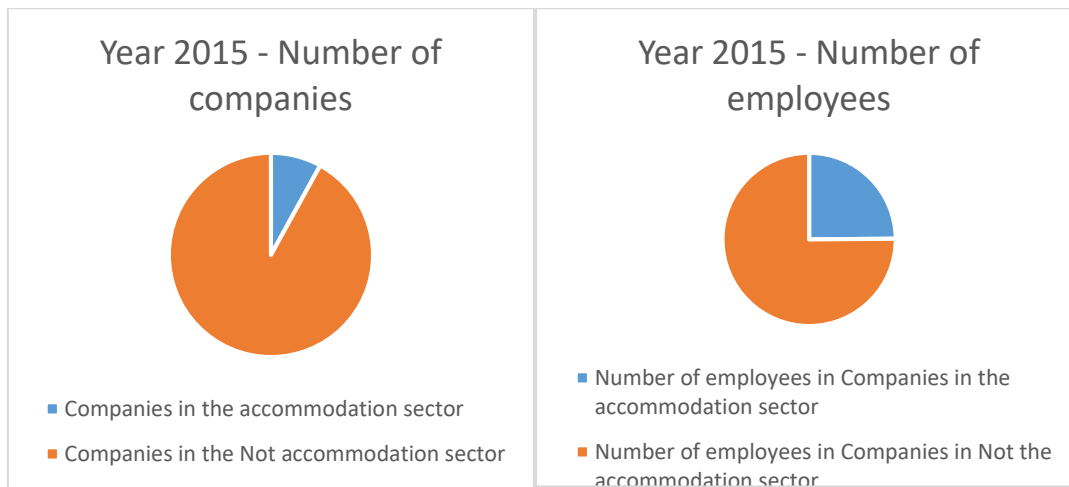
We can observe that in 2015 the Accommodation Sector benefits women which are favoured with a higher amount of contracts

When analysing the entire workforce, here it can be seen that men are the most benefited, as they count with a greater amount of job positions and better working conditions for them.

However, when disaggregating the values in Accommodation and NOT Accommodation, it can be clearly seen how in the NOT Accommodation sector men who are hired are a 54% more than women.

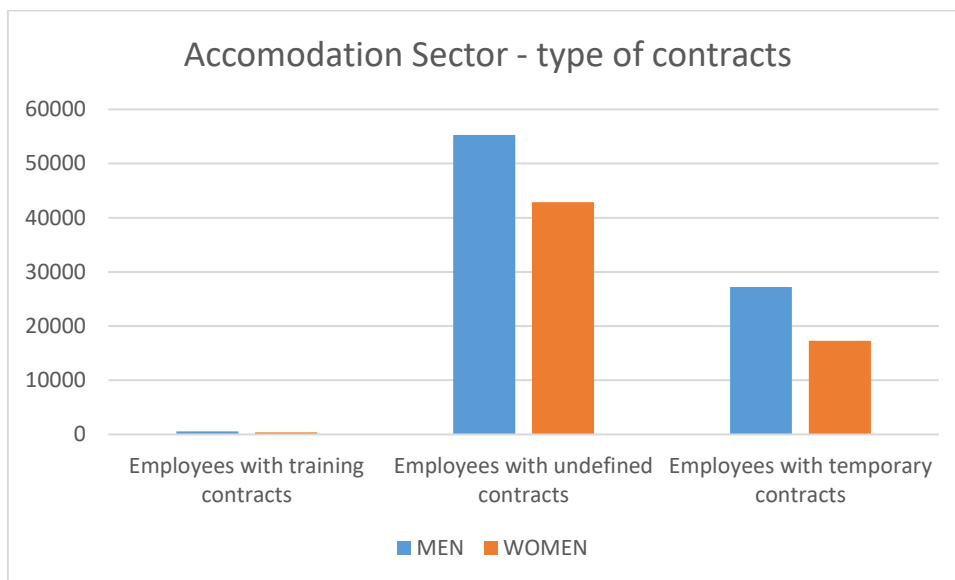
	Year 2015	Percent
Companies in the accommodation sector	1,014	8.02%
Companies in the Not accommodation sector	11,634	91.98%
Total Companies	12,648	

	Year 2015	Percent
Number of employees in Companies in the accommodation sector	42,838	24.87%
Number of employees in Companies in Not the accommodation sector	129,378	75.13%
Total Employees	172,216	

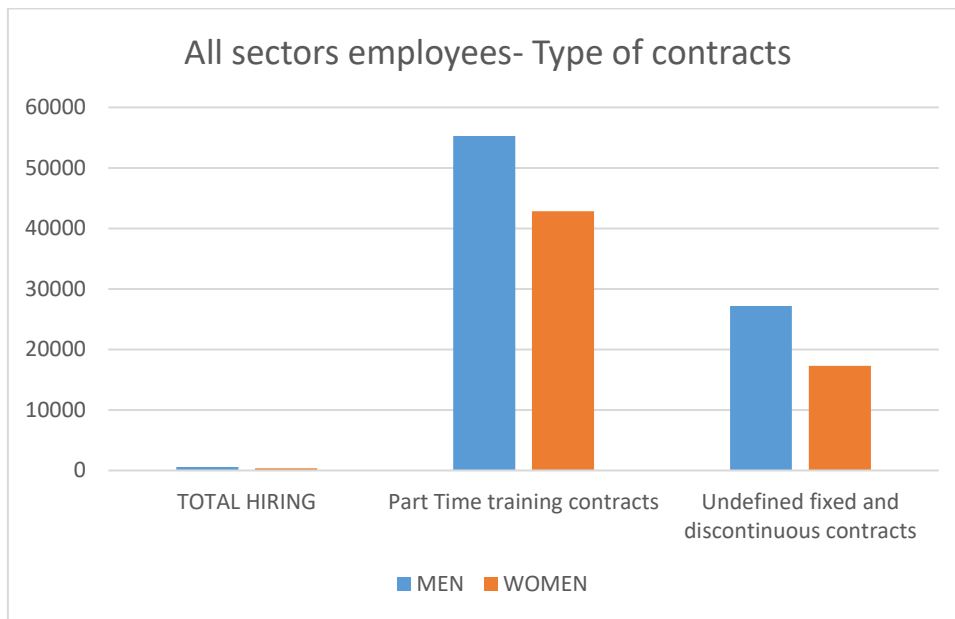


	Net_income	Cost_employees	GVA/Employee
N	12363	12363	12363
Mean	166,01	466,68	55,29
St. Deviation	4373,37	3638,35	531,00

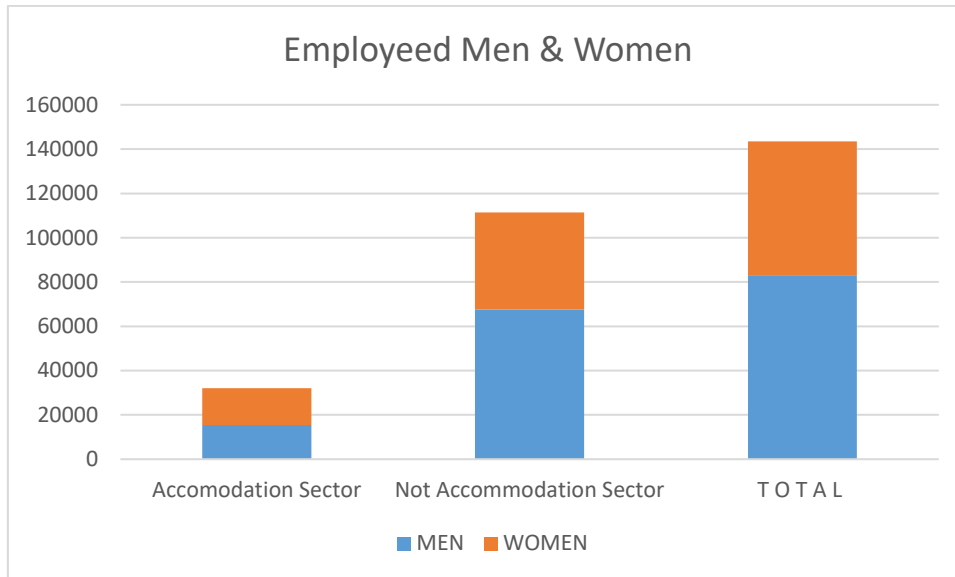
ACCOMMODATION SECTOR	MEN	WOMEN
Employees with training contracts	53	51
Full Time training contracts	52	49
Part Time training contracts	1	2
Employees with permanent contracts	10436	11527
Full Time permanent contracts	2997	2001
Part Time permanent contracts	128	215
Permanent fractional contracts	7311	9310
Employees with temporary contracts	4911	5114
Full Time temporary contracts	4423	4465
Part Time temporary contracts	488	649



TOTAL HIRING	MEN	WOMEN
Employees with training contracts	555	367
Full Time training contracts	515	322
Part Time training contracts	40	45
Employees with permanent contracts	55257	42845
Full Time permanent contracts	38039	21750
Part Time permanent contracts	3253	6620
Permanent fractional contracts	13965	14477
Employees with temporary contracts	27203	17307
Full Time temporary contracts	22523	11455
Part Time temporary contracts	4680	5852



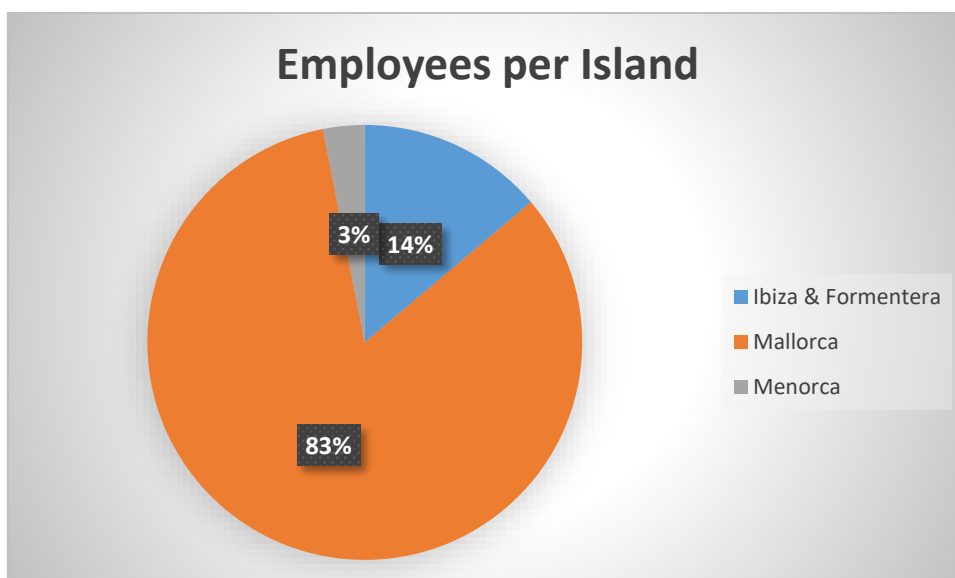
Employed People	MEN	WOMEN
Accommodation Sector	15399	16690
Not Accommodation Sector	67615	43830
T O T A L	83014	60520



Analysis by Island:

It can be seen that out of all of the employees of the Accommodation Sector, the 83% is concentrated in Mallorca

Accommodation Sector - Year 2015	Ibiza & Formentera	Mallorca	Menorca
Companies	218	704	76
Employees	5528	33170	1233
Average employees	25,47	47,11647727	16,2236842
Minimum	1	1	1
Maximum	1228	5327	128



Year 2015 Accommodation Sector	Ibiza & Formentera	Mallorca	Menorca
Average workers	25,47	47,11	16,22

If we analyse each Island we obtain as a result:

Ibiza & Formentera	Year 2015 Accommodation Sector	Year 2015 Not Accommodation Sector	Year 2015 All Sectors
Companies	218	1682	1900
Employees	5528	14460	19988
Averages employees	25,47	8,60	10,52
Minimum	1	1	1
Maximum	1228	212	1228

Mallorca	Year 2015 Accommodation Sector	Year 2015 Not Accommodation Sector	Year 2015 All Sectors
Companies	704	8534	9238
Employees	33170	106887	140057
Averages employees	47,12	12,52	15,16
Minimum	1	1	1
Maximum	5327	3032	5327

Menorca	Year 2015 Accommodation Sector	Year 2015 Not Accommodation Sector	Year 2015 All Sectors
Companies	76	1158	1234
Employees	1233	8562	9795
Averages employees	16,22	7,39	7,94
Minimum	1	1	1
Maximum	128	189	189

COMPARATIVE ANALYSIS OF THE THREE PERIODS: BEFORE, DURING AND AFTER THE CRISIS

When analysing the three previously mentioned periods, it can be seen that after the 2009 fall, the tourism sector was not able to recover properly and return to the numbers of companies of 2006. This was not the case for the other industries in the Balearic Islands, where company were able to recover properly.

Furthermore, in regards of the amount of employees, tourism sector was not able to recover its figures from 2006 either.

As it was said, the crisis in the tourism sector, affected in different ways men and women. As far as the types of contracts used by employers, training contracts were the most affected (even though numerically it is not a significant figure, it really is in its percentage). Permanent contracts represented a greater precariousness for women, even though they did not lose as far as number of jobs, they did lose as far as their working conditions.

It can be seen that in this sector, the 2009 crisis did not affect as much as it did to the Accommodation Sector. Even though a decrease in the quantity of employees in Ibiza Formentera and Mallorca Islands can be detected, in the three locations studied, the amount of companies raised from the years 2006 to 2009 by 18%, while the amount of employees decreased by 15%. Subsequently, however, not only have they recovered, but also increased by 4% in the year 2015.

Table of relative Frequency for employees of all Sectors by Island for the three years were analysed. With the relative frequency analysis it can be seen how the presence of each Island on the total changes. Although Mallorca does not lose its leadership, it loses its weight over the years when the remaining islands start increasing in importance.

Moreover, it is studied how has the crisis and occupation behaved in the different Islands which are object of this analysis:

Consequently, as it was already said, the recovery was not equal for men and women as these last ones were the most affected by the 2009 crisis

The ratio of men and women in the Islands is represented in the table below.

Therefore, it can be seen that in the year 2015, when the crisis was believed to be over or at least its worst part had been a few years ago, 2006 indexes slowly recovered, that is to say as the Spanish GDP started to recover, businessmen regained their trust and they began to reopen their companies and consequently hire employees in order to reactivate the economy.

In 2009 an important fall can be clearly seen and even though in the year 2015 the GDP had not fully recovered, the unemployment rates did.

As a matter of fact, the recovery of competitiveness, in terms of labor and financial costs, together with the cyclic evolution and the fall on the oil prices, explains the improvement on the Spanish economy which has seen a vigorous recovery in the last years and that has come with an improvement of its ratios.

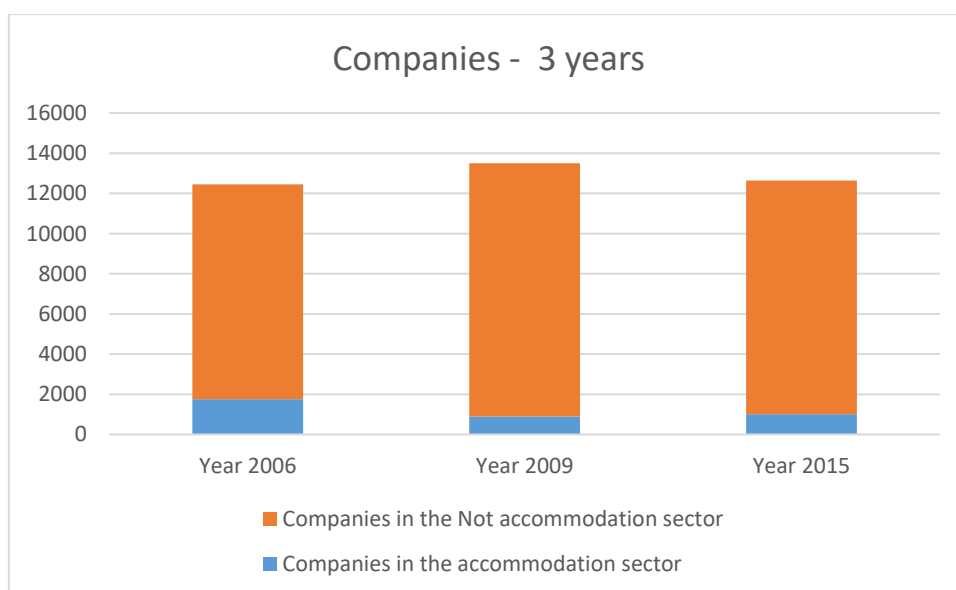
Financial institutions, as they are more capitalized, have invested in more funds into the market which represented a greater intake; lot of that intake is drifted to tourism and that automatically implies a greater need of workforce in the Accommodation Sector.

Regarding the other companies, the construction sector, for instance, has registered in the last two decades an expansion and a recession. It started its gradual recovery since the year 2014 after six years of intense crisis, but has not reached their desired levels before the crisis, yet.

The number of mortgages also initiates its recovery just in the year 2014, which means that by the year 2015 (which is the year of this analysis), the desired indexes of the year 2006 have not been reached yet, beyond the efforts made by the Central Bank of Spain.

With the already known indexes of the GDP of the last years, it can be expected that the trend to the raise in the occupation and in the creation of companies will continue, especially in the Accommodation Sector.

	Year 2006	Year 2009	Year 2015
Companies in the accommodation sector	1752	890	1014
Companies in the Not accommodation sector	10703	12607	11634
Total Companies	12648	13497	12648



	Year 2006	Year 2009	Year 2015
Number of employees in Companies in the accommodation sector	49578	38604	42838
Number of employees in Companies in Not the accommodation sector	138526	138603	129378
Total Employees	188104	177207	172216

Productivity Average

	Year 2006	Year 2009	Year 2015
Total	38,314	26,021	55,023

Ibiza & Formentera	Year 2006 Accommodation Sector	Year 2009 Accommodation Sector	Year 2015 Accommodation Sector
Companies	247	171	218
Employees	2856	3494	5528
Minimum	1	1	1
Maximum	218	565	1228

Mallorca	Year 2006 Accommodation Sector	Year 2009 Accommodation Sector	Year 2015 Accommodation Sector
Companies	1304	644	704
Employees	19948	34053	33170
Minimum	1	1	1
Maximum	3096	6072	5327

Menorca	Year 2006 Accommodation Sector	Year 2009 Accommodation Sector	Year 2015 Accommodation Sector
Companies	201	72	76
Employees	2167	1057	1233
Minimum	1	1	1
Maximum	287	90	128

Accommodation Sector	MEN			WOMEN		
	Year 2006	Year 2009	Year 2015	Year 2006	Year 2009	Year 2015
Employees with training contracts	20	8	53	20	6	51
Full Time training contracts	20	8	52	20	6	49
Part Time training contracts	0	0	1	0	0	2
Employees with permanent contracts	9906	8837	10436	9815	9492	11527
Full Time permanent contracts	5058	3342	2997	3067	1992	2001
Part Time permanent contracts	264	92	128	468	186	215
Permanent fractional contracts	5142	5403	7311	6280	7316	9310
Employees with temporary contracts	6274	3318	4911	7560	3529	5114
Full Time temporary contracts	5634	3000	4423	6508	3120	4465
Part Time temporary contracts	640	318	488	1052	409	649

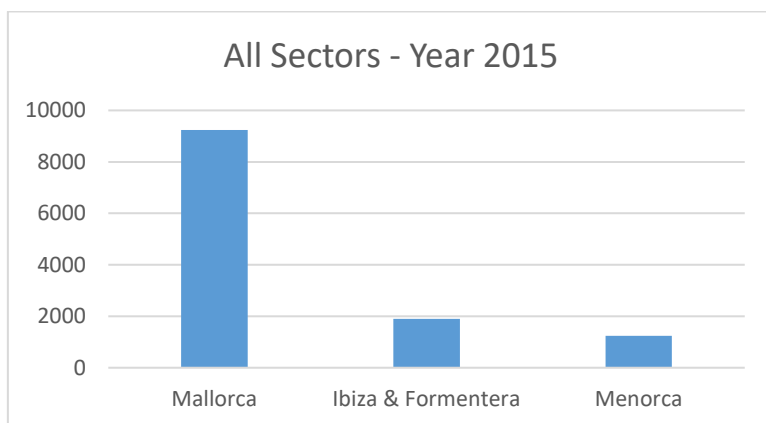
Ibiza & Formentera	Year 2006 Not Accommodation Sector	Year 2009 Not Accommodation Sector	Year 2015 Not Accommodation Sector
Companies	1267	1428	1900
Employees	14747	12446	19988
Averages Employees	11,64	8,72	10,52
Minimum	1	1	1
Maximum	649	229	1228

Mallorca	Year 2006 Not Accommodation Sector	Year 2009 Not Accommodation Sector	Year 2015 Not Accommodation Sector
Companies	8389	9789	9238
Employees	137992	115655	140057
Averages Employees	16,45	11,81	15,16
Minimum	1	1	1
Maximum	7099	2776	5327

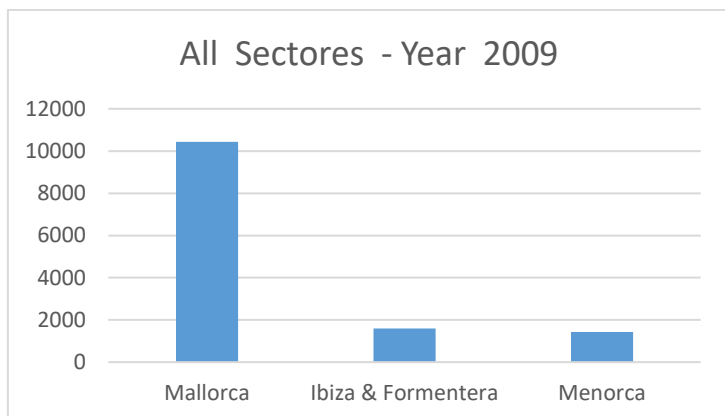
Menorca	Year 2006 Not Accommodation Sector	Year 2009 Not Accommodation Sector	Year 2015 Not Accommodation Sector
Companies	1000	1351	1234
Employees	9993	10502	9795
Averages Employees	9,99	7,77	7,94
Minimum	1	1	1
Maximum	152	177	189

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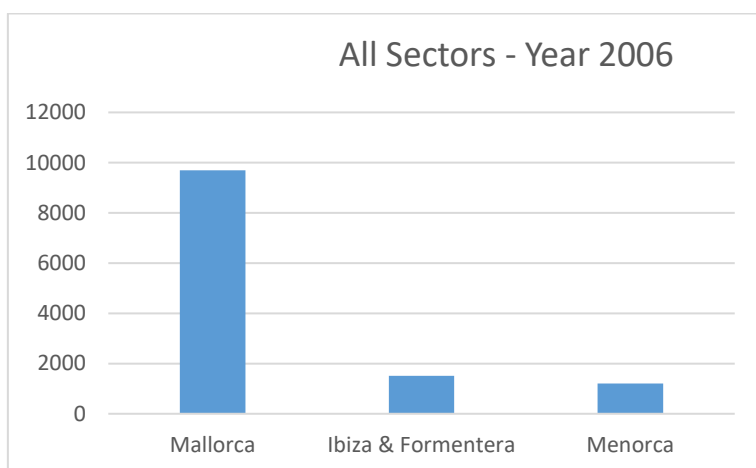
2015 - All Sectors	Quantity	Frequency
Mallorca	9238	74,67%
Ibiza & Formentera	1900	15,36%
Menorca	1234	9,97%
Total	12372	100,00%



2009 - All sectors	Quantity	Frequency
Mallorca	10433	77,54%
Ibiza & Formentera	1599	11,88%
Menorca	1423	10,58%
Total	13455	100,00%

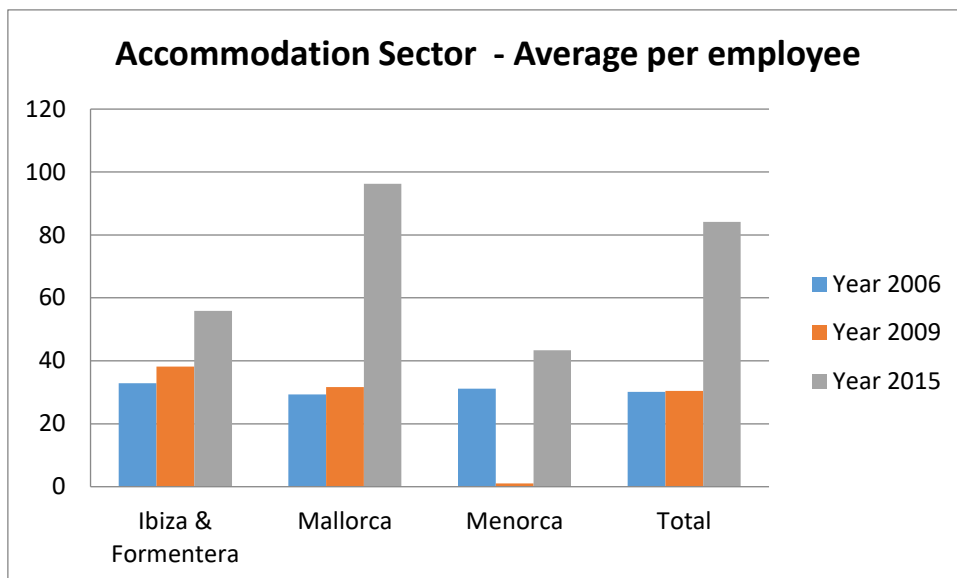


2006 All sectors	Quantity	Frequency
Mallorca	9693	78,12%
Ibiza & Formentera	1514	12,20%
Menorca	1201	9,68%
Total	12408	100,00%



Accommodation Sector - Average per employee

	2006	2009	2015
Ibiza & Formentera	32,916	38,158	55,87
Mallorca	29,36	31,648	96,24
Menorca	31,158	0,997	43,347
Total	30,098	30,492	84,175



	YEAR 2006		YEAR 2009		YEAR 2015	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Accommodation Sector						
Ibiza & Formentera	1786	913	866	374	2795	2949
Mallorca	9879	5859	3639	2219	11786	12586
Menorca	1166	763	356	581	818	886

	YEAR 2006		YEAR 2009		YEAR 2015	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Not Accommodation Sector						
Ibiza & Formentera	8925	5139	7411	4698	9433	5029
Mallorca	63504	37466	59117	40826	53275	35393
Menorca	6319	3408	8161	5840	4908	3409

Accommodation Sector:

	Ibiza		Mallorca		Menorca	
Year 2006	Quantity	Percentage	Quantity	Percentage	Quantity	Percentage
Men	1786	66%	9879	63%	1166	60%
Women	913	34%	5859	37%	763	40%
	2699		15738		1929	

	Ibiza		Mallorca		Menorca	
Year 2009	Quantity	Percentage	Quantity	Percentage	Quantity	Percentage
Men	866	70%	3639	62%	356	38%
Women	374	30%	2219	38%	581	62%
	1240		5858		937	

	Ibiza		Mallorca		Menorca	
Year 2015	Quantity	Percentage	Quantity	Percentage	Quantity	Percentage
Men	2795	49%	11786	48%	818	48%
Women	2949	51%	12586	52%	886	52%
	5744		24372		1704	

Economic Model

The model shows significance as the value of R-square is high for all the 6 regressions performed (See Appendix I, II, III, IV, V, y IV). The explanatory variable representing Partiality Coefficient never reached Statistical significance. This indicates us that the null hypothesis that part time workers are less productive than full time workers is rejected. The suspicion was that part time workers might be less motivated than full time workers because their salary is lower than full time workers. However, we could explain the results by the fact that part time workers, might have more than one part time jobs and therefore they could earn the same or even higher salaries than full-time workers. We could also consider those part time workers that are students or values their opportunity cost of their leisure time, especially considering the appealing natural environment that the Balearic Island offer.

As far as the other variables, all of them reached statistical significance for all the regressions.

The other explanatory variable of the model, which represents the temporality coefficient is statistically significance. The coefficient is positive in the regression for all sector in 2006, indicating that, in general, workers with fixed term contract were more productive than workers with permanent contract. The significant level of the coefficient was negative in the regression for the accommodation sector, meaning that the industry temporary workers were less productive than permanent workers of the same industry.

The confidence level of the temporality variable was not as high as the other variables for the year 2009. However it is still statistically significant. He lower confidence lever is possibly due to the economic crisis which distorted motivation factors because of scarcity of job offers. As for the accommodation sector thee coefficient was negative, meaning workers with a fixed-term contract were less productive than permanent workers.

Finally 2015 shows a positive temporary coefficient for both regressions (Accommodation and All-Sectors). This results describe a positive relationship between productivity and fixed-time workers, however temporary workers.

Last three regressions of this study clearly show lower temporary coefficients in the accommodation sector, compared to the rest of the economy in the Balearic Islands. This means that temporary workers employed in the accommodation sector are less productive than those working in the rest of the economic spectrum.

CONCLUSION

Tourism can be very beneficial for a country if it is well managed, but it can also bring negative consequences, such as degradation of the environment, loss of heritage, misuse of scarce resources and so on. For these reasons tourism calls for a continuous analysis to understand and predict its behaviour and consequently its impact on destinations' stakeholders such as workers, resident, business owners, and so on.

In this paper we have analysed the productivity of firms operating in the tourism industry (accommodation firms) and compared them to the productivity of the entire economy in the Balearic Islands, based on the types of labour contracts of their employees.

We concluded that part time workers have no impact on productivity in neither accommodation sector nor the rest of the economy. We also concluded that temporary workers that are employed in the accommodation sectors are less productive than temporary workers that are employed in the rest of the economy.

For this reasons the recommendation to accommodation firms is to employee permanent contract as much as possible, because even though this kind of contract may entail higher costs for the company, it will likely result in higher monetary benefits.

APPENDIX I

Year 2006 Regression - All Sectors of the Balearic Islands

Descriptive Statistics

	Mean	Std. Deviation	N
GVA_MAX_zero	484,8408	3829,06496	12377
NonCurrent_assets_th_EUR_2006	1491,4500	22420,20765	12377
Operating_revenue_turnover	2071,8129	20411,84217	12377
PC_TOTAL	,0858	,17367	12377
TC_TOTAL	,2316	,28244	12377

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,873a	,762	,762	1868,71543
2	,873b	,762	,762	1866,63461

a. Predictors: (Constant), Operating_revenue_turnover, NonCurrent_assets_th_EUR_2006

b. Predictors: (Constant), Operating_revenue_turnover, NonCurrent_assets_th_EUR_2006, PC_TOTAL, TC_TOTAL

c. Dependent Variable: GVA_MAX_zero

Year 2006 Regression - All Sectors of the Balearic Islands

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	151,971	16,887		8,999	,000
	NonCurrent_assets_th_EUR_2006	,079	,001	,462	92,783	,000
	Operating_revenue_turnover	,104	,001	,554	111,224	,000
2	(Constant)	79,019	22,212		3,558	,000
	NonCurrent_assets_th_EUR_2006	,079	,001	,462	92,810	,000
	Operating_revenue_turnover	,104	,001	,553	111,197	,000
	PC_TOTAL	-33,745	100,904	-,002	-,334	,738
	TC_TOTAL	328,757	62,068	,024	5,297	,000

a. Dependent Variable: GVA_MAX_zero

APPENDIX II

Year 2006 Regression - Accommodation Sector of the Balearic Islands

Descriptive Statistics

	Mean	Std. Deviation	N
CNAE_55_GVA_Max_zero	117,3240	2787,78161	12405
CNAE_55_NonCurrent_assets_th_EUR_2006	592,5515	17665,98425	12405
CNAE_55_Operating_revenue_turnover	290,7779	6589,03489	12405
CNAE_55_PC_Total	,0157	,08385	12405
CNAE_55_TC_Total	,0557	,17220	12405

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,980a	,960	,960	559,81240
2	,980b	,960	,960	559,46312

- a. Predictors: (Constant),
CNAE_55_Operating_revenue_turnover,
CNAE_55_NonCurrent_assets_th_EUR_2006
- b. Predictors: (Constant),
CNAE_55_Operating_revenue_turnover,
CNAE_55_NonCurrent_assets_th_EUR_2006,
CNAE_55_PC_Total, CNAE_55_TC_Total
- c. Dependent Variable: CNAE_55_GVA_Max_zero

Year 2006 Regression - Accommodation Sector of the Balearic Islands

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2,867	5,033		-,570	,569
	CNAE_55_NonCurrent_assets_th_EUR_2006	,002	,001	,014	2,557	,011
	CNAE_55_Operating_revenue_turnover	,409	,002	,966	172,507	,000
2	(Constant)	2,806	5,281		,531	,595
	CNAE_55_NonCurrent_assets_th_EUR_2006	,002	,001	,013	2,402	,016
	CNAE_55_Operating_revenue_turnover	,409	,002	,968	172,417	,000
	CNAE_55_PC_Total	139,017	70,049	,004	1,985	,047
	CNAE_55_TC_Total	-143,382	34,326	-,009	-4,177	,000

a. Dependent Variable: CNAE_55_GVA_Max_zero

APPENDIX III

Year 2009 Regression - All Sectors of the Balearic Islands

Descriptive Statistics

	Mean	Std. Deviation	N
GVA_MAX_zero	445,6600	3833,23568	13436
NonCurrent_assets_th_EUR_2009	2028,9213	30270,48958	13436
Operating_revenue_turnover	1674,4701	18292,57457	13436
PC_TOTAL	,1030	,19896	13436
TC_TOTAL	,1734	,25334	13436

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,804a	,646	,646	2280,30856
2	,804b	,646	,646	2280,17085

a. Predictors: (Constant), Operating_revenue_turnover, NonCurrent_assets_th_EUR_2009

b. Predictors: (Constant), Operating_revenue_turnover, NonCurrent_assets_th_EUR_2009, PC_TOTAL, TC_TOTAL

c. Dependent Variable: GVA_MAX_zero

Year 2009 Regression - All Sectors of the Balearic Islands

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	153,710	19,763		7,778	,000
	NonCurrent_assets_th_EUR_2009	,053	,001	,415	72,379	,000
	Operating_revenue_turnover	,111	,001	,528	92,189	,000
2	(Constant)	166,588	24,592		6,774	,000
	NonCurrent_assets_th_EUR_2009	,053	,001	,415	72,354	,000
	Operating_revenue_turnover	,111	,001	,528	92,200	,000
	PC_TOTAL	128,147	105,990	,007	1,209	,227
	TC_TOTAL	-150,401	83,245	-,010	-1,807	,071
a. Dependent Variable: GVA_MAX_zero						

APPENDIX IV

Year 2009 Regression – Accommodation Sector of the Balearic Islands

Descriptive Statistics

	Mean	Std. Deviation	N
CNAE_55_GVA_Max_zero	88,2978	2284,63651	13436
CNAE_55_NonCurrent_assets_th_EUR_2009	668,8739	21586,52967	13436
CNAE_55_Operating_revenue_turnover	208,6753	5403,63634	13436
CNAE_55_PC_Total	,0059	,05274	13436
CNAE_55_TC_Total	,0113	,07954	13436

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,918a	,842	,842	907,63784
2	,918b	,842	,842	906,96249

- a. Predictors: (Constant), CNAE_55_Operating_revenue_turnover, CNAE_55_NonCurrent_assets_th_EUR_2009
- b. Predictors: (Constant), CNAE_55_Operating_revenue_turnover, CNAE_55_NonCurrent_assets_th_EUR_2009, CNAE_55_PC_Total, CNAE_55_TC_Total
- c. Dependent Variable: CNAE_55_GVA_Max_zero

Year 2009 Regression – Accommodation Sector of the Balearic Islands

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7,229	7,836		,922	,356
	CNAE_55_NonCurrent_assets_th_EUR_2009	-,002	,001	-,017	-2,412	,016
	CNAE_55_Operating_revenue_turnover	,394	,003	,932	132,722	,000
2	(Constant)	11,324	7,915		1,431	,153
	CNAE_55_NonCurrent_assets_th_EUR_2009	-,002	,001	-,019	-2,633	,008
	CNAE_55_Operating_revenue_turnover	,395	,003	,935	132,541	,000
	CNAE_55_PC_Total	295,370	169,139	,007	1,746	,081
	CNAE_55_TC_Total	-523,768	112,367	-,018	-4,661	,000
a. Dependent Variable: CNAE_55_GVA_Max_zero						

APPENDIX V

Year 2015 Regression – All Sectors of the Balearic Islands

Descriptive Statistics

	Mean	Std. Deviation	N
GVA_MAX_zero	684,2162	6259,91863	12363
NonCurrent_assets_th_EUR_2015	2248,3321	28038,78376	12363
Operating_revenue_turnover	2128,8266	22566,19818	12363
PC_TOTAL	,1328	,22529	12363
TC_TOTAL	,1994	,26299	12363

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,768a	,590	,589	4011,05097
2	,768b	,590	,590	4009,88881

a. Predictors: (Constant), Operating_revenue_turnover, NonCurrent_assets_th_EUR_2015

b. Predictors: (Constant), Operating_revenue_turnover, NonCurrent_assets_th_EUR_2015, TC_TOTAL, PC_TOTAL

c. Dependent Variable: GVA_MAX_zero

Year 2015 Regression – All Sectors of the Balearic Islands

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	207,062	36,277		5,708	,000
	NonCurrent_assets_th_EUR_2015	,137	,001	,615	99,127	,000
	Operating_revenue_turnover	,079	,002	,285	45,979	,000
2	(Constant)	142,201	46,930		3,030	,002
	NonCurrent_assets_th_EUR_2015	,137	,001	,615	99,158	,000
	Operating_revenue_turnover	,079	,002	,285	45,932	,000
	PC_TOTAL	-184,534	173,255	-,007	-1,065	,287
	TC_TOTAL	448,967	148,375	,019	3,026	,002
	a. Dependent Variable: GVA_MAX_zero					

APPENDIX VI

Year 2015 Regression – Accommodation Sector of the Balearic Islands

Descriptive Statistics

	Mean	Std. Deviation	N
CNAE_55_GVA_Max_zero	220,0362	5213,84143	12363
CNAE_55_NonCurrent_assets_th_EUR_2015	867,0608	23213,35049	12363
CNAE_55_Operating_revenue_turnover	348,0569	6716,79091	12363
CNAE_55_PC_Total	,0064	,04780	12363
CNAE_55_TC_Total	,0223	,09630	12363

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,891a	,795	,795	2362,59466
2	,893b	,797	,797	2351,67770

- a. Predictors: (Constant),
CNAE_55_Operating_revenue_turnover,
CNAE_55_NonCurrent_assets_th_EUR_2015
- b. Predictors: (Constant),
CNAE_55_Operating_revenue_turnover,
CNAE_55_NonCurrent_assets_th_EUR_2015,
CNAE_55_PC_Total, CNAE_55_TC_Total
- c. Dependent Variable: CNAE_55_GVA_Max_zero

Year 2015 Regression – Accommodation Sector of the Balearic Islands

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	71,720	21,278		3,371	,001
	CNAE_55_NonCurrent_assets_th_EUR_2015	,240	,002	1,070	142,432	,000
	CNAE_55_Operating_revenue_turnover	-,173	,006	-,222	-29,594	,000
2	(Constant)	21,427	21,717		,987	,324
	CNAE_55_NonCurrent_assets_th_EUR_2015	,241	,002	1,074	143,459	,000
	CNAE_55_Operating_revenue_turnover	-,181	,006	-,233	-30,874	,000
	CNAE_55_PC_Total	-1030,274	519,212	-,009	-1,984	,047
	CNAE_55_TC_Total	2634,828	260,645	,049	10,109	,000
a. Dependent Variable: CNAE_55_GVA_Max_zero						

APPENDIX VII

Year 2006

Descriptive Statistics

	Mean	Std. Deviation	N
GVA_MAX_zero	484,8408	3829,06496	12377
NonCurrent_assets_th_EUR_2006	1491,4500	22420,20765	12377
Operating_revenue_turnover	2071,8129	20411,84217	12377
CNAE_55_NonCurrent_assets_th_EUR_2006	593,8920	17685,93459	12377
CNAE_55_Operating_revenue_turnover	291,4357	6596,46981	12377
PC_TOTAL	,0858	,17367	12377
TC_TOTAL	,2316	,28244	12377
CNAE_55_PC_Total	,0157	,08394	12377
CNAE_55_TC_Total	,0558	,17238	12377

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,918 ^a	,843	,843	1515,78338
2	,919 ^b	,844	,844	1511,81131

a. Predictors: (Constant), CNAE_55_Operating_revenue_turnover, Operating_revenue_turnover, NonCurrent_assets_th_EUR_2006, CNAE_55_NonCurrent_assets_th_EUR_2006

b. Predictors: (Constant), CNAE_55_Operating_revenue_turnover, Operating_revenue_turnover, NonCurrent_assets_th_EUR_2006, CNAE_55_NonCurrent_assets_th_EUR_2006, PC_TOTAL, CNAE_55_TC_Total, TC_TOTAL, CNAE_55_PC_Total

c. Dependent Variable: GVA_MAX_zero

Year 2006

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	151,316	13,707		11,040	,000
NonCurrent_assets_th_EUR_2006	,027	,001	,160	25,425	,000
Operating_revenue_turnover	,106	,001	,566	137,970	,000
CNAE_55_NonCurrent_assets_th_EUR_2006	-,024	,003	-,113	-9,304	,000
CNAE_55_Operating_revenue_turnover	,300	,006	,517	46,421	,000
2 (Constant)	105,538	18,040		5,850	,000
NonCurrent_assets_th_EUR_2006	,027	,001	,160	25,504	,000
Operating_revenue_turnover	,106	,001	,564	137,864	,000
CNAE_55_NonCurrent_assets_th_EUR_2006	-,025	,003	-,116	-9,568	,000
CNAE_55_Operating_revenue_turnover	,303	,006	,522	46,878	,000
PC_TOTAL	-6,476	90,343	,000	-,072	,943
TC_TOTAL	351,242	55,233	,026	6,359	,000
CNAE_55_PC_Total	114,915	209,277	,003	,549	,583
CNAE_55_TC_Total	-660,533	102,148	-,030	-6,466	,000

a. Dependent Variable: GVA_MAX_zero

Year 2009

Descriptive Statistics

	Mean	Std. Deviation	N
GVA_MAX_zero	445,6600	3833,23568	13436
NonCurrent_assets_th_EUR_2009	2028,9213	30270,48958	13436
Operating_revenue_turnover	1674,4701	18292,57457	13436
CNAE_55_NonCurrent_assets_th_EUR_2009	668,8739	21586,52967	13436
CNAE_55_Operating_revenue_turnover	208,6753	5403,63634	13436
PC_TOTAL	,1030	,19896	13436
TC_TOTAL	,1734	,25334	13436
CNAE_55_PC_Total	,0059	,05274	13436
CNAE_55_TC_Total	,0113	,07954	13436

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,830 ^a	,688	,688	2141,09951
2	,830 ^b	,688	,688	2140,46214

a. Predictors: (Constant), CNAE_55_Operating_revenue_turnover, Operating_revenue_turnover, NonCurrent_assets_th_EUR_2009, CNAE_55_NonCurrent_assets_th_EUR_2009

b. Predictors: (Constant), CNAE_55_Operating_revenue_turnover, Operating_revenue_turnover, NonCurrent_assets_th_EUR_2009, CNAE_55_NonCurrent_assets_th_EUR_2009, PC_TOTAL, CNAE_55_TC_Total, TC_TOTAL, CNAE_55_PC_Total

c. Dependent Variable: GVA_MAX_zero

Year 2009

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	147,711	18,561		7,958	,000
NonCurrent_assets_th_EUR_2009	,047	,001	,370	49,636	,000
Operating_revenue_turnover	,105	,001	,499	91,146	,000
CNAE_55_NonCurrent_assets_th_EUR_2009	-,049	,002	-,274	-24,389	,000
CNAE_55_Operating_revenue_turnover	,288	,007	,407	40,621	,000
2 (Constant)	167,241	23,088		7,244	,000
NonCurrent_assets_th_EUR_2009	,047	,001	,370	49,615	,000
Operating_revenue_turnover	,105	,001	,499	91,150	,000
CNAE_55_NonCurrent_assets_th_EUR_2009	-,049	,002	-,275	-24,495	,000
CNAE_55_Operating_revenue_turnover	,290	,007	,409	40,686	,000
PC_TOTAL	115,428	102,426	,006	1,127	,260
TC_TOTAL	-143,376	80,614	-,009	-1,779	,075
CNAE_55_PC_Total	19,701	411,009	,000	,048	,962
CNAE_55_TC_Total	-598,649	273,900	-,012	-2,186	,029

a. Dependent Variable: GVA_MAX_zero

Year 2015

Descriptive Statistics

	Mean	Std. Deviation	N
GVA_MAX_zero	684,2162	6259,91863	12363
NonCurrent_assets_th_EUR_2015	2248,3321	28038,78376	12363
Operating_revenue_turnover	2128,8266	22566,19818	12363
CNAE_55_NonCurrent_assets_th_EUR_2015	867,0608	23213,35049	12363
CNAE_55_Operating_revenue_turnover	348,0569	6716,79091	12363
PC_TOTAL	,1328	,22529	12363
TC_TOTAL	,1994	,26299	12363
CNAE_55_PC_Total	,0064	,04780	12363
CNAE_55_TC_Total	,0223	,09630	12363

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,831 ^a	,690	,690	3487,22240
2	,831 ^b	,691	,690	3483,02847

a. Predictors: (Constant), CNAE_55_Operating_revenue_turnover, Operating_revenue_turnover, NonCurrent_assets_th_EUR_2015, CNAE_55_NonCurrent_assets_th_EUR_2015

b. Predictors: (Constant), CNAE_55_Operating_revenue_turnover, Operating_revenue_turnover, NonCurrent_assets_th_EUR_2015, CNAE_55_NonCurrent_assets_th_EUR_2015, PC_TOTAL, CNAE_55_PC_Total, TC_TOTAL, CNAE_55_TC_Total

c. Dependent Variable: GVA_MAX_zero

Year 2015

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	309,107	31,581		9,788	,000
NonCurrent_assets_th_EUR_2015	,040	,002	,179	19,201	,000
Operating_revenue_turnover	,097	,002	,348	63,220	,000
CNAE_55_NonCurrent_assets_th_EUR_2015	,200	,003	,743	61,675	,000
CNAE_55_Operating_revenue_turnover	-,272	,009	-,292	-31,088	,000
2 (Constant)	255,238	40,980		6,228	,000
NonCurrent_assets_th_EUR_2015	,040	,002	,180	19,317	,000
Operating_revenue_turnover	,097	,002	,349	63,317	,000
CNAE_55_NonCurrent_assets_th_EUR_2015	,201	,003	,746	61,876	,000
CNAE_55_Operating_revenue_turnover	-,278	,009	-,298	-31,586	,000
PC_TOTAL	-123,794	154,270	-,004	-,802	,422
TC_TOTAL	170,571	133,130	,007	1,281	,200
CNAE_55_PC_Total	-988,665	783,632	-,008	-1,262	,207
CNAE_55_TC_Total	1957,725	400,257	,030	4,891	,000

a. Dependent Variable: GVA_MAX_zero

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