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SEASONALITY IN TOURISM: ECONOMIC, LABOR AND SOCIAL EFFECTS.

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ABSTRACT

Seasonality in tourism is a topic frequently analyzed in the literature, and is specifically important in sun and sand mature destinations like the Balearic Islands. The present work has analyzed the concept of seasonality in tourism and studied the different economic, social and labour effects.

The main economic effects studied are tourist arrivals, expenditure, hotel occupancy rate, index and rates of variation of prices of tourist, hotel occupancy rate in Balearics (high-Low season). The most important social effects identified are human pressure, seasonal rentals and public services impact. The effects of seasonality in tourism in the labor market analyzed are the high temporality rate present in the Balearic Islands, the rising unemployment during low season, the high use in the typologies of contracts of fixed-discontinuous contracts. In the present paper it is indicated how seasonality clearly affects the Balearic Islands in the effects that are studied.

La estacionalidad en el turismo es un tema analizado frecuentemente en la literatura, y es especialmente importante en destinos maduros de sol y playa como las Islas Baleares. El presente trabajo ha analizado el concepto de estacionalidad en el turismo y estudia los diferentes efectos económicos, sociales y laborales.

Los efectos económicos principales que se han estudiado son las llegadas, el gasto, el nivel de ocupación, el grado y el índice de precios de los turistas, la ocupación hotelera en los Baleares (temporada alta-baja). Los efectos sociales en el turismo más importantes identificados son la presión humana, los alquileres de temporada y el impacto de los servicios públicos. Los efectos de la estacionalidad en el turismo en el mercado laboral analizados son el alto grado de temporalidad presente en las Islas Baleares, el creciente desempleo en la temporada baja, el alto uso de tipologías de contratos fijos-discontinuos. En el presente trabajo queda constancia de cómo la estacionalidad afecta las Islas Baleares en los efectos estudiados.

1. INTRODUCTION

The present work corresponds to the End-of Degree Project for the Degree in Economics. The theme that has been chosen is "Seasonality in Tourism", because of its importance in tourism economies with a high seasonality in terms of consequences on economic activity, effects on the labour market and social effects. The present project focuses on the case of a sun and sand mature destination: the Balearic Islands, where there is the greatest contrast between high and low season of tourism activity.

A common definition of Tourist Seasonality is the one of Butler (2001) which states that "seasonality is the appearance of a temporal unbalance of the touristic activity of the destinations".

From the first studies of Bar-On (1975) with a vision on natural and institutional factors of seasonality, there are different perspectives to be observed. Some authors have considered that it is a problem that is not understood ¨"the phenomena of seasonality causes serious problems in the tourism sector caused by the instability and uncertainty made by the continuous change in touristic establishments ".Ramón and Abellán (1995); but other authors such as Highman and Hinch (2002) –recuperation ecological, social and cultural in low season-. Grant,Human and le pelly (1977) –maintenance of installations-and Mourdonxoutas (1988).-benefits of using seasonal contracts-.

The objective of this paper is first, to describe the concept and importance of seasonality in tourism in the literature and second, to analyze its economic, social and labour effects focusing on the case study of the Balearic Islands, a well-known sun and sand mature destination in the Mediterranean.

The structure of the paper is as follows: the first section has briefly introduced the topic of seasonality in tourism, as well as the importance in terms of social, economic and labor effects in the literature. The second section offers a deeper explanation of the concept of tourism seasonality and of the grouping effects implied in the seasonality. The third section summarizes the relevant literature that analyses the importance of seasonality in tourism and the impacts and economic and social effects as well as the effects on the labour market. The fourth section analyzes the seasonality in tourism in the Balearic Islands, a well-known resort destination. The fifth section describes the economic impacts of tourism seasonality in general and then, focuses on the specific case of the Balearic Islands using several information sources. The sixth section analyzes the effects on the labour market, identifying the consequences on the Balearic

labour market, in terms of employment, unemployment and the use of temporary contracts. The seventh section deals with the social effects of tourism seasonality, identifying the positive and negative effects. Finally, the conclusions and concluding remarks are discussed in the last section.

2. SEASONALITY IN TOURISM: CONCEPT AND GROUPING EFFECTS.

CONCEPT:

Hylleberg (1992) explains that: "Seasonality is the systematic, although not necessarily regular, intra-year movement caused by changes in the weather, the calendar, and timing of decisions, directly or indirectly through the production and consumption decisions made by the agents of the economy."

Butler (1994) explains seasonality as "a temporal imbalance in the phenomenon of tourism, which may be expressed in terms of dimensions of such elements as numbers of visitors, expenditure of visitors, traffic on highways and other forms of transportation, employment, and admissions to attractions."

Baron (1975), defines seasonality as " the effects occurring each year with more or less the same timing and magnitude. "

We will take these definitions in this Memory to define the effects of seasonality.

GROUPING EFFECTS:

We can identify several grouping effects implied in seasonality as we can observe in Figure 1. Mainly,

First Circle: Siting: Coast, City and Countryside // Environmental effects: Conservation and destruction (infrastructure and waste)

Second circle: Tourist Policy: Government and business positioning

Third circle: Economical effects: Growth of GDP

Fourth circle: Labor effects: Contrast of the labor market (high and low season)

Fifth circle: Social effects: Contrast of the interaction between residents and tourist, risk of saturation in the highs of tourism, loss of indigenous values, increase and knowledge of cultures, saturation of public services such as hospitals

Figure 1: Set of factors that determine seasonality. Grouping
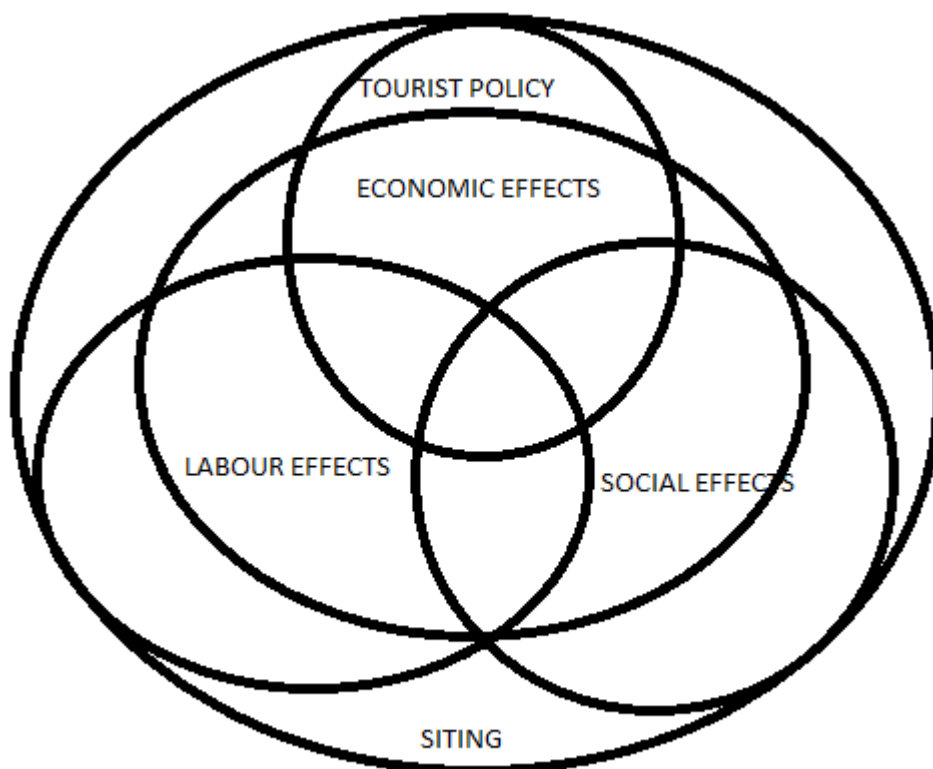
Source: Own elaboration.

3. LITERATURE REVIEW

The aim of this literature review of Seasonality in tourism is only to show some aspects such as:

The cause of seasonality
The negative and positive effects
The solutions and measurement

Causes of seasonality:

Different perspectives have been given from the first studies of Bar-On (1975) with a vision on natural factors and institutional factors of seasonality.

"Natural phenomena" Butler (1994) and "Different climatic patterns" Butler (2000), "Seasonality is the appearance of a temporal unbalance of the touristic activity of the destinations" Butler(2001)

Sports. Loy, McPherson Kenyon, (1989); Shaw and Williams (1998).

Institutional event. Religious, social…School holidays (BarOn, 1972; Butler,1994)

Negative and positive effects of seasonality:

The results of this have an uneven effect depending on the type of tourism and the specific environment; we can find authors that analize this situation: "Beach, sun and sex" of Karyopoli a& Koutra (2012), "Type of Tourist" of Spencer & Holecek (2007), "The origin of tourists" of Fernandez & Mayorga (2010).

Some authors find negative the instability and uncertainty made by the continuous change in touristic establishments "Ramón and Abellán "(1995);

Establishments hotels characteristics are important in the seasonality Capó, Riera & Rosselló (2006), Coastal areas need to close some or most of their establishments in the lower part of the season, Capó, Riera & Rosselló (2007).

Negative impact social (Muphy, 1985; Pearce, 1989); retain employees at a destination (Yacoumis, 1980); low annual returns or capital (Butler,1994) Temporalidad y estacionalidad en el trabajo (Alomar,L & Ribas,M.M. 2013).

But other authors such as positive– Social and ecological recovery (Butler, 2000).Recuperation ecological, social and cultural in low season Highman and Hinch (2002); Time for preparing hotels and installations (Butley 2000). Cultural Tourism in Mallorca (Arrom Munar, J.M.(2010)

The solutions and measurement:

Maintenance of installations -. Grant,Human and le pelly (1977) and Benefits of using seasonal contracts-. Mourdonxoutas (1988).-

The obvious aspiration would be to EXTEND IN BOTH DIRECTIONS the season. All this is reached by looking for a quality service as well as a good use of the winter season that is used for refurbishments of the installations and also the necessary rest of workers (Vargas, Porras & Plaza 2014).

The measurement of tourism preference is the Gini coefficient,(Wanhill,1980) and (Lundtorp 2001) Lorenz curve and regressions analysis.(Yacoumis, 1980).

In the posterior appendix, we will see some measures to evaluate seasonality.

4. SEASONALITY IN TOURISM IN BALEARIC ISLANDS

The tourism industry has a fundamental importance in the economy of the Balearic Islands due to the many tourist-related businesses and the amount of jobs that it creates. It accounts for 44.8% of GDP and 32% of employment (Exceltur, 2015).

Mallorca is one of the main destinations at the national level and one of the main European destinations for sun and beach tourism.

According to the Mallorca Hostelry Association (FEHM, 2016) *"the hoteliers need to make their establishments charming, creating new products or adapting existing ones to meet the needs of such sector as cycle touring, golf wellness and gastronomy".* Hence, in order to reduce seasonality hoteliers should work hard at creating competitive products to promote the islands during the winter months*.*

In general this industry has been growing in the past years, but this growth isn´t the same if we look at the monthly increase. Some of the past records of tourism that came in summer have been followed by the quietist winters.

In Mallorca, this affects essentially the resort hotels, as the rural tourism and the urban tourism (for example boutique hotels) have a lower level of seasonality.

November to March are quiet months in Mallorca and the following analysis intends to find the points where we can act and find a turning point to make tourism in Mallorca also efficiently exploited in the winter months.

Economic activity in the Balearic Islands is heavily concentrated during the summer months. The existing structures of hotels, apartments, residences… ,the international airport of Palma de Mallorca connected internationally with over 170 countries, the knowhow of all the tourist related jobs, the infrastructure of the towns and cities – hospitals, public services- exist, and there is no doubt that they function marvelously during the summer months.

The important question for reducing tourism seasonality is

How can we market our very positive assets during the rest of the year?

In fact, as we have seen in our literature review, seasonality can be an important problem regarding mature tourist destinations. That is the reason why in the past years policy makers in the Balearics have underlined the need to implement long term consolidation strategies with the object of reducing seasonality or in other words to balance out the tourist flow through the year have a clear intention to reduce the negative impact on social and environmental sustainability.

The impact of tourism in issues such as noise, water demand, impact on local natural species, pollution … are very actual issues that must be confronted with long term policies in the best way possible to permit the growth of tourism industry together with a respectful understanding of parallel matters that are also very important.

Actually, tourism is at a historical moment. Data referred to the year 2016 give a total number of Spanish and foreign tourist of 15.395.718. This number means an increase of 10. 8 % in the total number of tourist received compared to 2015. Furthermore, even if we take into account the many possible social, economic impacts … (Brexit…) the forecast for 2017 is excellent.

The increase of national tourists has been of 5.1% and the increase of international tourists has been of 11.9%, among these tourists German tourists have increased by 29.8% and British have increased by 24%. Mallorca has received a total of 71% of the total tourism to the Balearic Islands.

5. ANALYSIS OF THE ECONOMIC EFFECTS

The *Instituto Nacional de Estadística* (INE, 2017) gives us a very promising quantity of 79.5% hotel beds available in the Balearics, which have been sold, occupying the first position. More than a 45% of the GDP of the Balearic Islands is related the touristic activity (Exceltur, 2015), so in this case the influence of seasonality in tourism is very important.

5.1. GENERAL EFFECTS OF TOURISM IN THE ECONOMY ACCORDING TO WTO (OMT)

In general, there are three types of economic effects according to the World Tourism Organization (WTO-OMT) that affect the tourist sector: Global effects; partial and external effects.

- Global effects:

They affect the economic policy (governmental policies) and the external dependency (geopolitics, exchange rates…). The global effects require considerations of the external conditions that have influenced positively the increase of tourists. We will underline as important the fact of important tourist destinations that were in direct competition with our market and that have been annulled: Tunisia, Turkey, Egypt… The instable situation in these countries has favored the increase of the tourism to Spanish, and consequently to the Balearic Islands.

These factors have meant such an increase that the strategies of governments policies have been pressured; we are beginning to sea in the media words such as "saturation", "sustainability"… that are starting to be the guide towards limiting regulations regarding the influx of tourists: limitations towards hotels, regulations regarding vacational rentals…that have also a clear consequence on certain types of investors.

- Partial effects:

These effects fall upon the economic agents, the productive sectors, financial variables, macroeconomics… that produce consequences on production, jobs, balance of payments, exchange rate, money supply, public income and public expenditure, inflation, land speculation, distribution of income, regional development and demographic movement.

- External effects:

These would include the social/cultural effects such as environment, professional, consumption.

5.2.   EFFECTS OF SEASONALITY IN BALEARIC ISLANDS

This section will focus on the analysis of the importance of seasonality of tourism, focusing on the economic effects in Mallorca. Hence, we are going to use several information sources from different surveys carried out by the *Instituto de Estudios Turísticos* (ITE-TourEspaña) such as FRONTUR, EGATUR and other information sources found in INE ad IBESTAT. Specifically in Mallorca we are going to use the following variables to carry out the analysis: 1) Hotel Occupancy Rates, 2) Open establishments estimated in Mallorca, 3) Index and rates of variation of prices of tourist apartments by period and rate, 4) Tourist Arrivals, 5) Human Pressure Index (IHP), 6) Total expenditure, 7) Average daily expenditure per person, 8) Average tourist stay (days), 9) Average daily income per room available (RevPar), 10) Average daily rate (ADR), 11) Hotel price index, and, 12) Consumer price index.

Table 1 gathers the information on the hotel occupancy rate in the Balearic Islands in 2016-2017. We can observe in Table 1 or Figure 2 the contrast in the hotel occupancy rate between low season and high season, for example between January where the occupancy rate is 38.56% and August where the occupancy rate is almost 100% (92.69%).

The decrease pf the *Hotel Occupancy Rates* is higher in Menorca and Eivissa than in Mallorca, as shown in the following table, this produces the closure and dismissal of workers in the lower part of the season. For example, in Menorca there is a decrease in August to March of 90,39 to 38,86, meantime in Mallorca it is only of 92,69 to 55,17.

The rest of this study is based on general numbers of the Balearic Islands as a whole, but in some instances we will refer specifically to Mallorca as it is the main island.

Table 1: Hotel Occupancy Rates in the Balearic Islands

	BALEARIC ISLANDS	Mallorca	Menorca	Eivissa-Formentera
	TOTAL	TOTAL	TOTAL	TOTAL
2017M03	55,17	56,3	38,86	45,66
2017M02	46,6	48,41	...	34,22
2017M01	37,94	40,74	...	22,23
2016_Total	79,36	79,68	74,3	80,48
2016M12	38,65	42	...	20,76
2016M11	50,73	55,68	...	29,22
2016M10	65,53	67,3	46,35	66,49
2016M09	85,94	86,35	79,23	87,58
2016M08	92,69	92,97	90,39	92,72
2016M07	91,35	92,09	88,07	90
2016M06	86,58	87,56	84,53	83,51
2016M05	70,41	72,26	62,74	66,24
2016M04	67,02	67,95	55,34	55,33
2016M03	58,15	58,49	59,04	48,45
2016M02	50,03	52,28	31,4	31,17
2016M01	38,56	41,33	...	...

Source: IBESTAT (2017).

Figure 2: Hotel occupancy rate in the Balearics (2016-2017)
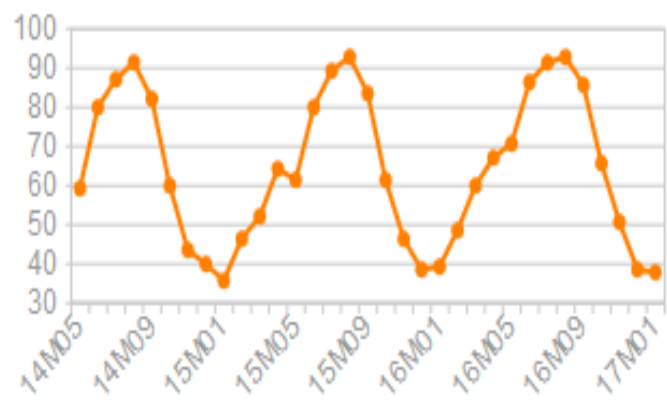
Source: IBESTAT

This situation of low hotel occupancy rates during some months of the year has effects on the level of employment and unemployment in the sector, something that will be analyzed on section 5. Figure 2 leads us to observe a clearly high seasonality in hotel occupancy.

Table 2: Number of hotel establishments open (estimation) in Mallorca.

Number of hotel establishments open in Mallorca (estimation)	
2017M01	102
2016M12	109
2016M11	133
2016M10	767
2016M09	911
2016M08	899
2016M07	877
2016M06	891
2016M05	824
2016M04	441
2016M03	262
2016M02	151
2016M01	83

Source: IBESTAT (2017)

When we analyze the evolution in the number of hotel establishments open in Mallorca, Table 2, the number of establishments that were opened throughout the year, clearly gives us an idea of the effects of seasonality on the economy. We can see an incredible difference of establishments that were opened during the high season in comparison with those that opened during the low season. For instance, between January and September there are ten times more.

Because of the reduction in overnight stays and expenditure, the establishments choose to reduce their employees in the best of the situations; and to close the establishments in the more extreme situations with the obvious negative effect on the economy.

The effect of seasonality is also observed in the evolution of rental prices of apartments (Table 3).

Table 3: Index and rates of variation of prices of tourist apartments

Index and rates of variation of prices of tourist apartments.			
	INDEX	monthly variation (%)	Interanual variation (%)
2017M01	138,4	32,17	13,14
2016M12	104,7	-26,58	3,77
2016M11	142,6	4,03	4,56
2016M10	137,1	-15,87	3,79
2016M09	163	-25,79	10,26
2016M08	219,6	1,82	4,63
2016M07	215,7	32,01	6,36
2016M06	163,4	11,98	1,17
2016M05	145,9	-5,15	11,78

Source: Own elaboration based on data from IBESTAT (2017)

The rental prices of apartments also increase during high season. We observe that as from June, there is a great increase comparing with the previous month, more concretely rental prices increased by 11.98%. And if this was not enough, the following month the increase was of 32.01%. However, during low season, prices decreased, for example, by 15.87% in October compared to September and by 25.70% in September compared to August.

Compared to the previous year, all the prices have increased. It is important to underlined the great increase of the months of May 11.78%, September 10.26%, January 13.4%.

The demand of seasonal rentals is expected to grow in the Balearic Islands by 40% in 2017, based on data of the "Asociación de Apartamentos Turísticos de Baleares" (APTUR). The proof of the incidence in the economy is the recent publication in periodic "Diario de Mallorca" Guijarro,F (2017), that

underlines that the seasonal rentals in the centre of the CITY , that is becoming an important problem for the residents of the Island that intend to rent properties.

Recently we have known the intention of authorities in Palma de Mallorca to ban any seasonal rentals within the town of Palma.

The analysis of the evolution in tourist arrivals (Table 4) also shows the different figure between high and low season

Passengers arrived by air transportation to Balearic Islands the past year were 36.848.655

Table 4: Tourist Arrivals 2016-2017 (High-Low season)

		MONTHLY DATA	ANNUAL VARIATION RATE	ACUMULATED/ YEAR	ACUMULATED RATE OF CHANGE
2017M03	TOTAL (1+2)	483.034	-13,02	941.543	-7,07
	1. SPANISH	157.772	-3,44	346.442	-2,17
	2. FOREIGN	325.263	-17,01	595.101	-9,7
2017M02	TOTAL (1+2)	254.985	-2,23	458.508	0,15
	1. SPANISH	92.234	-4	188.670	-1,08
	2. FOREIGN	162.751	-1,2	269.838	1,02
2017M01	TOTAL (1+2)	203.523	3,3	203.523	3,3
	1. SPANISH	96.436	1,89	96.436	1,89
	2. FOREIGN	107.087	4,6	107.087	4,6
2016M12	TOTAL (1+2)	174.908	8,63	15.372.128	10,54
	1. SPANISH	73.627	13,09	2.378.806	5,02
	2. FOREIGN	101.282	5,6	12.993.323	11,62
2016M11	TOTAL (1+2)	243.131	16,26	15.197.220	10,56
	1. SPANISH	90.569	8,42	2.305.179	4,78
	2. FOREIGN	152.563	21,47	12.892.041	11,67
2016M10	TOTAL (1+2)	1.366.325	23,76	14.954.088	10,48
	1. SPANISH	124.010	10,52	2.214.610	4,64
	2. FOREIGN	1.242.315	25,25	12.739.478	11,56
2016M09	TOTAL (1+2)	2.137.380	11,38	13.587.764	9,3
	1. SPANISH	276.142	17,1	2.090.600	4,31
	2. FOREIGN	1.861.238	10,58	11.497.164	10,26
2016M08	TOTAL (1+2)	2.738.162	3,98	11.450.383	8,92
	1. SPANISH	444.748	1,81	1.814.458	2,6
	2. FOREIGN	2.293.414	4,42	9.635.925	10,19
2016M07	TOTAL (1+2)	2.755.321	10,88	8.712.221	10,57

	1. SPANISH	396.043	8,62	1.369.710	2,86
	2. FOREIGN	2.359.277	11,27	7.342.512	12,13
2016M06	TOTAL (1+2)	2.221.605	10,29	5.956.901	10,42
	1. SPANISH	277.529	3,4	973.666	0,69
	2. FOREIGN	1.944.076	11,35	4.983.234	12,55
2016M05	TOTAL (1+2)	1.772.070	6,11	3.735.296	10,5
	1. SPANISH	160.897	-15,15	696.137	-0,35
	2. FOREIGN	1.611.174	8,83	3.039.159	13,32
2016M04	TOTAL (1+2)	950.067	7,34	1.963.226	14,79
	1. SPANISH	181.119	-2,19	535.241	5,17
	2. FOREIGN	768.948	9,86	1.427.985	18,86
2016M03	TOTAL (1+2)	555.319	33,11	1.013.159	22,77
	1. SPANISH	163.397	13,71	354.122	9,38
	2. FOREIGN	391.922	43,3	659.037	31,41
2016M02	TOTAL (1+2)	260.815	28,32	457.840	12,2
	1. SPANISH	96.079	17,81	190.725	5,92
	2. FOREIGN	164.735	35,36	267.115	17,16
2016M01	TOTAL (1+2)	197.025	-3,8	197.025	-3,8
	1. SPANISH	94.646	-3,93	94.646	-3,93
	2. FOREIGN	102.379	-3,68	102.379	-3,68

Source: Own elaboration based on IBESTAT (2017).

We can observe how there is a clear presence of seasonality. For example, if we take a month of the low season like January of 2016 (197.025 tourists) and a month of the high season like August of 2016 (2.738.162 tourists) there is an increase of 1.389, 75%.

Table 5: Comparison of tourist arrivals in low season 2014/2015 and 2015/2016 in the Balearic Islands

Tourist Arrivals (number of tourists)			
LOW SEASON	Spanish	Foreign	Total
2014-2015	334208	463671	797877
2015-2016	324585	449707	774292

Source: Own elaboration based on data from FRONTUR (INE).

When focusing on the low season (November to February), we can observe a decrease from 797877 to 774292 of tourist arrivals, this means a 2.95% decrease in low season from 2014/2015 to 2015/2016. This is a clear indicator that there is a lot to improve… If we observe month to month we see

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that in February there were 261.841 arrivals, a 26.43% more than the same period of the previous year, but the rest of the months have been worse.

There has been a similar decrease in the national tourist as in the foreign tourists that come to visit us during low season (Table 5). As we can see in Table 5, in low season of 2015/2016; 449707 international tourists arrived, this means a 3.01% less than the previous year, while the reduction of the national tourist was of 2.87%.

The seasonality of tourism activity can also be analyzed through the index of human pressure (IHP) in the Balearic Islands (Table 6).

Table 6: IHP in the Balearics and Mallorca 2016-2017

	BALEARIC ISLANDS		Mallorca	
	ACCUMULATED	MEAN	ACCUMULATED	MEAN
2017M02 A	33.125.438	1.183.051	…	…
2017M01 A	35.500.951	1.145.192	…	…
2016M12 P	34.985.134	1.128.553	27.345.566	882.115
2016M11 P	35.342.917	1.178.097	27.531.692	917.723
2016M10 P	46.676.300	1.505.687	35.947.624	1.159.601
2016M09 P	52.033.364	1.734.445	38.379.143	1.279.305
2016M08 P	61.612.851	1.987.511	43.973.039	1.418.485
2016M07 P	59.625.418	1.923.401	43.130.086	1.391.293
2016M06 P	52.485.733	1.749.524	38.624.459	1.287.482
2016M05 P	48.898.053	1.577.357	36.981.196	1.192.942
2016M04 P	40.593.548	1.353.118	31.623.359	1.054.112
2016M03 P	38.753.283	1.250.106	30.242.582	975.567
2016M02 P	33.990.910	1.172.100	26.442.037	911.794
2016M01 P	35.176.069	1.134.712	27.402.291	883.945

Source: Own elaboration based on IBESTAT (2017).

In Table 6 we can see clearly the difference in terms of human pressure in the Islands between the low season and the high season. The IPH reaches its highest values during the high season (June-September).

An important point of human pressure is found in the cruises that visit the island on Tuesdays and Thursdays of the summer months; 8000 tourists come off the ships per day. This means an increase of income for businesses in the city, and also a saturation of the more touristic areas during high season

The analysis of the total expenditure made by tourists (Table 7) also shows a large contrast between expenditure in high season and low season. Even so, it is significant the increase of expenditure of the last quarter of the year.

Table 7: Total expenditure in Balearics Islands

Total expenditure(M. of Euros)					
	November	December	January	February	Total
2014-2015	124	92	101	113	430
2015-2016	110	82	92	170	454

Source: Own elaborated from data from EGATUR (IBESTAT, INE, 2017).

The expenditure of the season 2015/2016 went up a 5% during the low season, comparing to the previous year; as the tendency is to prolong the high season, there is a clear intent to refurbish hotels to better the grade and give a wider offer towards cultural and sport related tourism.

Table 8: Daily average expenditure per person in Balearics Islands

Average total expenditure per person					
	November	December	January	February	Mean
2014-2015	890	965	949	915	930,75
2015-2016	1057	981	941	1032	1002,75

Source: Own elaboration from data of EGATUR (IBESTAT, INE).

The daily expenditure per person in the Balearics has also increased from 99.625 Euros to 113 Euros per day on average during the low season, with a great increase during the month of February.

Once the lower season has been analyzed of the years 2014-2015 and 2015-2016, the following graphic analyzes the high season and the low season from 2016 until February 2017.

In 2016 if we analyze for example the expenditure per person/day from January in the Balearic Islands, we can see that the expenditure per person is of 80.2 Euros and specifically in Mallorca of 83.58 Euros. In July the

expenditure is of 141.92 Euros in Balearic Islands and specifically in Mallorca of 138.95 Euros daily. This underlines the lower power of purchase of in the lower season of the tourists, which is a main factor of consideration in maintaining open certain business of limited profitability. This is a clear example of the incidence of seasonality.

TABLE 9: Total expenditure, expenditure per person, expenditure per person/day in Balearic Islands and Mallorca

		MONTHLY DATA	ANNUAL VARIATION RATE	ACCUMULATED/ YEAR	ACCUMULATED RATE OF CHANGE
2017 M02	**BALEARIC ISLANDS**				
	TOTAL EXPENDITURE	193,18	-7,81	349,55	1,66
	EXPENDITURE PER PERSON	757,62	-5,34	762,36	0,1
	EXPENDITURE PER PERSON/DAY	114,58	2,69	107,93	11,51
	Mallorca				
	TOTAL EXPENDITURE	172,43	-3,57	304,89	4,51
	EXPENDITURE PER PERSON	773,48	-5,94	787,75	-0,7
	EXPENDITURE PER PERSON/DAY	120,19	2,97	114,63	13,27
2017 M01	**BALEARIC ISLANDS**				
	TOTAL EXPENDITURE	156,37	16,46	156,37	16,46
	EXPENDITURE PER PERSON	768,3	8,49	768,3	8,49
	EXPENDITURE PER PERSON/DAY	100,72	25,59	100,72	25,59
	Mallorca				
	TOTAL EXPENDITURE	132,46	17,32	132,46	17,32
	EXPENDITURE PER PERSON	807,14	7,44	807,14	7,44
	EXPENDITURE PER PERSON/DAY	108,11	29,35	108,11	29,35
2016 M12	**BALEARIC ISLANDS**				
	TOTAL EXPENDITURE	153,49	16,16	14.545,21	10,73
	EXPENDITURE PER PERSON	877,53	6,94	944,76	-0,07
	EXPENDITURE PER PERSON/DAY	95,94	7,38	127,97	5,54
	Mallorca				

	TOTAL EXPENDITURE	127,94	12,84	10.599,61	10,4
	EXPENDITURE PER PERSON	909,78	6,6	970,32	0,73
	EXPENDITURE PER PERSON/DAY	100,06	8,53	127,87	5,59
2016 M11	**BALEARIC ISLANDS**				
	TOTAL EXPENDITURE	200,65	18,98	14.391,72	10,67
	EXPENDITURE PER PERSON	825,29	2,34	945,53	-0,15
	EXPENDITURE PER PERSON/DAY	113,52	23,85	128,43	5,54
	Mallorca				
	TOTAL EXPENDITURE	164,62	8,98	10.471,68	10,37
	EXPENDITURE PER PERSON	818,52	-5,18	971,11	0,66
	EXPENDITURE PER PERSON/DAY	121,13	29,15	128,3	5,55
2016 M10	**BALEARIC ISLANDS**				
	TOTAL EXPENDITURE	1.299,41	29,93	14.191,07	10,56
	EXPENDITURE PER PERSON	951,02	4,98	947,48	-0,17
	EXPENDITURE PER PERSON/DAY	117,91	5,17	128,67	5,28
	Mallorca				
	TOTAL EXPENDITURE	1.026,44	28,2	10.307,06	10,39
	EXPENDITURE PER PERSON	975,1	5,09	974,01	0,77
	EXPENDITURE PER PERSON/DAY	119,43	4,94	128,42	5,14
2016 M09	**BALEARIC ISLANDS**				
	TOTAL EXPENDITURE	2.031,25	10,93	12.891,66	8,93
	EXPENDITURE PER PERSON	950,34	-0,41	947,13	-0,61
	EXPENDITURE PER PERSON/DAY	127,97	6,7	129,86	5,45
	Mallorca				
	TOTAL EXPENDITURE	1.394,20	7,95	9.280,62	8,72
	EXPENDITURE PER PERSON	962,11	-1,31	973,89	0,36
	EXPENDITURE PER PERSON/DAY	125,84	5,42	129,5	5,3
2016 M08	**BALEARIC ISLANDS**				
	TOTAL EXPENDITURE	2.849,00	4	10.860,41	8,56
	EXPENDITURE PER	1.040,48	0,02	946,53	-0,65

	PERSON				
	EXPENDITURE PER PERSON/DAY	127,65	1,23	130,22	5,22
	Mallorca				
	TOTAL EXPENDITURE	1.921,05	2,03	7.886,42	8,86
	EXPENDITURE PER PERSON	1.081,25	0,97	976	0,66
	EXPENDITURE PER PERSON/DAY	128,93	3,59	130,17	5,27
2016 M07	**BALEARIC ISLANDS**				
	TOTAL EXPENDITURE	2.866,67	8,01	8.011,42	10,28
	EXPENDITURE PER PERSON	1.040,41	-2,59	917,08	-0,69
	EXPENDITURE PER PERSON/DAY	141,92	7,92	131,16	6,72
	Mallorca				
	TOTAL EXPENDITURE	1.963,25	8,14	5.965,37	11,26
	EXPENDITURE PER PERSON	1.068,65	-1,28	946,34	0,84
	EXPENDITURE PER PERSON/DAY	138,95	4,87	130,58	5,84
2016 M06	**BALEARIC ISLANDS**				
	TOTAL EXPENDITURE	2.024,68	11,47	5.144,75	11,59
	EXPENDITURE PER PERSON	911,36	1,07	860,26	0,42
	EXPENDITURE PER PERSON/DAY	130,89	4,6	125,84	6,24
	Mallorca				
	TOTAL EXPENDITURE	1.467,50	13,09	4.002,12	12,85
	EXPENDITURE PER PERSON	956,18	3,18	896,02	1,98
	EXPENDITURE PER PERSON/DAY	130,53	3,75	126,83	6,43
2016 M05	**BALEARIC ISLANDS**				
	TOTAL EXPENDITURE	1.544,77	10,24	3.120,07	11,66
	EXPENDITURE PER PERSON	871,73	3,89	830,05	0,05
	EXPENDITURE PER PERSON/DAY	136,19	2,95	122,77	7,25
	Mallorca				
	TOTAL EXPENDITURE	1.176,79	10,41	2.534,62	12,72
	EXPENDITURE PER PERSON	909,69	6,29	864,53	1,35
	EXPENDITURE PER PERSON/DAY	136,49	0,7	124,78	7,9

2016 M04	BALEARIC ISLANDS				
	TOTAL EXPENDITURE	760,88	2,08	1.575,29	13,1
	EXPENDITURE PER PERSON	800,87	-4,9	792,87	-3,35
	EXPENDITURE PER PERSON/DAY	117,84	5,16	111,95	11,06
	Mallorca				
	TOTAL EXPENDITURE	657,16	4,82	1.357,83	14,8
	EXPENDITURE PER PERSON	842,15	-3,06	828,88	-2,54
	EXPENDITURE PER PERSON/DAY	121,7	6,97	116,14	13,72
2016 M03	BALEARIC ISLANDS				
	TOTAL EXPENDITURE	470,59	35,42	814,41	25,78
	EXPENDITURE PER PERSON	803,99	-1,08	785,54	-1,4
	EXPENDITURE PER PERSON/DAY	115,84	16,01	106,95	18,37
	Mallorca				
	TOTAL EXPENDITURE	408,95	36,4	700,67	26,06
	EXPENDITURE PER PERSON	834,46	-0,47	816,8	-1,7
	EXPENDITURE PER PERSON/DAY	119,97	17,76	111,37	21,63
2016 M02	BALEARIC ISLANDS				
	TOTAL EXPENDITURE	209,56	31,71	343,83	14,61
	EXPENDITURE PER PERSON	800,32	-0,28	761,62	-2,2
	EXPENDITURE PER PERSON/DAY	111,58	20,95	96,79	18,93
	Mallorca				
	TOTAL EXPENDITURE	178,81	31,94	291,72	13,94
	EXPENDITURE PER PERSON	822,34	-2,17	793,27	-3,53
	EXPENDITURE PER PERSON/DAY	116,73	26,23	101,2	23,62
2016 M01	BALEARIC ISLANDS				
	TOTAL EXPENDITURE	134,27	-4,7	134,27	-4,7
	EXPENDITURE PER PERSON	708,18	-6,02	708,18	-6,02
	EXPENDITURE PER PERSON/DAY	80,2	11,65	80,2	11,65
	Mallorca				
	TOTAL EXPENDITURE	112,91	-6,3	112,91	-6,3

EXPENDITURE PER PERSON	751,22	-6,41	751,22	-6,41
EXPENDITURE PER PERSON/DAY	83,58	15,29	83,58	15,29

Source: Own elaboration based on IBESTAT (2017).

Table 10: Average tourist stay in Balearic Islands during low season 2014-2016

	November	December	January	February	Mean
2014-2015	3,98	3,58	3,95	4,73	4,06
2015-2016	3,76	3,56	3,99	4,31	3,91

Source: Own elaboration based on data from EGATUR (IBESTAT and INE, 2017)

The average tourist stay in the Balearics was 4.06 days during the low season of 2014/2015 and of 3.91 days in the previous year. The analysis by months strangely gives us that in February there was a decrease in the tourist stay from 4.73 days in 2014-2015 to 4.31 days in 2015-2016.

Table 11: Average tourist stay in Balearic Islands and Mallorca 2016-2017

	BALEARIC ISLANDS	Mallorca
	TOTAL	TOTAL
2017M03	4,89	5,07
2017M02	4,29	4,5
2017M01	3,98	4,29
2016_Total	6,04	6,26
2016M12	3,35	3,5
2016M11	4,11	4,46
2016M10	6,41	6,48
2016M09	6,21	6,46
2016M08	6,46	6,85
2016M07	6,23	6,58

2016M06	6,2	6,5
2016M05	5,6	5,75
2016M04	5,36	5,49
2016M03	5,11	5,2
2016M02	4,4	4,59
2016M01	4,06	4,34

Having analyzed the low season of the said years, if we go to the years 2016-2017 and compare the low season with the high season in the Balearic Islands and in Mallorca, we can observe that the tourists stay more days in the high season. Once again we observe an effect of seasonality.

All this seasonality is also noticeable in terms of the economic profitability of hotels and the change of prices. As we observe in the following table:

Table 12: Average daily income per room available (RevPar , over for month) during the low season

Average daily income per room available (RevPar ,over for month)		
	Balearics	Mallorca
2014-2015	30,48	33,23
2015-2016	33,55	36,83

Source: Own elaboration from IBESTAT (2017).

The RevPar is a metric performance of the hotel industry that is calculated multiplying the ADR by the occupancy rate. It also can be calculated by the division of the hotel´s total room revenue and the total of available rooms.

This measure is used to obtain the financial profitability of the hotels. There has been an increase of 30.48 to a 33.55, therefore RevPar increased by 10.7.

Furthermore, the analysis of the average daily rate per room (ADR) (Table 13) indicates an increase from 65.50 Euros to 68.83 Euros, i.e., a 5.08% increase.

Table 13: Average daily rate in the Balearics Islands and Mallorca (ADR) during the low season in Euros

Average daily rate in the Balearics Islands and Mallorca in Euros(ADR) during the low season in Euros		
	Balearics	Mallorca
2014-2015	65,5	67,88
2015-2016	68,83	69,2

Source: Own elaboration based on data from IBESTAT and INE (2017)

ADR is the average sale Price per room.

When we analyze the evolution of the hotel price index in the Balearics (Table 14), we can know the evolution of prices received by the hoteliers considering all their clients.

The Hotel Price Index, allows us to know the evolution of the prices received by the hotel entrepreneurs taking in account all their clients (private clients, companies, tour-operators, travelling agencies). This indicator gives us a clear rise of prices due to seasonality.

Table 14: Hotel price index in the Balearic Islands 2016-2017

HOTEL PRICE INDEX		
	INDEX	MONTHLY VARIATION (%)
2017M02	100,5	-12,28
2017M01	114,5	-10,38
2016M12	127,8	16,7
2016M11	109,5	-0,15
2016M10	109,7	-11,26
2016M09	123,6	-6,26
2016M08	131,9	0,22
2016M07	131,6	8,93
2016M06	120,8	3,04
2016M05	117,2	9,6
2016M04	107	4,46
2016M03	102,4	3,29
2016M02	101,1	-2,8
2016M01	104	-6,8

Source: Own elaboration based on data from IBESTAT (2017).

The analysis of the evolution of the consumer price index (Figure 3) gives information on how seasonality affects the evolution of prices in the Balearic Islands.

Figure 3: Consumer price index in the Balearic Islands
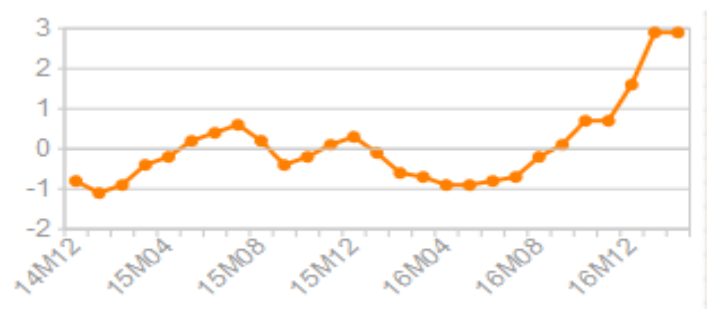
Source: IBESTAT (2017).

The CONSUMER PRICE INDEX measures the level of prices and consumer services, paid by the Spanish residents.

We observe in Figure 3 that during the high season the prices go up because of the increase of demand, due to the increase in exports (due to increase in demand of hotel services etc. made by tourists), Hence, a consequence of seasonality is an increase in prices in the Balearics for the residents.

Finally, **the conclusion** of the economic consequences of seasonality is that, after the analysis of several variables, seasonality has effects in terms of rising of prices, or increase in human pressure during the peak season, among other effects. More than 875.000 tourists travelled to the Balearic Islands, more specifically to Mallorca 728.773 arrived between November 2016 and February 2017; a rise of 6% in the case of Mallorca. This has given an increase in the expenditure of 9.17% that in total is 703 millions.

When policy makers in Mallorca focus on tourism products that help to deseasonalize tourism activity, such as urban tourism, rural tourism, MICE tourism, or sport tourism, the economic impacts will be reduced and the unemployment will decrease less during low season.

6. ANALYSIS OF THE EFFECTS ON THE LABOUR MARKET

SEASONALITY ends up affecting the labor market in aspects such as: Increasing use of temporary contracts, unstable labour relations, negative influence on human investments on behalf of the employers, high staff turnover, difficulty in professionalization, …

The Balearic economy is characterized by the weight of the sector of services, if we confront it with industry, construction… Tourism in the Balearics accounts for 44.8% of GDP and 32% of employment (Exceltur, 2015).

In general the motor of the Balearic economy (tourism) has also caused a clear seasonality in tourism activity and it has consequences on the type of labour contracts used, with clear differences between high season and low season.

It has been proven that there has always been the same cycle of affiliation and dismissal of workers, essentially the number of contracts increase around Easter and decrease during the last quarter of the year.

The economic crisis led to employment reaching its lower position in 2013 with an unemployment rate that was over 28%, in comparison with rates under a 7% in the years previous to the crisis.

The labour reform implemented by the Spanish Government guarantees the high compensations of long term contracts in the case of dismissal, still maintains the support for the temporary contracts and discontinuous permanent workers.

With the economic recovery, the increase in tourism arrivals led to an unemployment level of 17%, in annual terms, with the obvious highs and lows depending on seasonality. One of the most important effects of the increase in tourist arrivals that started in 2013 is if the increase will be noticed on the employment level.

Even though Mallorca has a constant tourism in comparison with the rest of Islands, in low season there is a reduced demand and consequently a scarcer offer as we see in the following graphics, the effect of seasonality on the work market is clear:

6.1. EMPLOYMENT

Table 15: Active population of the tourism sector 2015 - 2016

	Active	**Distribution**
2016_annual	**168,3**	**27,31**
2016T4	**156**	**26,29**
2016T3	**193,4**	**30,19**
2016T2	**172,9**	**27,48**
2016T1	**150,9**	**25,08**
2015_annual	**162,5**	**26,36**
2015T4	**160**	**26,48**
2015T3	**184,1**	**28,55**
2015T2	**173**	**27,49**
2015T1	**132,7**	**22,63**

Source: Own elaboration based on data from IBESTAT (2017).

FIGURE4: The 8 quarters of active population of 2015 and 2016
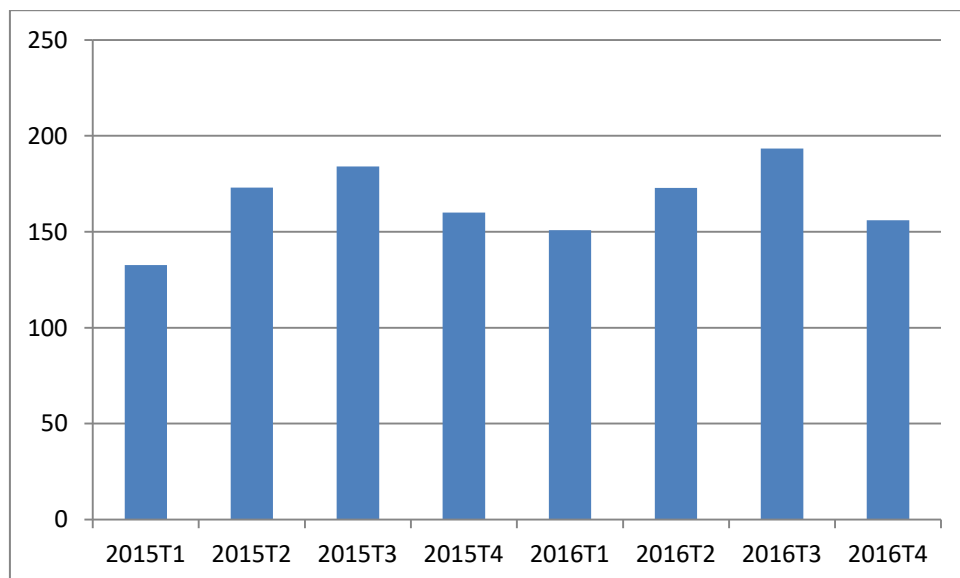
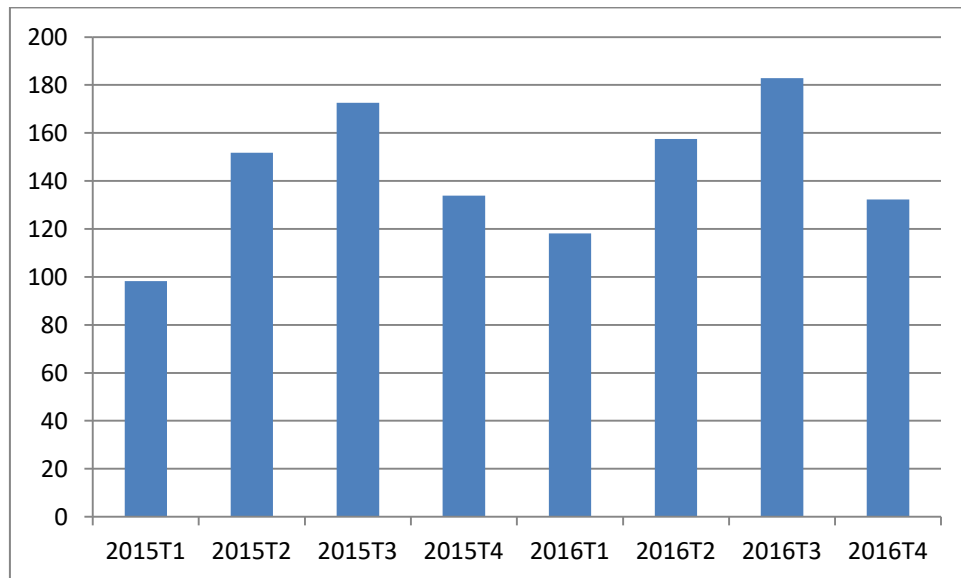Source: Own elaboration based on data from IBESTAT (2017).

In the table and in the figure we observe that in the quarters 2nd and 3rd, the percentage of active population (employed and unemployed) increases. This is due in part, to economical activity during the high season that attracts worker from out of the Balearic Islands. This is another effect of seasonality.

TABLE 16: Employed persons of the Tourist Sector 2015 and 2016

	Employed	Distribution
2016_annual	**147,6**	**27,83**
2016T4	**132,3**	**25,85**
2016T3	**182,8**	**31,92**
2016T2	**157,5**	**28,79**
2016T1	**118,1**	**24,04**
2015_annual	**139,1**	**27,3**
2015T4	**133,9**	**26,7**
2015T3	**172,6**	**31,08**
2015T2	**151,8**	**28,88**
2015T1	**98,2**	**21,54**

Source: Own elaboration based on data from IBESTAT (2017).

FIGURE 5: The 8 quarters of 2015 and 2016 of employed people

Source: Own elaboration based on data from IBESTAT (2017).

In both the table and the figure, we observe that the quarters that correspond to the high season (2 and 3) are those that more workers are employed. This is also another effect of seasonality that we can observe clearly in the graphic.

6.2. UNEMPLOYMENT

Table 17: Unemployed 2015 and 2016

	UNEMPLOYED
2016_annual	**20,7**
2016T4	**23,8**
2016T3	**10,6**
2016T2	**15,4**
2016T1	**32,9**
2015_annual	**23,4**
2015T4	**26,2**

2015T3	**11,5**
2015T2	**21,2**
2015T1	**34,5**

We can see how the greater percentage of unemployed is produced in the quarters 1 and 4 (low season) in both years.

The high seasonality of tourism activity generates a situation of a highly seasonal unemployment in the Balearics as we can observe in Figure 6:

**Figure 6: Unemployment rate in the Balearic Islands**
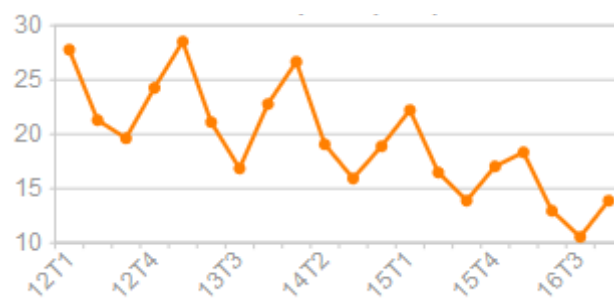
Source: IBESTAT (2017).

We observe how the unemployment rates rises in the low season and decreases in the high season.

The same result is obtained if we observe the evolution on the figures of registered unemployment in the Balearics (Figure 7). It is clear that unemployment registration goes up in the low season.

Figure 7: Registered unemployment in the Balearics
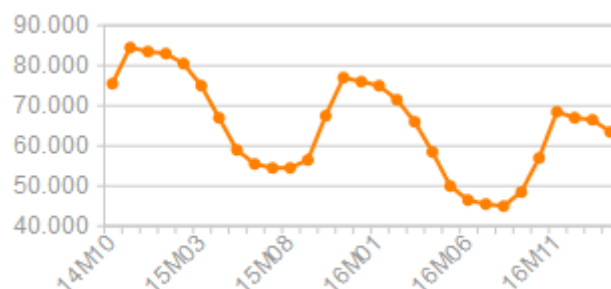
Source: IBESTAT (2017)

6.3. CONTRACTS

The seasonality of tourism activity leads to a high use of temporary contracts in the Balearic economy (Table 18). As we can observe, in the 3rd quarter, i.e. the high season, we observe clearly the highest temporality of all year. The temporality rate is the quotient of employees with temporary contracts over the total of employees in the economy.

Table 18: Rate of temporality among the wage earners (employees) in the tourist sector in Balearic Islands

Rate of temporality			
	Rate of temporality among the wage earners in the tourist sector by period.	Wage earners in the service sector	Employees (total economy)
2016_annual	30,70	25,93	28,15
2016T4	29,35	26,45	29,05
2016T3	34,67	28,66	30,44
2016T2	33,12	26,06	27,98
2016T1	22,34	22,01	24,73

Source: Own elaboration with data from IBESTAT (2017)

When we analyze the use of part-time contracts in the tourism sector (Table 19) compared to the service sector as a whole or the total economy, we can notice that part-time contracts are less frequently used in the tourism sector. The reason for this is that the tourism sector is labour intensive with very long working days, so there is a need of workers during high season working many hours, not part-time.

Table 19: Part-time employment rate among wage earners in the Balearic Islands

Part-time employment rate among wage earners in the tourism sector by period.			
	Part time employment rate among wage earners in the tourist sector	Part time employment rate among wage earners in the service sector	Part time employment rate among employees (total economy)
2016_annual	11,93	15,14	13,72
2016T4	12,55	15,96	13,99
2016T3	10,71	13,47	12,5
2016T2	11,12	14,82	13,75
2016T1	14,34	16,66	14,82

Source: Own elaboration with data from IBESTAT (2017)

Finally, when we analyze the use of the different typologies of contracts in the Balearics (Table 20), distinguishing three modalities: fixed-discontinued contracts, fixed contract and part-time contracts, we can see how there has been a great increase in fixed, discontinuous contracts and temporary contracts.

Table 20: Typologies of Contracts used in the Balearic Islands

CONTRACTS:	2007-2015
PERMANENT CONTRACT - FULL TIME	-41,59%
PERMANENT PART-TIME CONTRACT	15,36%
FIXED-DISCONTINUOUS UNDEFINED CONTRACT	57,81%
FULL-TIME TEMPORARY AGREEMENT	-17,11%
TEMPORARY CONTRACT	78,15%

Source: Own elaboration based on data from IBESTAT (2017).

The proportion within the different modalities of contracts in the Balearic Islands shows us the accepted ¨system¨, motivated by the interests of employers and employees. The hotel companies, make the most of the months of higher profitability and also make the most of the lower season by passing the workers to the unemployment system in Winter, benefiting from the use of the figure of fixed discontinuous contracts and temporary contracts..

Other effects are the refurbishing of the installations of the hotels and the well needed rest for the employees. For all this, the previous explained contracts are chosen over other modalities, not only motivated by seasonality but also by other economical agents implied.

An effect of the upcoming tourist market is also on the contracts. In 2016, according to the Social Security, every month was a record in fixed-discontinuous contracts (from May to September more than 70.000). In the 1st quarter there was a rise of 7.7% in the Balearic Islands, confronting a 3.29% national rise that meant 491.100 employments (EPA); there was also an increase in worked hours due to a clear increase in employment.

We can appreciate that as tourism recuperates and we recover from the crisis, the labour and wage costs go down, due to the rise of business profits.

In conclusion, the Balearic Islands lead the decrease of unemployment not only the beginning of the season but it still leads the increase of unemployment when the season finishes.

The temporary contracts or the fixed-discontinuous contracts are the preferred contracts used by the hotel companies. Certain segments of workers also prefer this modality of contract because it gives an opportunity to have other activities, or attend the family.

During the first quarter of 2017, 27.469 fixed-discontinuous contracts were given, and according to the CAEB the indefinite contracts grow at a rate of 23,1%, facing the 19,2% temporary contracts. The Balearic Islands presented in March 2017 a 5% extra affiliates (429.954 total) compared to the previous year (66.075) with an unemployment rate of 58.295 workers, a long way from the 96.122 of 2012.

To give the correct dimension to the labor seasonality in Mallorca, it is of interest to know the yearly variation of -11.90% and monthly -8.40% of unemployment of the last twelve months. The annual affiliation is of 5.71% and monthly 6.30% (data given by the ¨Govern Balear¨). But there are still three factors present at labor level: seasonality, low pay and precariousness of affiliates of the hotel sector and difficulty of accommodation caused by the saturation of the high season.

7. ANALYSIS OF SOCIAL EFFECTS:

The Balearic Islands have an area of approximately 5.000 Km^2, with a population census of 1.107.220 (Ibestat 2016), and with a higher density than the rest of Spain that reaches 225 persons per km. This population is doubled during the high season.

Nonetheless, the Balearics occupies the last positions in Spain in terms of quality of the environment, access to health services, knowledge and wellbeing. It is among the last four regions in areas such as social inclusion or equality of opportunity, and in education it is one of the last within the community of Spain of numbers of basic education.

The Balearic Islands occupies the second last position in the Index of Social Progression, after Andalucía, index that is elaborated by the European Index.

In fact, the social effects, in general of the seasonality in tourism, are diverse and affect workers, tourists and citizens at many different levels.

Table 21: Social effects of seasonality in tourism

POSITIVE	NEGATIVE
INTERNATIONALIZATION	LOSS OF IDENTITY
MORE JOBS	TARGETTING JOBS
MORE INVESTMENT	FOREIGN INVESTMENTS
CONSTRUCTION DEVELOPMENT	HIGH PRICES
POPULATION INCREASE	HUMAN PRESSURE
INCREASE OF GDP	NOT BALANCED
MORE INFRAESTRUCTURES	ECOLOGICAL IMPACT
POPULATION FAVORING TOURISM	RESIDENT POP. AGAINST TOURISM

Source: Own elaboration.

The areas where the **social effects** of seasonal tourism are more significant are:

From a **negative** point of view:

The labour integration; the load of work versus the family relation; the human pressure; coexistence of cultures; saturation of resources, services, infrastructures and environmental resources; harm to the ecosystem…

From a **positive** point of view:

Increase of the GDP, increase of employment, interaction with other cultures, large investments in all areas…

In terms of employment, we have to underline from a sociological point of view and integration that the youngest people are the most negatively affected – and within this group the extremes are the most affected. The young people with better options are those that have studied "formación profesional" and more specifically those that have studied hostelry and catering, many of which end up migrating.

It is also important to underline that the high temporality rate and high use of fixed-discontinuous contracts goes against the promotion of human capital formation in the sector, as hoteliers face a high staff turnover and hence, they have little incentives to invest in training of human capital. Jobs

pass from the hotel sector to the construction or other jobs. This affects the reincorporation in summer at a good level of quality-service (Jolliff and Farnsworth 2006).

Another effect is the intensity and the duration of the jobs in the high season; this affects the families and takes us to the well known phenomena of "key children", under-aged that stay alone while their parents work very long hours.

Seasonality generates temporality and high staff turnover (rotation) in the tourism sector of the Island, with periods of staff selection and recruitment followed by periods of dismissal and unemployment. This causes a feeling of uncertainty and precariousness in the workers of this industry.

One of the most harmful consequences of what has been exposed affects the mental health of the worker and its consequences at a personal level, with low self-estime, insecurity, etc... the lack of family coexistence because of difficult timetables.

All this causes tension within the family members that can give way, in some cases, to violence between genders (Balearics is at the head).

On the other hand it is important to underline the **call effect** of the jobs in summer not only towards the rest of the nation, but also towards Europe. Many English, German workers with higher levels of languages come to occupy job positions. This reduces the competitiveness of Spanish workers with less language skills.

Another collateral effect , is the increase of the rental prices for seasonal workers. This has caused a general rise in prices, not only in rentals but also in the buying prices of properties that are orientated to rentals (the vacation or short term rental is another factor that increases the prices). This situation makes emancipation in youngsters even more difficult.

Coexistence of the different cultures and nationalities, sometimes leaves a feeling of shading the original culture or a feeling of not recognizing the original values and customs.

The **human pressure,** as we have seen in the fifth section in Table 6, shows how, in relation with the registered population, the general population increases year after year. Recently we could read in the local paper (Ultima Hora) how the cycle tourism generates problems because there is a great need for public toilets.

In the case of cruises, when we receive 4 ships a day in the Palma port, the problem for the city is important, especially for the historical center of the city as human pressure increases heavily and resident population complains. Up to 8000 people arrive at once, and evidently they need to consume essential services while in land.

The human pressure also creates a risk of "residential distress" as indicated by Salva (2011), consequence of doubling the population of the island in high season.

Saturation is the key of positioning the various actors: Hotels, Tour-Operators, workers, citizens, governments and public services (overbooking, infrastructures, waste, health services, police services, etc…)

The development of new businesses with the implication of private owners of properties such as AirBnb, UBER…also aggravates the problem of seasonality and human pressure during high season. Furthermore, even this they represent new business opportunities and are providing very good profits, but it is also causing conflict in other sectors. For example, the creation of an online rental housing websites such as AirBnb that offers housing especially during the summer months (peak season) is generating new conflicts with other sectors (hotel sectors, etc). In fact, an estimated 6000 seasonal rentals are creating competition for hotels and apartments, this has taken the "Govern" to create a law for seasonal vacations. In the city of Palma de Mallorca the rentals have been recently banned after a great success in the past years. In an effort to regularize and inspect this new sector, the "Govern" has limited the permissions to houses out of the city, but it is also clear that the great part of these rentals are made without any form of permissions.

It is also clear that the increase of prices in hotels, as it has been mentioned by the tour operator TUI, has favored this type of initiatives.

This competition for the existing hotels has not had a very positive acceptance. The noise produced, we can recall especially the well-known situation generated in the Barceloneta in Barcelona, with youngsters drinking in the streets in their swimsuit, has made a negative image of this type of rental.

A clear effect that will have a large importance in the future is the **ecological effects** that affect in different ways: over exploitation of natural environments, erosion, accumulation of pollution, over exploitation of certain natural resources (water, landscape aggression, over construction)…

The answer of the **public services** and the decrease in service quality , is an issue that has to be tackled during the high season when the population is doubled. The amount of waste is at its highest, the saturation of services such as hospitals is evident.

Finally, even thus the seasonality in tourism brings about problems such as the ones mentioned before (congestion and saturation of public services, increase of human pressure, high unemployment during low season, high temporality rate, etc.), it is evident that we should not forget the **wealth and progress** that tourism generates, in other words the positive factors. The last tourist seasons have been historically the best for the Balearic Islands. In 2016 all records have been beaten, in daily expenditure, in volume of tourists…It is quite possible that 2017 will reach a new record according to the previsions of tour-operators and hotel associations.

8.CONCLUSION AND CONCLUDING REMARKS

In order to tackle the problem of seasonality in tourism, policy makers in several destinations, regions and cities are trying to design and implement strategies to deseasonalize tourism activity. For example, the city of Palma tries to differentiate and offer different products than the sun and beach product, standing out for its shopping, cultural visits, leisure, congress (Fredline & Faulkner, 2000); Some other cities like Valencia with the "Ciudad de las Artes", and the Aquarium or the city of Bilbao with the "Museo Gugenhein" have stood out in the tourist sector by using a singular and original strategy, and have changed the total image of the city. In the rest of the Island of Mallorca there is a permanent development of strategies to promote new orientations towards tourism. Residential tourism (Baum & Hagem 1999), sport orientated tourism such as golf tourism or cycle tourism, rural tourism… are some of the ideas to give options to reduce seasonality.

All these different types of strategies are complementary; the city is visited by tourists that are brought here to practice sport, or those that have a congress…There is a synergy between the different circles: Coast, city, countryside…

The interest shown on this subject to conduct seasonality, due to its importance in the GDP, can be seen in the many studies that have been made at a private or public level, or at a University level; all this would require a coordinated and executive line of action to implement a touristic policy.

It is necessary to underline an important fact in Majorca; its relation with tourism (Velasco, M. 2002) due to its importance in the economy, the labour sector and society, the continuous change of politics from "left wing" to "right wing" views are very present and influence the tourist policies greatly. Some authors Koening-Lewis.N & Bichoff. E. (2010) and . Martín, J. M., Jiménez, J. D. & Molina, V. (2014). indicate that there are considerable consequences and affect opening permissions of business, land-use planning, urban upgrading, etc…This affects strongly and creates legal and economic insecurity for certain investments in the islands.

Two further factors accompany seasonality: Sustainability and Saturation. Sustainability is a relatively new concept and without doubt tourism is an industry with a great impact in the environment Almenara, Bono & García (1998). The understanding of saturation – Vargas, Porras & Plaza (2011 and 2014) started in Barcelona and has consequences on the control of hotels, cruises, vocational rentals… Part of the population is clearly against tourism and we have seen on the news messages painted in the old town. In Mallorca this type of opposition among the resident propulation can also be noticed.

Cleary, all these strategies and polices to reduce seasonality need to deal with two important factors: the low supply of flights during low season (Transport problem) and the implication of the Tour Operators in promoting the Balearic Islands during low season and offering packages to the islands. The German operator TUI or the British operator JET and others, are offering an increase of winter places. It is necessary to fill planes to fill hotels. During the last winter season, the air companies have offered a 15.5% extra seats and increased their routes.

Finally, a global agreement among all the implicated parties: hoteliers, employers, employees, authorities…., is necessary for all these policies to be effective. There is plenty of know-how concerning tourism on the Island, there is plenty of initiatives and there is also plenty of inconvenience and problems when "innovation" needs give way to a more efficient, rentable and sustainable tourism sector. Complexity and the need to find solutions should be coordinated from an institution that needs to face the future of the growing industry of Tourism.

This paper evidences the weight of seasonality in the Balearic Islands, that maintains – even though the season is prolonged on both ends, the evident contrast between high season and low season, with a special incidence on the employment / unemployment rate in the Balearic Islands.

Seasonality and its economical, labour, social and environmental consequences need a policy from different directions depending on the context: beach, city, countryside. The degree of seasonality should be determined in each context and there should be certain synergies taken to bind the three types of environments to create a global optimization of the industry of tourism.

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10. APPENDIX

Measures used to evaluate seasonality :

-Relative Importance Index

$$IR(MB) = 1 - \frac{x^{jun} + x^{jul} + x^{ago} + x^{set}}{\sum\limits_{i=ene}^{dic} x^i} \times 100$$

-Variation Coefficient

$$CV = \frac{s}{\overline{x}}$$

-Seasonal Indicator

$$IS = \frac{\overline{x}}{x_{max}}$$

-Coefficient of Gini (mostly used)

$$G = \frac{\sum_{j=1}^{12}(p_j - q_j)}{\sum_{j=1}^{12} p_j} \qquad f_j(G) = \frac{y_j}{\sum_{Jan}^{Dec} y_j}$$

Source: Subject – Economy of Tourism of Antonio Aguiló and Jaume Roselló

DATA

Actually, Mallorca has excellent infrastructures and a complementary offer subdivided in 12 great groups: cycle-tourism, Nordic walking, sport tourism, nautical tourism, golf tourism, multi adventure tourism, Spa and Wellness tourism, bird Watching, gastronomical tourism, cultural tourism and shopping tourism. We can also add family/enjoyment tourism and company meetings/conventions tourism.