

SEASONAL PATTERN IN THE TOURIST SPANISH SECTOR

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Abstract:

The seasonal variations materialize in different ways in the destinations. In this paper we try to analyze the seasonal typology that differs in the Spanish territory, especially, we refer to the Autonomous Communities. With this aim, we observe the levels of seasonality of the tourist demand and supply depending on different variables, such as: the number of tourists, the average days of stay of the tourists, the number of available rooms, and the personnel employed in the tourist housings.

Key words: tourism demand, tourism supply, seasonal variation

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1. INTRODUCTION

Seasonality does not concern exclusively the tourist activity, but it represents one of the most predominant characteristics in the tourism. The seasonal variations have turned into a problem of long duration that concerns many activities and many destinations, and a very relevant question to having in consideration for the tourist agents. Most of the academic literature, specially treated from an economic perspective, suggests that the seasonality must be considered as a significant problem that it is necessary to look for answers.

In the present paper we analyse the patterns of the seasonal variations in the Spanish regions, trying to determine their possible differences. Seasonality is commonly defined as the recurring movements in a time series during a particular period of the year that occur of similar form every year (Moore, 1989), or as the trend of the tourist flows in relatively short periods of the year (Allcock, 1994). But also we can find other concepts that gather, somehow, a few more wide ideas. For instance, Butler (1994) explains seasonality as a temporal imbalance in the phenomenon of tourism which may be expressed in terms of number of visitors, expenditure of visitors, traffic in highways and other forms of transportation, employment, and admission to attractions. From this point of view, but more general, tourist seasonality can be defined as the temporal imbalance promoted, principally, by a high concentration of the tourist flows in certain periods of the year, in which there can be involved factors of demand and supply.

Afterwards, we are going to detail the aims and the methodology used to determine the seasonal patterns in the different Autonomous Communities of Spain. Therefore, the information that we handle refers for the period 2001 to 2004, using different representative tourist variables of the supply and of the demand. Likewise, we

describe the current situation of the Spanish tourism basing on these variables. Finally, we try to identify the possible differences among the Spanish regions.

2. OBJECTIVES AND METHODOLOGY

Uysal, Fesenmaier and O'Leary (1994) realize an analysis of the seasonal variations that promote the tourist trips in The United States, and conclude that it is necessary to pay more attention to the study of the nature of the trips in the different seasons, being possible that the different States could present a seasonal different pattern among them. In the present paper, as already mentioned, we try to verify the seasonal typology that takes place in the tourist Spanish sector, comparing the possible existing differences among the Autonomous Communities.

The methodology is based on the calculation of the Specific Index of Seasonal Variation (IEVE) depending on the tourist monthly movement. As Sancho (2001) indicates, the simplest method to isolate the seasonal component is that of the ratio to the moving average and, if the multiplicative hypothesis is adopted, the coefficient series Y_t divided by series of moving averages MM_t of equal period to the number of observations in one year, includes only the seasonal and irregular components. The arithmetical expression is established as follows:

$$\frac{Y_t}{MM_t} = \frac{T_t \times C_t \times E_t \times I_t}{T_t \times C_t} = E_t \times I_t = IEVE_t$$

In this expression the factors that form the temporary series are collected: the trend (T_t), the cycle (C_t), the seasonality (E_t), and the irregular variations (I_t). Sancho (2001) assures that in case the seasonality should be stable and there should not exist irregular fluctuations of significant magnitude, the specific indexes of seasonal variation can be divided equally to obtain the General Indexes of Seasonal Variation (IGVEs), which reflect only the seasonal component. This index calculates by means of the arithmetical average of the IEVEs from all the observations corresponding to the same period of time, that in our work it is the monthly period, and can be expressed in absolute numbers or in percentage. Hereby, the value of the unit supposes the non-existence of seasonality with regard to the trend of the series,

whereas the highest or lowest values mean seasonal variations for excess or for fault, respectively, with relation to the observed trend.

On the other hand, the information and the variables used in our analysis are extracted from the periodic reports of the Spanish Statistical Institute. We notify that the statistical information of 2004 is still provisional. The tourist variables of the demand and the supply that we utilize are: (1) the number of tourists, who are formed by all the travellers who fulfil, at least, one stay in any tourist housing; (2) the average stay of the tourists, that it is the average number of days that the travellers remain in the tourist accommodations; (3) the available rooms, that are the number of fixed available beds of the tourist establishment during the month of reference, without including the supplementary ones and counting the double beds as two places; and (4) the personnel employed in the tourist housings, which corresponds with the set of persons, remunerated and not remunerated, that contribute with their work, to the production of goods and services during the month of reference, though they work outside. We make notice that the numbers that we handle with relation to the variables of supply are expressed in average monthly values, whereas the average stay has been calculated from the weighted average with regard to the stays realized by the tourists in the set of the tourist accommodations. Following, we describe each of these four variables with regard to the Spanish regions during the analyzed period of time.

3. VARIATIONS IN THE NUMBER OF TOURISTS

The Spanish regions which received more tourists in 2004 are: Catalonia, with 18,1 %, and Andalusia, with 17,2 %. After these regions stand out: Canaries (11,5 %), Balearics (9,6 %), the Valencian Community (8,8 %), and Madrid (8,3 %). In the third level we find: Castile and Lion (5,6 %), and Galicia (4,9 %). The rest of communities attain a small representation (table 1).

In our analysis it is necessary to highlight the continued growth of the number of tourists in Spain, which rate is 10 % during the period of four studied years. The majority of the Autonomous Communities increases the number of tourists over the average growth of Spain during this period of time, emphasizing Galicia, with a rate of increase of 44,4 %, the Basque Country, with 25,5 %, Navarre, with 19,6 %, the Valencian Community, with 18,2 %, Asturias, with 18,1 %, and Madrid, with 15 %. There is another group of Autonomous Communities that support a growth similar to

that of Spain: La Rioja, Castile and Lion, Andalusia, and Murcia. On the contrary, there are three communities with a growth lower than that of Spain. They are: Cantabria, with 8,3 %, Aragon, with 6,3 %, and Castile-La Mancha, with 2,8 %. And, finally, there are only three regions with rates of decrease in this period: Extremadura, with 0,6 %, Balearics, with a 1,4 %, and Canaries, with 5 %. We have to emphasize the case of Canaries, that is suffering a continuous decrease in four analyzed years.

Table 1.
Number of tourists in a year in the Autonomous Communities.

Autonomous Communities	2001	%	2002	%	2003	%	2004	%
Andalusia	13.062.705	17,18	13.128.503	17,27	13.791.757	17,29	14.466.794	17,29
Aragon	2.181.570	2,87	2.196.513	2,89	2.294.954	2,88	2.318.287	2,77
Asturias	1.319.459	1,74	1.341.518	1,76	1.477.205	1,85	1.558.824	1,86
Balearics	8.145.809	10,71	7.359.469	9,68	7.812.211	9,79	8.027.976	9,60
Canaries	10.199.530	13,41	10.000.919	13,15	9.988.888	12,52	9.685.956	11,58
Cantabria	1.296.236	1,70	1.365.183	1,80	1.383.113	1,73	1.404.170	1,68
Castile and Lion	4.208.933	5,53	4.285.829	5,64	4.255.824	5,33	4.682.237	5,60
C.-La Mancha	2.033.324	2,67	1.992.844	2,62	1.987.530	2,49	2.090.171	2,50
Catalonia	13.374.570	17,59	13.749.192	18,08	14.621.984	18,33	15.182.579	18,15
Valencian C.	6.278.593	8,26	6.314.335	8,30	7.094.011	8,89	7.421.696	8,87
Extremadura	1.197.565	1,57	1.121.470	1,47	1.152.595	1,44	1.190.329	1,42
Galicia	2.844.868	3,74	2.968.331	3,90	3.394.271	4,25	4.107.469	4,91
Madrid	6.060.331	7,97	6.198.886	8,15	6.237.918	7,82	6.967.516	8,33
Murcia	1.065.676	1,40	1.069.359	1,41	1.145.281	1,44	1.176.766	1,41
Navarre	724.873	0,95	747.749	0,98	804.508	1,01	866.945	1,04
Basque Country	1.567.799	2,06	1.680.216	2,21	1.811.625	2,27	1.967.563	2,35
La Rioja	483.885	0,64	515.350	0,68	536.137	0,67	539.690	0,65
Spain	76.045.726	100	76.035.666	100	79.789.812	100	83.654.968	100

Source: own elaboration based on the Spanish Statistical Institute

The general indexes of seasonal variation with regard to the number of tourists are gathered in the table 2. The data inform us about the seasonal concentration during the months of the year. In order to improve its description, we stand out in grey those cells which indexes overcome the unit. The summer period in the Spanish territory is the most important according to the number of tourists, beginning, approximately, in spring middle and ending in September. This average period coincides only with Catalonia. At first, we may think that a major extension of this period of concentration

of the tourists is going to reduce the seasonality. Hereby, there are regions that overcome the national average of five mentioned months: Andalusia, Castile-La Mancha, La Rioja, Extremadura, and Madrid, which expand their periods for seven months, from April to October for the first three communities mentioned, and from March to October, with a month of lack, for the other two regions. Likewise, there are other communities that have a period of seasonality of six months: (1) the Valencian Community and Murcia, from April to September; and (2) Balearics, Castile and Lion, Navarre, and the Basque Country, from May to October. Besides, there are other communities that concentrate the tourists who visit them exclusively during the summer. Those are: Aragon, Asturias, Cantabria, and Galicia. On the other hand, Canaries has very unlike months that overcome lightly the unit, due to its scanty degree of seasonality.

Table 2.
General index of seasonal variation in the Autonomous Communities according to the number of tourists

Autonomous Communities	Jan	Feb	Mar	Apr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
Andalusia	0,537	0,726	0,956	1,148	1,153	1,127	1,265	1,499	1,221	1,026	0,698	0,645
Aragon	0,665	0,799	0,965	0,946	0,905	1,003	1,439	1,804	1,118	0,938	0,638	0,780
Asturias	0,387	0,456	0,685	0,845	0,874	1,046	1,856	2,632	1,280	0,833	0,575	0,531
Balearics	0,151	0,292	0,454	0,705	1,524	1,759	1,935	2,086	1,693	1,073	0,191	0,138
Canaries	0,966	0,944	1,110	1,000	0,845	0,845	1,037	1,186	0,983	1,056	1,004	0,974
Cantabria	0,291	0,383	0,681	0,821	0,933	1,229	2,012	2,560	1,334	0,807	0,522	0,427
Castile and L.	0,517	0,618	0,842	0,988	1,048	1,066	1,388	1,817	1,201	1,055	0,782	0,679
C.-La Mancha	0,626	0,729	0,905	1,040	1,033	1,037	1,254	1,452	1,165	1,100	0,884	0,776
Catalonia	0,436	0,522	0,699	0,966	1,150	1,355	1,751	1,939	1,238	0,884	0,542	0,517
Valencian C.	0,567	0,687	0,920	1,061	1,022	1,153	1,436	1,644	1,186	0,925	0,732	0,669
Extremadura	0,564	0,710	1,020	1,213	1,091	0,967	1,174	1,484	1,114	1,070	0,845	0,748
Galicia	0,501	0,563	0,733	0,851	0,929	1,083	1,598	2,307	1,237	0,929	0,663	0,604
Madrid	0,842	0,916	1,015	1,019	1,074	1,071	1,033	0,983	1,090	1,106	0,975	0,876
Murcia	0,635	0,761	0,974	1,092	1,030	1,113	1,312	1,434	1,193	0,982	0,801	0,673
Navarre	0,542	0,629	0,848	0,984	1,046	1,061	1,503	1,763	1,180	1,091	0,780	0,573
Basque Country	0,611	0,674	0,849	0,909	1,002	1,120	1,413	1,716	1,126	1,024	0,840	0,715
La Rioja	0,593	0,678	0,943	1,028	1,122	1,047	1,260	1,526	1,184	1,130	0,869	0,619
Spain	0,565	0,670	0,852	0,986	1,089	1,177	1,438	1,669	1,220	0,998	0,695	0,640

Source: own elaboration.

4. VARIATIONS IN THE AVERAGE STAY

Depending on the average days of stay of the tourists we can distinguish some regions that attract undoubtedly tourism of vacation nature (table 3). This is the case of Canarias and Balearics, with an average stay lightly superior to one week. On the other hand, the Valencian Community, Murcia, Catalonia, and Andalusia achieve an average stay of approximately the half of the week. And all the other regions attain average stays lower than three days.

In contrast to the increase of the number of tourists who travel for Spain, the most significant of the evolution of their average stays is the decrease in the last years. Hereby, the average stay of the tourists has passed from 4,59 days in 2001 to 4,12 days in 2004, diminishing in 10,2 %. This percentage is overcome by only two Autonomous Communities: Balearics (11,8 %) and Catalonia (10,4 %). The majority of the regions reduces its levels of stay average, except Castile-La Mancha, which increases in 5,9 %, though it is still the community with the minor average number of days of stay, together with Castile and Lion, with 1,78 days; and Extremadura, which increases in 5,1 %, being the following community with a lower average stay, with 1,85 days. Finally, Aragon, Castile and Lion, and La Rioja. support a similar level.

Table 3
Average stay of the tourists in a year in the Autonomous Communities.

Autonomous Communities	2001	2002	2003	2004	Rate of variation 2001-04 (en %)
Andalusia	3,43	3,40	3,39	3,37	-1,75
Aragon	2,31	2,38	2,34	2,32	0,43
Asturias	2,71	2,68	2,57	2,59	-4,43
Balearics	8,29	8,08	7,71	7,31	-11,82
Canaries	8,67	8,41	8,38	8,19	-5,54
Cantabria	2,86	2,90	2,83	2,83	-1,05
Castile and Lion	1,78	1,83	1,82	1,78	0,00
C.-La Mancha	1,68	1,73	1,78	1,78	5,95
Catalonia	4,30	4,24	3,94	3,85	-10,47
Valencian C.	5,64	5,56	5,11	5,08	-9,93
Extremadura	1,76	1,79	1,84	1,85	5,11
Galicia	2,47	2,54	2,25	2,23	-9,72
Madrid	2,28	2,25	2,22	2,14	-6,14

Murcia	4,33	4,49	4,39	4,22	-2,54
Navarre	2,41	2,34	2,25	2,21	-8,30
Basque Country	2,10	2,10	2,03	2,02	-3,81
La Rioja	2,05	2,06	2,04	2,08	1,46
Spain	4,59	4,46	4,29	4,12	-10,24

Source: own elaboration based on the Spanish Statistical Institute

The general index of seasonal variation according to the average stays (table 4) shows a highest concentration of the months of the year than in the previous index (table 2), that was measured with regard to the number of tourists. This fact highlights the tourist movement of merely vacation nature, something that we can appreciate in minor measurement with relation to the number of tourists, because in this case what we compute are the trips and not the duration of the trip. Therefore, the summer period stands out in the national average and July and August in all the regions, though a major heterogeneity differs among them with regard to the periods that concentrate the stays of longest duration. Thus, we observe that the months of November, December, and January accumulate numerous stays, as we can see in the case of Castile-La Mancha, Castile and Lion, and the Basque Country in November; Andalusia and Murcia in December; and Aragon, Canaries, the Valencian Community, and Murcia in January. Somewhat, this is justified by the Christmas vacations. Obviously, the dispersion of the stays in more heterogeneous periods contributes to improve the indexes of seasonality. Murcia represents a special case, attaining high levels of stay during the whole winter. On the other hand, Extremadura and Madrid also extend up their period of concentration to the spring.

Table 4.

General index of seasonal variation in the Autonomous Communities according to the average stay

Autonomous Communities	Jan	Feb	Mar	Apr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
Andalusia	0,956	0,951	0,918	0,938	1,013	1,176	1,219	1,063	0,956	0,894	0,890	1,025
Aragon	1,051	0,980	0,995	0,957	0,897	0,909	1,156	1,363	0,916	0,877	0,910	0,989
Asturias	0,861	0,860	0,886	0,969	0,901	1,004	1,271	1,452	1,071	0,922	0,898	0,904
Balearics	0,996	0,852	0,879	0,834	0,941	1,100	1,161	1,167	1,190	1,171	0,887	0,821
Canaries	1,043	0,981	0,988	0,955	0,951	0,985	1,058	1,058	1,024	0,976	0,995	0,986
Cantabria	0,851	0,788	0,910	0,964	0,884	0,972	1,329	1,589	1,142	0,890	0,833	0,849
Castile and L.	0,985	0,959	1,014	0,981	0,981	0,955	1,045	1,109	0,965	0,981	1,037	0,987
C.-La Mancha	0,955	0,936	0,965	0,979	0,973	1,017	1,029	1,176	0,966	0,981	1,016	0,977
Catalonia	0,694	0,684	0,737	0,893	0,996	1,143	1,555	1,694	1,300	0,940	0,691	0,673

Valencian C.	1,063	0,943	0,939	0,856	0,886	0,974	1,176	1,284	1,068	0,984	0,908	0,920
Extremadura	0,870	0,871	0,992	1,022	1,025	1,040	1,058	1,213	1,037	0,965	0,960	0,948
Galicia	0,901	0,900	0,938	0,946	0,937	0,991	1,209	1,269	1,028	0,974	0,976	0,930
Madrid	0,999	0,975	1,002	1,008	1,013	0,978	1,008	1,073	0,982	0,979	1,000	0,983
Murcia	1,191	1,070	1,010	0,871	0,796	0,866	1,143	1,300	0,983	0,838	0,902	1,029
Navarre	0,997	0,970	0,989	0,965	0,880	0,942	1,100	1,333	0,947	0,919	0,982	0,976
Basque C.	0,951	0,942	0,950	0,966	0,960	0,943	1,098	1,281	0,997	0,962	1,003	0,947
La Rioja	0,898	0,951	0,960	1,000	0,900	0,927	1,152	1,394	0,963	0,921	0,973	0,960
Spain	1,007	0,926	0,919	0,879	0,931	1,029	1,186	1,234	1,100	0,994	0,900	0,894

Source: own elaboration.

5. VARIATIONS IN THE AVAILABLE ROOMS OF TOURIST HOUSINGS

At first, it is necessary to specify that the figures we handle in our analysis (table 5), express the number of available rooms in tourist accommodations offered for one month, as annual average. We can observe that the regions with a major tourist supply, according to the number of available rooms of housing, are also those with a major tourist demand. In fact, 75 % of this supply is located, on order of major weight, in Catalonia, Canaries, Andalusia, the Valencian Community, and Balearics. To certain distance, we find the Community of Madrid, which achieves a tourist relevant demand with relation to the number of tourists, but it reaches a small level of average stay. Farther, the tourist supply of Castile and Lion and Galicia stands out. And the rest of regions attain a scanty participation in the Spanish supply of the available rooms in tourist accommodations.

As for the evolution of the number of available rooms in tourist housings during last years, we can see that the majority of the regions experience a growth over 8 %. The exceptions are only Balearics, whose number of available rooms diminishes in 6,3 %, and Canaries, with practically the same level of supply. The Autonomous Communities with the highest increase during this period are the Valencian Community (23 %), Asturias (21,3 %), Galicia (20,6 %), Extremadura (17,8 %), and Andalusia (17 %).

Table 5
Number of available rooms of tourist accommodations offered in the Autonomous Communities.

Autonomous Communities	2001	%	2002	%	2003	%	2004	%
Andalusia	282.365	14,18	208.908	10,21	221.026	10,70	330.569	15,17
Aragon	50.148	2,52	52.216	2,55	54.054	2,62	54.410	2,50
Asturias	34.375	1,73	38.134	1,86	40.405	1,96	41.704	1,91
Balearics	249.588	12,53	238.938	11,68	255.565	12,37	233.659	10,72
Canaries	374.672	18,82	375.409	18,35	357.448	17,31	376.779	17,29
Cantabria	34.847	1,75	39.146	1,91	39.030	1,89	40.171	1,84
Castile and L.	74.142	3,72	79.012	3,86	80.452	3,90	84.680	3,89
C.-La Mancha	34.347	1,72	36.358	1,78	39.135	1,89	40.061	1,84
Catalonia	387.992	19,49	405.422	19,81	410.435	19,87	426.388	19,57
Valencian C.	200.571	10,07	211.526	10,34	217.433	10,53	246.889	11,33
Extremadura	20.274	1,02	20.866	1,02	22.832	1,11	23.895	1,10
Galicia	64.142	3,22	67.945	3,32	73.933	3,58	77.371	3,55
Madrid	87.304	4,38	89.735	4,39	90.106	4,36	97.329	4,47
Murcia	37.171	1,87	38.383	1,88	38.810	1,88	40.149	1,84
Navarre	18.304	0,92	19.173	0,94	19.303	0,93	19.845	0,91
Basque C.	27.459	1,38	28.135	1,37	29.634	1,43	29.882	1,37
La Rioja	11.232	0,56	11.403	0,56	11.858	0,57	12.215	0,56
Spain	1.991.213	100	2.046.213	100	2.065.217	100	2.179.070	100

Source: own elaboration based on the Spanish Statistical Institute

The general indexes of seasonal variation of the available rooms in tourist housings show that the supply increases from April to September in Spain (table 6). The majority of the regions maintain the same behaviour. Andalusia, Navarre, and the Basque Country even lengthen this period until October.

But there are geographical zones that present a clearly different situation. That is the case of Galicia, with the shortest period of supply that goes from June to September, and La Rioja, with the most extensive period of supply, covering almost the whole year, which demonstrates its insignificant seasonality. Something similar happens to Canaries and to Madrid, though in alternate months.

Table 6
General index of seasonal variation in the Autonomous Communities according to
the available rooms of housing

Autonomous Communities	Jan	Feb	Mar	Apr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
Andalusia	0,819	0,894	0,952	1,069	1,076	1,100	1,118	1,125	1,102	1,005	0,882	0,858
Aragon	0,829	0,843	0,906	1,075	1,050	1,117	1,264	1,271	1,119	0,916	0,760	0,849
Asturias	0,670	0,654	0,787	1,047	1,031	1,340	1,488	1,503	1,306	0,755	0,726	0,694
Balearics	0,519	0,323	0,421	0,685	1,570	1,670	1,648	1,668	1,664	1,422	0,225	0,185
Canaries	0,817	1,027	1,033	1,026	0,989	0,984	1,008	1,015	1,019	1,023	1,025	1,032
Cantabria	0,461	0,534	0,656	1,145	1,161	1,418	1,584	1,615	1,440	0,792	0,678	0,516
Castile and L.	0,774	0,820	0,868	1,001	1,054	1,160	1,278	1,276	1,157	0,927	0,873	0,813
C.-La Mancha	0,894	0,883	0,922	0,981	1,006	1,128	1,177	1,197	1,095	0,947	0,901	0,868
Catalonia	0,451	0,464	0,539	1,086	1,351	1,547	1,648	1,668	1,527	0,790	0,472	0,457
Valencian C.	0,751	0,832	0,903	1,039	1,048	1,152	1,235	1,260	1,178	0,941	0,841	0,821
Extremadura	0,826	0,851	0,916	1,093	1,144	1,144	1,153	1,166	1,116	0,901	0,863	0,827
Galicia	0,727	0,753	0,788	0,914	0,994	1,246	1,479	1,490	1,255	0,826	0,784	0,745
Madrid	0,989	0,996	0,999	1,005	1,011	1,012	1,003	0,977	0,997	0,997	1,010	1,004
Murcia	0,888	0,954	0,998	1,037	1,035	1,060	1,076	1,064	1,057	0,988	0,942	0,900
Navarre	0,786	0,893	0,943	1,033	1,038	1,113	1,198	1,196	1,131	1,024	0,915	0,731
Basque C.	0,865	0,901	0,950	1,022	1,026	1,069	1,125	1,126	1,069	1,006	0,946	0,895
La Rioja	0,943	1,003	1,011	1,037	1,034	1,038	1,058	1,060	1,033	1,020	1,015	0,748
Spain	0,664	0,747	0,803	1,008	1,164	1,256	1,316	1,327	1,261	0,991	0,742	0,719

Source: own elaboration.

6. VARIATIONS IN THE EMPLOYMENT IN THE TOURIST HOUSINGS

In the table 7 we gather the annual information relative to the number of personnel in the tourist accommodations, expressed in an average monthly value. Canaries stands out attaining 20,4 % of the employment in Spain. Farther, we find Andalusia, Balearics, and Catalonia, and beyond, the Valencian Community and Madrid. The remaining regions are kept to a mayor distance. We must underline that the percentage of personnel in Canaries, with regard to the totality, is superior to its percentage in the number of available rooms of housing, though the number of personnel for room is, together with Balearics and the Basque Country, one of the most reduced. In contrast, Catalonia attains a percentage of personnel notably smaller than its percentage of the number of available rooms, whereas its index of personnel divided by available rooms is the highest of all the regions.

The growth of the employment in the tourist accommodations during the last four years is significant. Eleven Autonomous Communities overcome 15 %, standing out Cantabria, with an increase of 48,2 %, Asturias, with 35,5 %, Galicia, with 31,7 %, and

and the Valencian Community, with 30,5 %. On the other hand, the employment scarcely increases in Navarre (4,6 %) and Extremadura (3,1 %), it does not grow in Canaries, and reduces in Balearics (5,3 %).

Table 7
Personnel employed in the tourist housings in the Autonomous Communities.

Autonomous Communities	2001	%	2002	%	2003	%	2004	%
Andalusia	30.250	15,77	31.172	15,95	32.277	15,91	35.088	16,45
Aragon	4.297	2,24	4.216	2,16	4.533	2,23	4.673	2,19
Asturias	2.939	1,53	3.212	1,64	3.563	1,76	3.983	1,87
Balearics	31.154	16,24	29.696	15,19	32.061	15,81	29.474	13,82
Canaries	43.702	22,78	42.358	21,67	42.050	20,73	43.612	20,44
Cantabria	1.929	1,01	2.584	1,32	2.719	1,34	2.859	1,34
Castile and Lion	7.168	3,74	7.719	3,95	8.295	4,09	9.168	4,30
C.-La Mancha	3.313	1,73	3.437	1,76	3.707	1,83	3.991	1,87
Catalonia	25.383	13,23	26.334	13,47	27.841	13,73	29.408	13,78
Valencian C.	13.575	7,08	15.184	7,77	16.106	7,94	17.723	8,31
Extremadura	2.522	1,31	2.394	1,22	2.604	1,28	2.602	1,22
Galicia	5.979	3,12	6.455	3,30	7.152	3,53	7.879	3,69
Madrid	11.098	5,78	11.608	5,94	11.684	5,76	12.909	6,05
Murcia	2.654	1,38	2.879	1,47	2.991	1,47	3.123	1,46
Navarre	1.751	0,91	1.785	0,91	1.795	0,89	1.832	0,86
Basque Country	3.039	1,58	3.272	1,67	3.664	1,81	3.720	1,74
La Rioja	810	0,42	891	0,46	868	0,43	977	0,46
Spain	191.860	100	195.451	100	202.831	100	213.343	100

Source: own elaboration based on the Spanish Statistical Institute

The general indexes of seasonal variation in the national employment show a similar behaviour to those of the supply of available rooms of accommodations, except that the period of major growth is between May and October (table 8). Nevertheless, this behaviour pattern is not as homogeneous as in the previous case. The majority of the regions overcome this period of time, emphasizing Canaries that expands its period for nine months. On the contrary, Asturias, Cantabria, and Catalonia achieve a period of just five months, and Aragon and Galicia only four months.

Table 8
General index of seasonal variation in the Autonomous Communities according to
the personnel employed

Autonomous Communities	Jan	Feb	Mar	Apr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
Andalusia	0,786	0,855	0,925	1,028	1,053	1,105	1,174	1,197	1,157	1,034	0,859	0,827
Aragon	0,938	0,964	1,023	0,999	0,944	1,007	1,209	1,235	1,000	0,895	0,843	0,943
Asturias	0,798	0,802	0,870	0,995	1,005	1,068	1,307	1,362	1,155	0,938	0,864	0,835
Balearics	0,387	0,327	0,445	0,688	1,505	1,673	1,712	1,726	1,686	1,399	0,256	0,197
Canaries	0,890	1,022	1,035	1,016	0,971	0,970	1,002	1,021	1,014	1,020	1,015	1,025
Cantabria	0,664	0,729	0,831	0,975	1,012	1,092	1,513	1,673	1,216	0,891	0,744	0,660
Castile and L.	0,889	0,929	0,974	1,001	1,011	1,025	1,094	1,117	1,052	1,010	0,978	0,919
C.-La Mancha	0,919	0,896	0,944	0,969	1,013	1,046	1,130	1,102	1,046	1,012	0,986	0,936
Catalonia	0,599	0,622	0,705	0,963	1,175	1,318	1,514	1,561	1,365	0,952	0,609	0,617
Valencian C.	0,780	0,834	0,929	0,995	1,018	1,099	1,210	1,251	1,163	1,005	0,868	0,847
Extremadura	0,859	0,897	0,988	1,036	1,047	1,056	1,064	1,093	1,071	1,001	0,982	0,906
Galicia	0,803	0,816	0,865	0,926	0,956	1,066	1,334	1,413	1,181	0,954	0,874	0,814
Madrid	0,971	0,994	1,009	1,020	1,024	1,023	0,999	0,954	1,009	1,006	1,002	0,990
Murcia	0,854	0,890	0,967	1,028	1,009	1,067	1,143	1,154	1,107	1,008	0,923	0,851
Navarre	0,853	0,904	0,947	0,986	1,012	1,074	1,175	1,196	1,073	1,018	0,914	0,848
Basque C.	0,902	0,909	0,929	0,981	0,999	1,048	1,078	1,097	1,077	1,030	1,014	0,936
La Rioja	0,924	1,010	1,055	1,034	1,006	0,995	1,048	1,052	0,999	0,972	1,014	0,890
Spain	0,723	0,792	0,856	0,956	1,105	1,175	1,266	1,290	1,217	1,063	0,789	0,767

Source: own elaboration.

7. SEASONAL PATTERN OF THE SPANISH REGIONS

The seasonality can present different forms in a geographical area. In this respect, Butler and Mao (1997) distinguish three types: (1) seasonality with one peak, (2) seasonality with two peaks, and (3) without seasonal peak. Fernandez (2003) indicates that the first type happens generally in the countries of south of Europe, as Spain, Portugal, Greece, or Cyprus. It is characterized for a period of high fluctuations of approximately three or four months, usually coinciding with the summer period. But our study verifies that inside a wide territory as it is Spain it is possible to observe these three types of seasonality.

The concept of high season refers to a high seasonal concentration. Therefore, we have to establish a measurement of this level of concentration in order to identify the types of the seasonality. Lim and McAleer (2001) use a simple method that consists of including the months with an index superior to the unit. But, as Fernandez (2003) notices, this methodology can be improved substantially, for example, including an average season based on the factors close to the unit. We adopt this mechanism in our analysis, so that the values between 0,9 and 1,1 correspond with the average

season, the lower values than 0,9 refer to the low season, and the superior values to 1,1 to the high season. Obviously, the predominance of average season in a region means that it has a small seasonality.

In our analysis we base on the number of months in each of the three seasons. The seasonal types are obtained from the averages of the months corresponding to the high season. As a guide, the type with one seasonal peak refers to the interval between 1 and 4 months. If it does not exceed one month we understand that it is a type without seasonal peak, and if it overcomes four months we have named it as a type with a range of mountains. Finally, when two discontinuous peaks are located in the time we identify that as a type with two peaks. Table 9 presents this information.

Table 9

Tourist seasons in the Autonomous Communities according to the number of months

Autonomous Communities	High season		Average season		Low season		Seasonal types		
	Demand	Supply	Demand	Supply	Demand	Supply	Demand	Supply	Average
Andalusia	4	4	5	4	3	4	Peak	Peak	Peak
Aragon	2,5	3	6,5	6	3	3	Peak	Peak	Peak
Asturias	2,5	3,5	3,5	3	6	5,5	Peak	Peak	Peak
Balearics	5	6	1,5	0	5,5	6	Range	Range	Range
Canaries	1	0	10	11	1	1	No peak	No peak	No peak
Cantabria	3,5	4	2	1,5	6,5	6	Peak	Peak	Peak
Castile and Lion	2	2,5	7,5	5	2,5	3	Peak	Peak	Peak
C.-La Mancha	2,5	2,5	7,5	7,5	2	2	Peak	Peak	Peak
Catalonia	4,5	5	1,5	1,5	6	5,5	Range	Range	Range
Valencian C.	3	3,5	6	4,5	3	4	Peak	Peak	Peak
Extremadura	2,5	3,5	6	4	3	4,5	2 peaks	Peak	Peak
Galicia	2,5	3,5	6,5	3	3	5,5	Peak	Peak	Peak
Madrid	0,5	0	10,5	12	1	0	No peak	No peak	No peak
Murcia	3,5	1,5	4,5	8,5	4	2	2 peaks	Peak	Peak
Navarre	2,5	3	6,5	6,5	3	2	Peak	Peak	Peak
Basque Country	2,5	1	7	9,5	2,5	1,5	Peak	Peak	Peak
La Rioja	3,5	0	6	11	2,5	1	2 peaks	No peak	Peak
Spain	3,5	5	5,5	2	3,5	5	Peak	Range	Range

Source: own elaboration.

We can verify that the majority of the regions possess a type of one seasonal peak corresponding with the summer period. The supply and demand variables show some differences. The fluctuations in the supply are more moderate. Therefore, it is possible to observe that there are no types with two peaks, since the supply is concentrated especially in the summer, which is the period when the peak of primary demand

appears. On the other hand, and with relation to the variables of demand, we observe that in Extremadura, Murcia, and La Rioja there appear types with two peaks, being the months of April, January, and May, respectively, those who present what we can name as a secondary peak, besides the summer peak. In Extremadura and La Rioja this typology appears in the number of tourists, and in the case of Murcia it happens in the number of days of stay.

Likewise, we discover two regions with a type that we called range of mountains: Balearics and Catalonia. This situation is given also in the set of Spain, but its seasonal variations are much more moderated by an average long season, fact that in both mentioned regions is not produced, which indicates that they attain a high seasonality.

Finally, it is necessary to emphasize the type without seasonal peak, which appears especially in Canary Islands and the Community of Madrid. In these two regions the opposite happens that in the previous case, since most of the months of the year is of average season.

8. CONCLUSIONS

In this paper we have analyzed the different seasonal types in the Spanish territory. With this aim, we have based on the Autonomous Communities and on the levels of seasonality produced in diverse variables, both of the demand and of the supply tourist, such as the number of tourists, the average stays of the tourists, the number of available rooms, and the personnel employed in the tourist housings. We calculate the seasonal variations from the Specific and General Indexes of Seasonal Variation.

We have verified that extensive territories that the Autonomous Communities include, show significant differences with regard to the types that the tourist seasonality presents. Butler and Mao (1997) identify three seasonal types: (1) seasonality with one peak, (2) seasonality with two peaks, and (3) without seasonal peak. But according to the handled information in this study, we have considered suitably to add a fourth type that we name as seasonal type with a range of mountains. Precisely, the set of Spain is characterized by the latter type.

As thought, the majority of the regions possess a type of one seasonal peak corresponding with the summer period. But we have found some exceptions. On the one hand, there are zones with a type of two peaks with regard to the variables of demand, as Extremadura, Murcia, and La Rioja. Besides, Balearics and Catalonia

attain a form of range of mountains, with clear indications of a high seasonality. On the contrary, Canaries and Madrid stand out for their scanty or practically void seasonality, having a type without seasonal peak.

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