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Conference Paper

The Role Of Tourism Industry On The Regional Growth: An Study Case For The Balearic Islands And Canary Islands

40th Congress of the European Regional Science Association: "European Monetary Union and Regional Policy", August 29 - September 1, 2000, Barcelona, Spain

Provided in Cooperation with:

European Regional Science Association (ERSA)

Suggested Citation: Alemany, Margarita; Barros, Vicente; García, M^a Antonia; Capó, Javier; Payeras, Margalida (2000) : The Role Of Tourism Industry On The Regional Growth: An Study Case For The Balearic Islands And Canary Islands, 40th Congress of the European Regional Science Association: "European Monetary Union and Regional Policy", August 29 - September 1, 2000, Barcelona, Spain, European Regional Science Association (ERSA), Louvain-la-Neuve

This Version is available at:

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“The Role of Tourism Industry on the Regional Growth: A Study Case for the Balearic Islands and Canary Islands”

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According to the literature and empirical evidence, the productive structure of any economy, and its specialization, plays an important role to understand the production and population growth. In Spain, from 1955 to 1997, there are two regions where the GNP and population have increased more than in the others: the Balearic Islands and Canary Islands. Besides, the basis of their economy is the services sector, especially the hospitality.

The main aim of this study is to analyze and compare the productive structure and specialization of both economies, in order to examine the role played by tourism industry on the regional growth.

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1. Introduction

A comparison of the regional socio-economic development in Spain reveals that Balearic and Canary Islands are characterised by a big dynamism. Both insular communities have been leaders in regional GDP growth, employment growth and population growth during the period 1955-1988¹. The main objective of this study is to determine if the production specialisation of their economies are the clue to explain this reality.

T.1 Regional (Comunidades Autonomas) Ranking during the period 1955-1998

Regional GDP Growth	Population Growth	Employment Growth
Canary Islands	C. Madrid	Madrid
Balearic Islands	Canary Islands	Balearic Islands
Murcia	Balearic Islands	Canary Islands
C. Valenciana	País Vasco	Cataluña
Navarra	Cataluña	País Vasco
Cataluña	C. Valenciana	C. Valenciana
C. Madrid	Murcia	Murcia
La Rioja	<i>España</i>	<i>España</i>
<i>España</i>	Navarra	Navarra
Andalucía	Andalucía	La Rioja
País Vasco	Cantabria	Andalucía
Galicia	P. Asturias	Aragón
Aragón	La Rioja	Cantabria
Castilla-La Mancha	Aragón	Galicia
Cantabria	Galicia	P. Asturias
Castilla y León	Castilla y León	Castilla y León
Extremadura	Castilla-La Mancha	Castilla_La Mancha
P. Asturias	Extremadura	Extremadura

Source: Own elaboration from datas offered by:SOPHINET (Fund. BBV)

¹ In fact, the first position relative to ratio of population growth and employment growth is for Madrid region, but the difference respect to Canary and Balearic Islands is minimum

2. Production specialisation

Balearic and Canary Islands are characterised by a production structure with a high degree of specialisation in services sector, more concisely the analysis of their production structure show their high production specialisation in tourism sector (hospitality); it is more evident for Baleares region. Contrary, the primary sector is not important. It is due to the rivalry between tourism and agriculture for using the land. In fact the land as well as the hydrologic resources are limited. But the highest added value of tourism activity determines that the natural resources are primarily used to develop tourism activities. The insularity basically contributes to explain the low importance of industrial sector.

T. 2 Sectorial structure of production and employment

1998	Agric., silv. & Fishing		Industr. & energ.		Construcc. & engin.		Services	
	GAV	Employment	GAV	Employment	GAV	Employment	GAV	Employment
SPAIN	6,24	8,34	26,26	19,59	7,07	9,16	60,42	62,91
Andalucía	15,24	14,19	17,04	12,06	7,48	10,16	60,24	63,59
Aragón	6,66	10,07	32,87	24,73	6,32	8,05	54,13	57,14
Asturias	5,05	11,21	31,36	20,67	6,95	10,06	56,63	58,06
Balearic I.	1,91	2,71	9,67	10,04	5,56	10,31	82,84	76,94
Canary I.	4,63	5,57	10,53	8,09	9,09	9,77	75,74	76,55
Cantabria	5,20	11,47	28,58	21,72	7,00	10,50	59,20	56,30
Castilla y León	11,51	12,95	27,81	17,53	8,21	10,38	52,46	59,13
Castilla-La Mancha	13,99	12,22	27,28	20,26	11,07	12,57	47,64	54,94
Cataluña	1,83	2,96	34,61	27,89	6,18	8,12	57,37	61,02
C. Valenciana	4,85	7,04	30,13	26,87	6,89	8,02	58,11	58,06
Extremadura	19,32	18,15	18,21	8,68	9,73	11,81	52,72	61,34
Galicia	9,99	19,61	24,66	15,91	8,77	9,77	56,56	54,70
Madrid	0,52	0,76	18,90	14,23	6,11	8,18	74,45	76,81
Murcia	11,24	14,24	23,86	17,40	8,65	9,29	56,24	59,053
Navarra	5,09	5,55	41,60	33,16	5,96	8,77	47,34	52,51
País Vasco	2,09	3,17	41,73	32,06	5,56	7,93	50,61	56,83
La Rioja	9,27	10,43	36,91	31,40	6,51	7,25	47,30	50,92

Source: Own elaboration from datas offered by: SOPHINET (Fund. BBV)

To measure the sectorial production specialisation of each region it can be used a ratio that weigh up the regional GAVcf per capita of each sector in relation to national GAVcf per capita.

$$IESR_{i,j} = \frac{GAV_{i,j} / P_i}{GAV_{n,j} / P_n} \cdot 100$$

being i the region, n the nation, j the sector and P the population.

The results (table 3) indicates that Baleares is a region highly specialised in hospitality (hostelry and restaurants); on contrary, Canary Islands, according to the results, are not so specialised on this sector.

Another index to measure the regional production specialisation is :

$$IPR_{i,j} = \frac{GAV_{i,j} / VAB_{n,j}}{GAV_i / VAB_n} \cdot 100$$

being i the region, n the nation and j the sector.

T. 3 Sectorial production specialisation

1993 Sectors	IESR		IPR	
	BALEARES	CANARY ISLANDS	BALEARES	CANARY ISLANDS
Agriculture & silvicultura	53,41	77,74	36,53	77,42
Fishing	81,77	179,21	55,93	178,49
Energetic and Hydraulic resources	91,50	70,71	62,59	70,42
Metallic Minerals s.	6,26	3,18	4,28	3,16
Miner. & mineral prod.. no metallic.	64,37	44,26	44,03	44,08
Chemistry products	9,61	13,97	6,57	13,91
Metallic products and machinery	28,03	24,45	19,17	24,35
Transport material	7,75	13,14	5,30	13,09
Beverage and Tobacco industry	74,55	89,38	50,99	89,01
Textile, curio	101,73	8,04	69,58	8,00
Paper industry	47,67	48,77	32,61	48,57
Wood and furniture industry	94,12	41,97	64,38	41,80
Caucho, plastics & other industr.	98,98	23,36	67,71	23,26
Construction & engineering	124,40	104,47	85,09	104,05
Recuperation y reparations	134,06	108,58	91,70	108,14
Commercial services	135,25	126,47	92,52	125,96
Hostelry & restaurants	650,35	218,97	444,86	218,08
Transport. services. & communications	171,11	131,25	117,05	130,72
Credit insurance & banking	103,67	67,58	70,91	67,30
Alquil. inmuebl. y capit. residenc.	193,98	102,64	132,69	102,22
Education and Sanity (private)	152,73	98,99	104,47	98,58
Other serv. For selling	117,83	102,09	80,59	101,68
Domestic service	116,03	104,11	79,37	103,69
Public services	96,29	109,86	65,86	109,41
<i>Total private services</i>	<i>153,76</i>	<i>98,97</i>	<i>105,17</i>	<i>98,57</i>
<i>Total serv. destined to sell</i>	<i>208,93</i>	<i>123,13</i>	<i>142,92</i>	<i>122,63</i>
<i>Total energy and industry</i>	<i>59,00</i>	<i>42,87</i>	<i>40,36</i>	<i>42,69</i>
<i>Total industrial products</i>	<i>51,94</i>	<i>36,83</i>	<i>35,53</i>	<i>36,68</i>
<i>Total classification R24</i>	<i>146,19</i>	<i>100,41</i>	<i>100</i>	<i>100</i>

Source: Own elaboration from datas offered by:SOPHINET (Fund. BBV)

This ratio (it is also indicated in table 3) corroborates the high production specialisation of Baleares in sectors related to hospitality (hostelry & restaurants),

meanwhile This ratio demonstrates that this situation in Canary economy is not so radical; in other words, Canary islands are characterised by a more diversified production than in Balearic Islands.

Besides the analysis of tourist demand, by nations and by the moment of arrival during the year, in both regions show, once again, that Balearic Islands presents a highest degree of production specialisation on tourism industry. The table 4 is evident: in Balearic Islands the tourism demand is concentrated in two nationalities. So, Germans and British tourists represent the 75% of tourist's arrivals; in canary, this percentage is only of 65%. The graph 1 show us the high concentration of arrivals during summer months in the case of Balearic Islands, meanwhile in Canary Islands the tourist arrivals are distributed more homogeneous during all year, due to, primarily, the climatic differences of both regions.

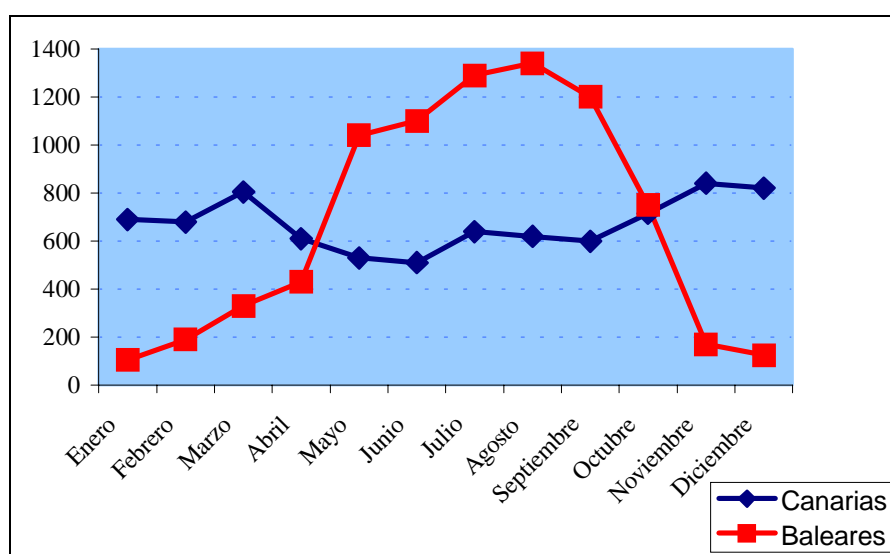
T. 4 Structure of Inbound tourism (%)

<i>1997 from:</i>	Canary I.	Balearic I.
Germany	32,80	41,12
Britain	33,13	35,45
Escandinavian	10,31	4,38
Netherlands	4,55	1,99
France	2,32	3,94
Italian	2,05	2,70
Switzerland	2,54	2,43
Belgium	2,57	2,08
Austria	1,98	1,37
Ireland	1,54	1,29
East Countries	1,40	1,31
Other Countries	4,80	1,94

Source: Own elaboration from datas offered by:

“Evolució econòmica de les Illes Balears 1997”

G. 1 Number of tourism arrivals during the year (1997)



Source: Own elaboration from datas offered by: "Evolució econòmica de les Illes Balears 1997"

The high sectorial specialisation in both regions generates that their production structure is so different if we compare with the rest of the country. This reality is collected by means of an index of regional specialisation.

$$IER_i = \sum_i \left| \left(\frac{L_{ij}}{L_i} \right) - \left(\frac{L_{nj}}{L_n} \right) \right|$$

being i the region, n the nation, j the sector and L the studied variable, in our case the GAVfc and employment. The value of IER varies between 0 and 2. Higher is the value of the index, the region has a production structure more different.

T. 5 Index of regional specialisation of production and employment (IER)

1993	1955		1975		1985		1993	
	GAV	Employment	GAV	Employment	GAV	Employment	GAV	Employment
Andalucía	0,287	0,221	0,238	0,222	0,241	0,214	0,218	0,215
Aragón	0,199	0,169	0,205	0,150	0,196	0,173	0,172	0,189
Asturias	0,573	0,417	0,518	0,436	0,445	0,383	0,293	0,312
Balearic Islands	0,382	0,248	0,461	0,402	0,518	0,484	0,533	0,503
Canary Islands	0,359	0,304	0,422	0,340	0,418	0,347	0,315	0,336
Cantabria	0,292	0,213	0,279	0,312	0,216	0,244	0,182	0,175
Castilla y León	0,441	0,316	0,353	0,374	0,330	0,305	0,307	0,270
Castilla-La Mancha	0,527	0,441	0,452	0,357	0,362	0,326	0,353	0,297
Cataluña	0,422	0,556	0,263	0,398	0,227	0,308	0,203	0,260
C. Valenciana	0,197	0,124	0,238	0,250	0,227	0,256	0,193	0,226
Extremadura	0,618	0,491	0,427	0,514	0,431	0,411	0,436	0,393
Galicia	0,376	0,426	0,285	0,568	0,225	0,500	0,201	0,366
Madrid	0,574	0,841	0,332	0,513	0,307	0,398	0,293	0,337
Murcia	0,193	0,228	0,230	0,229	0,269	0,221	0,234	0,220
Navarra	0,267	0,198	0,322	0,257	0,359	0,284	0,346	0,335
País Vasco	0,518	0,649	0,503	0,479	0,375	0,402	0,289	0,339
La Rioja	0,415	0,263	0,359	0,352	0,381	0,305	0,319	0,297

Source: Own elaboration from datas offered by: SOPHINET (Fund. BBV).

This high regional specialisation indicated in Balearic Islands increases the risk of suffering an asymmetric shock. However, the production structure differences in relation to Spain implies that the integration of our region in the EMU will not negatively affect to its relative position.

3. How to explain the economic growth of Balearic and Canary Islands?

The growth of GDP per capita in Balearic Islands and Canary Islands from 1965 to 1997 has been bigger than for the Spanish average. In the case of Canary region has implied a real convergence: the start point of this region was inferior to the national average. Baleares is the leader in terms of GDP per capita.

To understand the factors that explain this level and growth of GDP per capita , this value is broken down:

$$\frac{GDP}{P} = \frac{GDP}{N} \cdot \frac{N}{PA} \cdot \frac{AP}{P_{+16}} \cdot \frac{P_{+16}}{P}$$

being P the population, N the employment, AP the active population and P_{+16} the population over 16 years. If we apply logarithms and differentiate respect to time, the growth of GDP can be separated into the labour apparent productivity growth (GDP/N), , the growth of (1- unemployment ratio), growth of activity ratio (AP/P₊₁₆), and the growth of a demographic factor, which takes into account the proportion of population with age to work over the total population (P₊₁₆/P)².

T. 6 Relative GDPpc regional (Spain=100)

1965	GDPpc	1997	GDPpc
Madrid	166,23	Balearic I.	142,44
País Vasco	147,67	Cataluña	127,39
Cataluña	141,15	Madrid	123,78
Balearic I.	140,09	Navarra	121,37
Navarra	110,05	La Rioja	120,83
La Rioja	105,97	País Vasco	117,31
Cantabria	105,54	Aragón	109,78
C. Valenciana	104,68	C. Valenciana	100,64
Aragón	101,20	<i>Spain</i>	<i>100</i>
P. Asturias	101,15	Cantabria	94,88
<i>Spain</i>	<i>100</i>	Canary I.	92,97
Canary I.	82,53	Castilla y León	90,98
Murcia	80,14	P. Asturias	86,23
Castilla y León	77,88	Murcia	84,14
Andalucía	69,84	Galicia	82,33
Galicia	68,89	Castilla-La Mancha	79,18
Castilla-La Mancha	61,46	Andalucía	72,67
Extremadura	52,66	Extremadura	71,79

Source: Own elaboration from datas offered by:SOPHINET (Fund. BBV)

The analysis of table 7 indicates that the first position of Balearic Islands in relation to GDP per capita is based on its high productivity, low unemployment rate and activity index. On contrary, the demographic factor is the lowest. However, this relative high proportions of population less than 16 years is a positive element in medium and long-term. The fact that Canary Islands presents a GDPpc lower than the Spanish average, according to the results of table 7, is explained by their lower level of apparent productivity. The demographic factor is also lower than the average, this reality could be positive in the future.

T. 7 Relative levels in 1997 (Spain = 100)

	GDPpc	Productivity	(1-unemployment rate)	Activity rate	Popl ₊₁₆ /Pop
Andalucía	72,67	89,46	87,17	97,42	95,65
Aragón	109,78	97,39	108,27	100,47	103,61
Asturias	86,22	91,34	100,46	90,00	104,39
Balearic I.	142,44	115,00	111,36	117,14	94,95
Canary I.	92,96	94,81	100,47	102,24	95,44
Cantabria	94,88	97,61	100,43	93,57	103,43
Castilla y León	90,98	91,70	101,90	93,46	104,17
Castilla-La Mancha	79,18	88,15	101,81	89,47	98,60
Cataluña	127,39	113,89	103,94	104,58	102,88
C. Valenciana	100,64	100,59	100,25	101,27	98,55
Extremadura	71,79	81,94	91,39	96,34	99,51
Galicia	82,33	80,12	102,74	96,53	103,61
Madrid	123,78	110,68	103,37	106,04	102,02
Murcia	84,14	88,36	100,56	98,44	96,19
Navarra	121,37	108,76	111,91	95,30	104,63
País Vasco	117,31	115,48	101,16	96,95	103,56
La Rioja	120,83	104,15	111,56	102,26	101,68

Source: Own elaboration from datas offered by:SOPHINET (Fund. BBV)

Applying the statistical breakdown of GDPpc in the Spanish regions (table 8), the factor that contributes to explain the higher economic growth of both insular regions in relation to other regions is the labour market. Although the growth of Balears' productivity is similar to the Spanish average, the evolution of unemployment rate and activity rate has performed better. In Canary Islands, their growth of GDPpc has based on the growth of productivity, and mainly on the increase of activity rate.

During the period 1987-1997 (table 9), both insular communities have demonstrated a GDPpc lower than for Spanish average. In Balears it can be explained

² The growth of this component could reflect an elderly population; this fact has a positive effect on the economic growth. But in long term it could be a negative element for this economy.

by the decrease in activity rate, and in Canary Islands, although the important effort done to reduce the unemployment rate, the causes are the scarce relative increase of productivity and the decrease of activity rate.

T. 8 Accumulative growth rates during the period 1965-1997

	GDPpc	Productivity	(1–Unemployment rate)	Activity rate	Pop ₊₁₆ /Pop
<i>Spain</i>	2,69	3,08	-0,62	-0,08	0,33
Andalucía	2,82	3,31	-0,95	0,15	0,33
Aragón	2,95	3,16	-0,40	-0,07	0,27
Asturias	2,18	2,95	-0,65	-0,49	0,40
Balearic I.	2,75	3,05	-0,27	-0,02	-0,004
Canary i.	3,08	3,21	-0,59	0,04	0,42
Cantabria	2,35	3,13	-0,64	-0,54	0,43
Castilla y León	3,19	3,59	-0,58	-0,26	0,45
Castilla-La Mancha	3,51	3,80	-0,57	-0,001	0,29
Cataluña	2,36	2,76	-0,51	-0,15	0,28
C. Valenciana	2,57	3,12	-0,64	-0,10	0,20
Extremadura	3,69	3,95	-0,81	0,21	0,36
Galicia	3,27	3,82	-0,54	-0,36	0,36
Madrid	1,75	1,98	-0,54	-0,01	0,33
Murcia	2,85	3,05	-0,55	0,04	0,30
Navarra	3,01	3,27	-0,29	-0,42	0,45
País Vasco	1,96	2,64	-0,62	-0,48	0,44
La Rioja	3,12	3,44	-0,30	-0,29	0,28

Source: Own elaboration from datas offered by:SOPHINET (Fund. BBV)

T. 9 Accumulative growth rates during the period 1987-1997

	GDPpc	Productivity	(1–Unemployment rate)	Activity rate	Pop ₊₁₆ /Pop
<i>Spain</i>	2,34	1,85	-0,09	-0,07	0,64
Andalucía	2,54	1,87	-0,22	0,29	0,59
Aragón	2,61	1,46	0,03	0,70	0,38
Asturias	1,46	2,02	-0,06	-1,07	0,59
Balearic I.	1,33	2,27	-0,013	-1,02	0,12
Canary I.	1,99	1,67	0,26	-0,50	0,56
Cantabria	2,05	2,14	-0,29	-0,72	0,93
Castilla y León	2,69	2,25	-0,22	0,09	0,56
Castilla-La Mancha	2,63	2,43	-0,39	0,34	0,23
Cataluña	2,55	1,70	0,31	-0,32	0,85
C. Valenciana	2,02	1,83	-0,24	-0,26	0,69
Extremadura	3,30	2,43	-0,17	0,80	0,22
Galicia	2,52	3,40	-0,59	-0,76	0,50
Madrid	1,95	0,95	-0,19	0,24	0,94
Murcia	2,34	1,23	-0,05	0,38	0,76
Navarra	2,93	2,08	0,56	0,42	0,22
País Vasco	2,76	1,70	0,42	-0,17	0,79
La Rioja	3,29	2,13	0,22	0,35	0,55

Source: Own elaboration from datas offered by:SOPHINET (Fund. BBV)

In order to analyse the sectorial factors that explain the economic dynamism of Balears' and Canary Islands' economy it will be used the Shift-Share methodology applied on labour market³. The Shift-Share analysis allows to breakdown the growth of employment into three components: 1) the growth of the region in case that region will

³ -It is not applied to the GAVfc because we have detected errors in the regional basedatas. The

increase at the same rate than the area of reference, in our case Spain. 2) the differential of growth explained by the specialisation of the region in the more dynamic sectors of the country studied, well-known as regional structural component; 3) the part that corresponds to the higher (lower) dynamism for the region in relation to Spanish average, the regional dynamic component.

For each sector, the absolute variation of employment is broken down into three components, above indicated:

$$\Delta N_{ji} = N_{ji} \cdot r_n + N_{ji} \cdot (r_{jn} - r_n) + N_{ji} \cdot (r_{ji} - r_{jn})$$

being i the region, n the nation, j the sector, N the employment and r the employment growth rate. At the same time, if these three components for all productive sectors of each region are aggregated, we obtain:

$$\sum_1^j \Delta N_{ji} = \sum_1^j N_{ji} \cdot r_n + \sum_1^j N_{ji} \cdot (r_{jn} - r_n) + \sum_1^j N_{ji} \cdot (r_{ji} - r_{jn})$$

It is useful to do homogenous the datas, giving a start value of 100 to regional employment, in order to do comparisons.

The analysis Shift-Share for employment during the period 1955-1993 show us (table 10) that the Balearic's big dynamism is based on its relative specialisation in sectors of quick increase to national level: primarily in commercial sectors, hostelry and restaurants, private education and sanitary sectors and other services destined to sell as well as the highest dynamism of their productive sectors respect to sectorial growth of Spain. Canary Islands are characterised by a negative structural contribution, because of their production specialisation on sectors of low national growth, concisely on the fishing sector, and for having a diversified economy, although their bigger relative increase in these sectors have implied a higher regional dynamism. The scarce relative weight of both regions in industrial sectors of high increase to national level, basically the metal productions- machinery and transport material, not allow a higher regional structural component for Balearic and Canary Islands.

T. 10 Shift-share of employment growth (24 sectors) in the period 1955-1993

Period 1955-1993	. total Growth	National Comp.	Regional Comp.	regional structural C.	regional dynamic C.
Andalucía	-6,70	11,08	-17,78	-14,19	-3,59
Aragón	-8,11	11,08	-19,19	-6,29	-12,89
Asturias	-13,58	11,08	-24,66	-7,88	-16,77
Balearic I.	73,76	11,08	62,68	9,49	53,18
canary I.	47,14	11,08	36,06	-18,29	54,35
Cantabria	-5,80	11,08	-16,88	6,34	-23,23
Castilla y León	-26,60	11,08	-37,68	-21,83	-15,84
Castilla-La Mancha	-30,36	11,08	-41,44	-34,60	-6,84
Cataluña	42,21	11,08	31,13	31,11	0,01
C. Valenciana	21,57	11,08	10,48	-7,34	17,83
Extremadura	-38,97	11,08	-50,05	-36,97	-13,08
Galicia	-10,19	11,08	-21,27	-27,84	6,57
Madrid	107,58	11,08	96,51	78,72	17,78
Murcia	11,14	11,08	0,06	-13,72	13,79
Navarra	11,46	11,08	0,38	-4,97	5,36
País Vasco	27,65	11,08	16,57	52,19	-35,63
La Rioja	-2,78	11,08	-13,86	-13,09	-0,76

Source: Own elaboration from datas offered by:SOPHINET (Fund. BBV)

If the expansive period (1985-1991) is analysed, it is observed (table 11) that the employment growth is above the Spanish average. The production specialisation in sectors of quick increase at national level explains this reality.⁴ However, the regional sectorial growth of employment has shown a lower dynamism than at national level.

T. 11 Shift-share of employment growth (24 sectors) during the period 1985-1991

Period 1985-1991	. total Growth	National Comp.	Regional Comp.	regional structural component	dynamic regional C.
Andalucía	8,82	6,91	1,91	-0,86	2,76
Aragón	6,91	6,91	0,00	-0,75	0,75
Asturias	-2,01	6,91	-8,92	-5,45	-3,47
Balearic I.	9,50	6,91	2,59	4,27	-1,68
Canary I.	9,23	6,91	2,32	2,87	-0,55
Cantabria	0,74	6,91	-6,16	-2,34	-3,82
Castilla y León	2,23	6,91	-4,69	-3,71	-0,97
Castilla-La Mancha	3,04	6,91	-3,88	-4,54	0,66
Cataluña	10,62	6,91	3,70	2,30	1,39
C. Valenciana	8,64	6,91	1,73	-1,26	2,99
Extremadura	5,71	6,91	-1,19	-4,16	2,96
Galicia	-3,29	6,91	-10,21	-8,78	-1,43
Madrid	10,09	6,91	3,17	7,59	-4,41
Murcia	9,29	6,91	2,38	-1,29	3,67
Navarra	9,59	6,91	2,67	-0,14	2,81
País Vasco	6,59	6,91	-0,32	3,28	-3,61
La Rioja	8,95	6,91	2,03	-3,00	5,03

Source: Own elaboration from datas offered by:SOPHINET (Fund. BBV)

⁴ The hostelry and restaurants sectors and commercial services, for regions, and the private education and sanitary sectors, as well as those sectors designed to sell, in Baleares case.

4. Cycle evolution

The evolution of regional GDP during the period 1985-1998 (table 12) show us that the Baleares' and Canary Islands' correlation coefficients of Balearic's and Canary Islands' GDP in relation to Spain's GDP are the lowest. It reveals a lack of synchrony between the Baleares' and Canary Islands' economic cycle and Spanish economic cycle. Besides both insular communities present an economy cycles more volatile than in Spain. The reason could be the dependence of these regions on a tourism sector; this sector suffer a recession, due to the appreciation of the peseta, meanwhile the set of Spanish economy was in a expansive, but also the tourism sector, thanks to depreciation of the peseta in 1992, experienced a boom. It is remarkable that, although the Canary Islands' economy is characterised by being exporter, Canary Islands presents the lowest correlation with the EMU.

T. 12 Evolution of the GDP growth rate during the period 1985-1998

Period 1985-1998	Standar Desviat.	Correlat. with Spain	Correlat. with EMU
Andalucía	3,21	0,89	0,61
Aragón	2,96	0,97	0,74
Asturias	2,18	0,91	0,54
Balearic I.	3,89	0,76	0,51
Canary I.	3,44	0,68	0,41
Cantabria	2,77	0,92	0,64
Castilla y León	3,04	0,90	0,64
Castilla-La Mancha	2,71	0,81	0,42
Cataluña	3,01	0,97	0,71
C. Valenciana	3,03	0,97	0,72
Extremadura	3,12	0,86	0,48
Galicia	2,42	0,94	0,70
Madrid	2,62	0,94	0,56
Murcia	2,52	0,96	0,62
Navarra	2,85	0,90	0,80
País Vasco	2,59	0,94	0,65
La Rioja	2,42	0,90	0,85
<i>Spain</i>	2,65	<i>1</i>	<i>0,69</i>
<i>EMU</i>	<i>1,40</i>	<i>0,69</i>	<i>1</i>

Source: Own elaboration from datas offered by Alcaide Inchausti (1999)

5. Prices and Wages

The analysis of the price evolution from 1978 to 1999 (table 13) demonstrates that it has been more moderate in the case of Balearic and Canary Islands than for all Spanish economy. It is remarkable if we take into account the high economic growth, the insularity and their high specialisation in services sector. Although, more recently,

(1996-1999), the prices presented a lower level, their performance have implied an inflationary scenario stressed.

T. 13 Accumulative Inflation rate

	1978-1999	1996-1999
Andalucía	7,42	1,59
Aragón	7,36	1,94
Asturias	7,65	2,16
Balearic I.	7,35	2,23
Canary I.	7,52	2,36
Cantabria	7,24	2,07
Castilla y León	7,31	1,90
Castilla-La Mancha	7,39	1,70
Cataluña	7,77	2,36
C. Valenciana	7,58	1,96
Extremadura	7,41	1,64
Galicia	7,51	2,12
Madrid	7,49	1,86
Murcia	7,58	2,37
Navarra	7,63	2,46
País Vasco	7,65	2,45
La Rioja	7,68	2,61
<i>Spain</i>	7,54	2,04

Source: Own elaboration from datas offered byTEMPUS (INE)

Relative to unit labour costs (table 14). Baleares has an advantage, so its level is the lowest. A mix of wage per employed equal explains this situation to national average and an apparent productivity above the average. Canary Islands is characterised by a labour costs higher than at national level, because its lower wage cost per employed is compensated by lower relative productivity.

$$ULC = \frac{LC}{GDP} = \frac{LC/N}{GDP/N}$$

Respect to labour costs, Balearic and Canary Islands present also an advantage in other index, such as monthly incomes and incomes per worked hour⁵ (table 15). The relative low level of wages in Baleares not corresponds to relative high level of apparent productivity.

A dynamic analysis show us that Baleares has presented a labour costs growth during the period 1989-1998 lower than the national average, this fact has implied the

⁵ Both values are measured by means of the total payments, including the fixed and temporary contracts long and short journey.

decrease of unit labour On contrary, Canary Islands present an increase of labour costs, above the Spanish average; this situation has implied a deterioration of its relative position in terms of unit labour

T. 14 Relative Unit labour Cost and its decomposition, 1996

1996	ULC	CL per employed	Productivity
Andalucía	96,76	87,78	90,72
Aragón	102,73	105,34	102,53
Asturias	105,78	103,96	98,28
Balearic I.	89,25	100,92	113,07
Canary I.	104,70	97,56	93,18
Cantabria	99,87	106,21	106,35
Castilla y León	96,57	93,29	96,61
Castilla-La Mancha	92,54	83,16	89,86
Cataluña	93,91	104,46	111,23
C. Valenciana	101,91	93,47	91,71
Extremadura	99,58	83,26	83,61
Galicia	98,59	74,21	75,28
Madrid	106,13	123,71	116,55
Murcia	97,86	90,99	92,97
Navarra	105,36	112,04	106,33
País Vasco	111,59	123,88	111,01
La Rioja	96,78	101,42	104,79
<i>Spain</i>	<i>100</i>	<i>100</i>	<i>100</i>

Source: Own elaboration from datas offered byTEMPUS (INE)

T. 15 Cost of labour factor and its growth.

	ULC 1996	Annual Growth l ULC (1986-1996)	Monthly Income 1998	Annual growth of Monthly Income 1989-1998	Income/hour 1998	Annual Growth Income/hour 1989-1998
Andalucía	96,76	0,37	92,17	1,00	92,29	1,39
Aragón	102,73	0,41	101,29	0,25	101,88	0,75
Asturias	105,78	-0,46	107,71	0,61	109,13	0,96
Balearic I.	89,25	-0,15	91,52	0,69	91,95	1,36
Canary I.	104,70	0,66	83,75	1,21	83,20	1,78
Cantabria	99,87	0,11	100,60	1,49	100,47	1,79
Castilla y León	96,57	0,11	97,43	1,21	98,48	1,63
Castilla-La Mancha	92,54	0,59	85,20	1,96	84,62	2,44
Cataluña	93,91	-0,69	102,73	0,72	102,12	1,01
C. Valenciana	101,91	1,29	89,46	1,77	89,09	2,02
Extremadura	99,58	0,96	82,67	0,13	83,22	0,88
Galicia	98,59	0,85	86,62	0,91	86,55	1,34
Madrid	106,13	-0,54	115,31	0,84	115,08	1,21
Murcia	97,86	1,52	78,57	1,42	80,28	2,04
Navarra	105,36	0,51	107,37	1,47	107,85	1,77
País Vasco	111,59	0,10	119,94	0,97	121,40	1,27
La Rioja	96,78	1,33	92,08	2,09	92,37	2,54
<i>Spain</i>	<i>100</i>	<i>0,10</i>	<i>100</i>	<i>1,01</i>	<i>100</i>	<i>1,37</i>

Source: Own elaboration from datas offered byTEMPUS (INE)

(1) It refers to the rate of annual accumulative growth in real terms. The deflation of the series has done using the IPC of each region (1992)

6. Labour Market

The Spanish's labour market rates show important differences in relation to the Balearic and Canary Island's rates, it is specially more remarkable for the Baleares case.

The structure of employment by type of labour journey (short versus long working hours) (table16) not presents big differences if it is compared with other regions in Spain: in all, the most common is long working hours. If the kind of contract, it appears bigger differences. Balearic and Canary Islands presents a high seasonally, due to the main activity, the tourism, is characterised by a high degree of seasonally, and also, it can be explained by the fact that their economic cycles fluctuate much more..

T. 16 Structure of employment according to labour journeys and types of contract

1997	long journey	short ourney	Indefinie C:	Seasonal C.
Andalucía	87,4	12,6	54,4	45,6
Aragón	88,8	11,3	64,5	35,5
Asturias	89,9	10,1	69,1	30,9
Balearic I.	87,4	12,6	56,2	43,8
CanarYI.	88,7	11,3	52,3	47,7
Cantabria	89,8	10,2	63,8	36,2
Castilla-La Mancha	89,6	10,5	56,5	43,5
Castilla_y León	89,5	10,5	64,4	35,6
Cataluña	88,1	11,9	66,3	33,7
C. Valenciana	88,3	11,7	58,6	41,4
Extremadura	89,4	10,6	54,5	45,5
Galicia	90,3	9,7	57,8	42,2
Madrid	89,8	10,2	69,6	30,4
Murcia	86,5	13,5	57,2	42,8
Navarra	90,1	9,9	66,3	33,7
País Vasco	89,5	10,5	71,5	28,5
La Rioja	89,4	10,6	67,6	32,4
TOTAL	88,8	11,2	61,8	38,2

Source: Own elaboration from datas offered by Boletín de Estadísticas Laborales (MTAS)

The duration of annual labour journey (table 17) is higher in Baleares than in other regions; this factor contributes partially to explain the higher apparent productivity.

Balearic and Canary Islands present a higher employment and activity, as well as a lower unemployment rate respect to other Spanish regions (table 18). canary Islands offer a better results than the Spanish average for all rates. However, the position of

Baleares is privileged, in the ranking Baleares is the first in activity and employment rate and the last one in unemployment rate.

T.17 Number of Hours of an annual average Journey.

	1995	1998
Andalucía	1682,8	1660,6
Aragón	1720,9	1686,8
Asturias	1657,6	1632,4
Balearc I.	1737,7	1727,9
Canary I.	1730,8	1708,0
Cantabria	1692,0	1694,9
Castilla-La Mancha	1705,9	1692,6
Castilla_y León	1671,4	1675,8
Cataluña	1700,1	1666,3
C. Valenciana	1714,9	1677,0
Extremadura	1723,8	1698,8
Galicia	1725,6	1706,1
Madrid	1705,5	1683,0
Murcia	1680,7	1645,3
Navarra	1683,8	1669,0
País Vasco	1647,1	1634,7
La Rioja	1725,4	1684,5

Source Ministerio de Trabajo

T. 18 Activity, employment, unemployment rates

1999	Activity rate(1)	Employment rate (1)	unemployment rate
<i>Spain</i>	42,26	50,23	15,86
Andalucía	35,95	49,14	26,84
Aragón	44,20	48,57	9,00
Asturias	34,93	42,55	17,92
Balearc I.	49,74	54,02	7,92
Canary I.	44,99	52,64	14,53
Cantabria	37,79	44,76	15,58
Castilla-La Mancha	39,86	47,02	15,23
Castilla y León	40,32	47,45	15,03
Cataluña	47,02	52,61	10,61
C. Valenciana	44,09	51,20	13,90
Extremadura	36,00	47,97	24,95
Galicia	40,60	48,45	16,21
Madrid	46,10	53,05	13,10
Murcia	43,84	50,94	13,94
Navarra	46,13	50,24	8,18
País Vasco	43,86	51,08	14,13
La Rioja	43,14	47,04	8,30

(1) Percentage on the population over 16 years.

Source: Encuesta de Población Activa (INE)

The analysis of the employment rate, activity rate and unemployment rate distributed by populations groups (table 19) show us that Canary Islands presents, in general, a better results than at national level. This is more evident for the Baleares'

economy Besides, it is noticeable that the female unemployment rate is double than masculine in the three areas.

T. 19 Structure of employment, activity and unemployment by population groups

1999	Spain	Balearic I.	Canary I.
Employment rate, male	56,07	61,96	58,48
Employment rate, female	29,54	38,39	32,40
Employment rate, 16-19 years	15,49	24,09	13,95
Employment rate, 20-24 years	43,66	53,09	44,36
Activity rate, male	63,10	65,72	65,26
Activity rate, female	38,37	43,15	40,87
Activity rate, 16-19 years	25,01	30,75	23,11
Activity rate, 10-24 years	59,92	62,69	59,77
Unemployment rate, male	11,14	5,73	10,38
Unemployment rate, female	23,02	11,02	20,71
Unemployment rate, 16-19 years	38,07	21,60	39,64
Unemployment rate, 20-24 years	27,14	15,31	25,78

(1) Percentage on the population over 16 years.

Source: Encuesta de Población Activa (INE)

The analysis of formation of employed (table 20), useful to evaluate the human capital in each region, demonstrates, first, in Spain, Balears and Canary Islands the major part of population has a medium level of education⁶. Second, Balearic and Canary Islands are characterised by a low level of university studies, it is more remarkable in the case of Balears. Second, there are different reasons that could explain this reality.

T. 20 Structure of Employed population according to education level

1997	Balearic .	Canary I.	Spain
Illiterate	0,72	1,44	0,60
primary studius	30,45	34,73	32,83
Medium leve	57,58	48,36	49,62
Before superior University	5,76	8,90	8,25
University Studies	5,49	6,57	8,70
TOTAL	100	100	100

Source: INE, Mas, Perez, Uriel & Serrano (1998)

The production specialisation on tourism sector explains partially the lowest level of education of insular workers⁷. The reason is that tourism sector is intensive in not qualified labour. The table 21 indicates that, in Balears and Canary Islands, the education level of workers in services sectors destined to sell is lower than at national

⁶ The lower level of formation could explain the lower wages of Balears' market labour. However, it does not explain its higher apparent productivity. One possible explanation is that formation has acquired in the same enterprise, and the enterprise takes into account this fact, paying lower wages.

⁷ If we suppose that formation level of workers reflects the requirements of labour demand and people decide the level of education according to these requirements.

level. It is due to the high proportion of population in this sector employed at tourism activities.

T. 21 Structure of employed population by education level (services sectors destined to sell)

1997	Balearic I.	Canary I.	Spain
Illiterate	0,71	0,77	0,49
without studies/primary studies	30,67	32,60	29,52
Medium studies	59,66	56,12	54,89
Before University	4,74	5,83	6,85
University studies	4,22	4,68	8,26
<i>TOTAL</i>	<i>100</i>	<i>100</i>	<i>100</i>

Source: INE, Mas, Perez, Uriel & Serrano (1998)

Another element to understand the lower degree of education level is the lower unemployment rate in both regions. The facility to enter into the labour market is a disincentive, for young people, to continue their education career. This factor is especially important for Balears case. In this region the young unemployment rate is considerable low, in comparison to other Spanish regions. Higher profitability from the investment in education (by means of lower unemployment rate and/or higher wage) increases the interest to continue the education career. The opportunity cost of investment in education increases when the unqualified unemployment rate is low. In Balears region the table 22 demonstrates that with a medium education level there is not a lot difficult to get a job. For this reason, the workers when they get this medium education level don't continue their formation. Besides, the lower wages, a common characterisation of Balears market labour, is another disincentive to invest more time and money in education

T. 22 Unemployment rate by education level

1997	Balearic I.	Canary I.	Spain
TOTAL	11,75	19,87	20,82
Illiterate	17,08	12,02	31,87
Without studies/primary studies	7,80	19,62	19,41
Medium studies	14,34	22,92	23,25
Before University	7,94	10,47	14,96
University Studies	7,52	9,58	15,72

SOURCE: INE, Mas, Perez, Uriel & Serrano (1998)

The reduced dimensions of the enterprises can also contribute to explain the lower human capital in Balearic and Canary Islands (table 23). The small enterprises demand less workers with university studies.. In Canary Islands' case, this factor is not so important.

T. 23 Employed according to the centre dimension ⁽¹⁾. Annual average

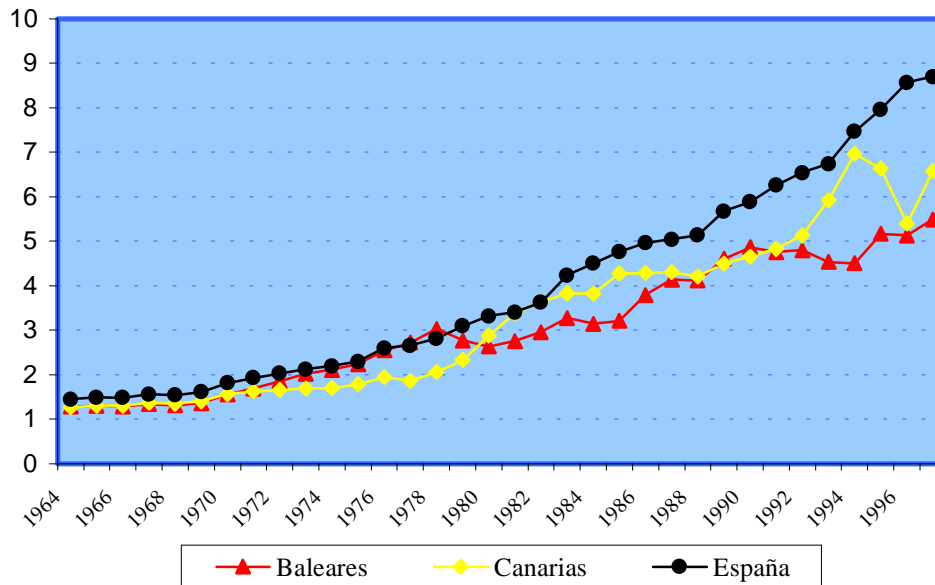
1997	De 1 a 10	De 11 a 50	De 51 a 250	Más de 250
<i>TOTAL</i>	<i>30,0</i>	<i>27,1</i>	<i>19,6</i>	<i>23,3</i>
Andalucía	33,6	26,8	18,0	21,6
Aragón	30,4	27,3	18,4	23,9
Asturias	28,7	22,5	17,2	31,6
Balearic I.	34,5	28,0	21,0	16,5
Canary I.	30,6	28,3	22,2	18,9
Cantabria	30,1	27,5	17,5	24,9
Castilla-La Mancha	35,4	31,8	19,1	13,7
Castilla_y León	33,6	26,5	18,0	21,9
Cataluña	28,1	28,5	20,6	22,8
C. Valenciana	33,1	30,8	18,5	17,6
Extremadura	40,9	27,9	15,3	15,9
Galicia	36,2	27,0	17,5	19,3
Madrid	24,2	22,8	19,5	33,5
Murcia	32,0	29,5	19,3	19,2
Navarra	24,0	27,0	24,0	25,0
País Vasco	25,6	26,8	23,5	24,1
La Rioja	31,2	33,6	20,0	15,2

(1) The dimension of the centre refers to the number of workers SOURCE: Encuesta de Coyuntura Laboral

Finally, a third element that could also justify the lower education level in both insular regions is the fact that their universities are relatively new. In Balearic case, its university began to suffer an expansion during the eighties and especially in nineties. The studies oriented towards tourism sector are very recent. The diplomatura of Tourism begins in 1987, and the Hospitality studies in 1995. Before, all the studies related to tourism are done at medium level (in the institutes but not in the University). In Canary Islands the university is not so recently, although its expansion of the University of La Laguna was in seventies, and the University of Gran Canarias was opened in 1989. Relative to tourism studies, there is only the Studies of Diplomature of

Tourism (in University of La Laguna) from the academic course 1998-99. Besides, the insular reality increases the possibility of studying some careers.

G.2 Percentage of employed population with high education



7. Conclusions

The production specialisation in tourism is one of the factors that contribute to understand the high dynamism of the Baleares' and Canary Islands' economy.

This production specialisation is more stressed in Baleares case. It has positively contributed to develop its economy, such as different economic rates indicates. The relative high apparent productivity and activity rates and the low unemployment rate explain the high level of GDP. Its economic development has mainly based on developing economic sectors of quick increase and bigger regional dynamism. Despite of this fact, the rate of real wages has increased at less velocity than at national level. The low level of wages, jointly to high productivity, implies that unit labour costs are the lowest in Spain. Apart from this excessive production specialisation, there is an element negative on Baleares scenario, it refers to low level of qualification of their workers; in the sense that the education level is comparatively lower.

Despite an important percentage of the production in the Canary Islands' economy is done in tourism sector, its is characterised by a bigger production

diversification. In last decades this economy has converged, in terms of GDP per capita, to the Spanish average, thanks to growth of productivity and activity rate. Its inflation rate has been lower than the national average, however, the increase of their wages, in real terms, has been higher than the Spanish average. Its bad performance at wage stadium has compensated its increase in productivity rate, this fact has implied that the growth of unit labour costs were higher to Spanish average. The analysis of labour market indicates that, like in Balears economy, the workers don't have a high degree of education.

This study has shown as Balearic and Canary Islands share some common characteristics. So, the economic cycle in both insular regions not seem high synchrony with the Spanish economic cycle that can mainly be explained by its common production structure, based on tourism industry.

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