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INEQUALITIES IN HUMAN DEVELOPMENT IN SPAIN: APPLICATION TO ANDALUSIA REGIONS HUMAN CAPABILITIES FOCUS

This article proposes to measure the levels of human development in the region of Andalusia (Spain), starting by dividing the region into 63 territorial units. This measurement uses the focus proposed by the United Nations Development Programme (UNDP), developed specifically through its Human development index (HDI-2010). The calculation of the HDI in Andalusia shows significant contrasts. This research focuses on demonstrating the importance of studying human development levels in small territorial areas and highlights the contrasts within a heterogeneous region of a developed country, based on the HDI methodology.

Keywords: human development, growth, Spain, Andalusia, HDI.

JEL classifications: O11, O18, R11.

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НЕРІВНОМІРНИЙ РОЗВИТОК ЛЮДСЬКОГО КАПІТАЛУ В ІСПАНІЇ: НА ПРИКЛАДІ РЕГІОНУ АНДАЛУСІЯ З АКЦЕНТОМ НА КАДРОВОМУ ПОТЕНЦІАЛІ

У статті виміряно рівень розвитку людського капіталу в регіоні Андалусія (Іспанія). Для дослідження регіон поділено на 63 територіальні одиниці і проаналізовано за методикою Програми розвитку Організації Об'єднаних Націй (ПРООН), розробленої із застосуванням Індексу людського розвитку (HDI-2010). Розрахунок для Андалусії виявив значні контрасти. Продемонстровано важливість вивчення рівня розвитку людського потенціалу на малих територіальних одиницях, підкреслено контрасти в розвитку країни.

Ключові слова: розвиток людського капіталу, економічне зростання, Іспанія, Андалусія, Індекс людського розвитку.

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НЕРАВНОМЕРНОЕ РАЗВИТИЕ ЧЕЛОВЕЧЕСКОГО КАПИТАЛА В ИСПАНИИ: НА ПРИМЕРЕ РЕГИОНА АНДАЛУСИЯ С АКЦЕНТОМ НА КАДРОВОМ ПОТЕНЦИАЛЕ

В статье измерен уровень развития человеческого капитала в регионе Андалусия (Испания). Для исследования регион поделен на 63 территориальные единицы и проанализирован по методике Программы развития Организации Объединенных Наций (ПРООН), разработанной с применением индекса человеческого развития (HDI-2010). Расчет для Андалусии выявил значительные контрасты. Продемонстрирована важность изучения уровня развития человеческого потенциала на малых территориальных единицах, подчеркнуты контрасты в развитии страны.

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Ключевые слова: развитие человеческого капитала, экономический рост, Испания, Андалусия, Индекс человеческого развития.

1. Introduction. Since the UNDP published its first Human Development Report in 1990, the focus and methodologies proposed have become an authoritative reference. The UN's notion of development includes a full conceptual evolution that extends from the mere consideration of economic growth as a measure of advances in a community's socioeconomic situation to the positions articulated by Amartya Sen and Mahbub ul Haq. The notion is focused on human capabilities or liberties; it measures the conditions of life that a human being enjoys in his or her own environment and that enable an individual to be or do what he/she wishes to be or do. This measure is based on the summary variables, a reflection of the conditions of human life organized in 3 dimensions: health, education and standards of living.

The study developed here aims to provide an image of a situation and evolution of human development in Andalusia by analyzing different territorial units that compose this region. The Autonomous Community (AC) of Andalusia is located in the southernmost part of the Iberian Peninsula and has the surface area of 87,268 km². It is characterized by intense socioeconomic and environmental contrasts that grant it great diversity. Application of this methodology of analyzing geographical units smaller than a country is supported by the UNDP itself in its 2010 Human Development Report (HDR-2010). This study adapts the methodology proposed by the UNDP, taking into account the availability of data at the level of towns so that we can aggregate the data later. The socioeconomic heterogeneity in Andalusia makes it necessary to understand the dimension of human development from a more concrete perspective, in smaller geographic areas.

The investigation proposed is organized as follows. First, it presents the evolution of the concept of development, detailing the advances in the progress made in procedures for quantifying it as well. After this review, it will define the methodology chosen to measure the levels of human development in Andalusia. These measures take as a reference the measures that the UNDP proposes as updated in HDR-2010. The contribution of this research focused on demonstrating the importance of studying human development levels in small territorial areas and for the first time highlights stark contrasts within the heterogeneous region of a developed country, based on a methodology as strong as the HDI. This contribution will provide a useful tool for territorial cohesion policies.

2. The concept of human development and its measurement. Until the 1970s, the conceptual approach to human development formed part of the concepts of economic growth and social well-being. It was defined as a ranking parameter based on the per capita GDP. After the proposal by Seers (1970), the concept of development advanced through the introduction of the notion of human scale development. The advance in measurement indicators involved the gradual abandonment of the strictly economic conception. The best-known aspect of this evolution dates to the beginning of the 1990s, with the formulation of the concept of human development, based on the idea of satisfying basic needs of an individual. This approach gained strength during the 1990s, due to the efforts of the UNDP to define human development. The definition takes as its foundation the concept developed by Sen and Mahbub ul Haq

(ul Haq, 1999), basing on the levels of individual freedom and freedom in the capabilities needed to lead the kind of life that individuals have reason to value.

This new approach stresses the importance of accumulating human capital, which fundamentally implies investing in education, health, research and development, nutrition and family planning. Economists have been indicating the limitations in the use of the per capita GVA for decades (Khan, 1991). The expansion of the measurement through this kind of indicator seeks to achieve a fuller understanding of human development. Thus, an objective indicator of human development should be constructed from a quantitative synthetic indicator that would compile the multidimensionality described through a group of objective variables. It may be that the greatest difficulty in developing the index (Castro, 2004), such as the analysis of distance or principal component analysis.

In 1990, the UNDP presented a new proposal for measuring human development. This measure was included in the first Human Development Report, a document still published today, that explains a new conceptual foundation, as well as a new methodology for measuring human development. To make the variables operative, this measurement is structured into 3 groups of variables (health, education and standard of living), called the essential components. Thus, the closer a country's HDI is to 1, the shorter the distance it needs to advance. The task for each country is to find the way of reducing its insufficiency (UNDP, 2000). Its utility stems from its multidimensionality, since it corresponds to the concept of human development (Sutcliffe, 1993).

3. Measurement of the levels of human development in Andalusia, Spain.

Measurement of human development in Andalusia using the proposed scale has not been undertaken prior to this investigation. The methodology proposed by the UNDP through the HDI has been adapted by various authors based on the conditioners derived from the data available and fitted the environment studied etc. This is the methodology used by Crafts (1997) of the implications of economic development for standards of living in Western Europe and in the East Asian members of the OECD. It is also used by Horrell (2000) in analyzing the achievements in the United Kingdom. And it is close to the studies performed by Herrero et al. (2004) and Marchante et al. (2006). The foregoing studies also differ from the approach presented in this investigation in that our study updates the methodology used according to the latest recommendations of the UNDP in the choice of indicators and, above all, its application to a highly differentiated geographic area. The subject of these studies is primarily local environments in developed countries, which demonstrates the validity of applying the methodology proposed to this kind of environment. It is very useful to understand the internal inequalities within an autonomous community like Andalusia.

The choice of geographical units from which to combine the data on towns will determine the potential of the analysis. These units should have some inner homogeneity, as well as comparability with other units. Using the mosaic of towns in the region would make the study too fragmented, and the provinces are too few and artificial for fulfilling the requirements we have proposed (Rodriguez and Zoido, 2002).

The response proposed in this study takes as its reference the county map developed in 1998 as a technical proposal (Benabent, 1998). This proposal divides Andalusia into 63 counties or intermediate units between town and province.

Since the indicator proposed is based on the aggregation of town data, the limitations are great, as homogeneous data on towns are very scarce in terms of both time and space. For this reason it has resorted to the census data to construct specific variables, choosing 1991 and 2001 as the time periods in order to create a sufficiently broad time span for the analysis.

For the dimension of health, 2 variables have been selected. The first is life expectancy at birth (LE), calculated according to the methodology of (Benach, 2004), for each of the zones analyzed. Many authors remark that measurement of the tendencies in mortality and life expectancy in local areas has acquired particular relevance in developed countries in recent years. LE has great descriptive power, since it synthesizes many other health variables (UNDP, 2009). Although the HDI includes only this variable, we have introduced the second variable in our study, the infant survival rate (ISR), calculated as the rate of infant deaths per 1000 births minus 1. In this study we included this variable as recommended by Anan and Sen (1994) for calculating the HDI of developed countries. The system of aggregation for these variables was proposed in HDI-2010 for the aggregation of variables within the same dimensions, that is, the geometric mean.

$$\text{Dimension Health}(t) = (\text{LE}(t) * \text{ISR}(t))^{(1/2)}$$

For the dimension of education we consider the average years of instruction (AYI), as has been done in the most recent reports. As the second component we use an extension of the literacy rate employed in HDI. To adjust this variable to a developed environment, we included both illiterate individuals and those people who did not complete primary school, using the inverse of the proportion of this population group to adult population, the rate of adult population that possesses education (RAE). Introducing this variable fulfils the need for a certain level of knowledge to increase other liberties and to enable individuals to promote their own interests (UNDP, 2010).

$$\text{Dimension Education}(t) = (\text{AYI}(t) * \text{RAE}(t))^{(1/2)}$$

The component of decent standard of living, calculated in the HDI from the per capita gross national income, takes as its reference here the only series of homogeneous data available for Andalusian towns, the net income declared by taxpayers (NID). The component of decent standard of living should reflect the decreasing earnings produced by transforming incomes into human capabilities, since a respectable standard of living does not imply infinite income (Marchante et al., 2006). It has been included as additional variable to complement the measure proposed by the UNDP, the employment rate for individuals of working age (ER). This choice is based on the idea underlying HDI, the measurement of human capabilities to achieve a life in accordance with individuals' preferences, for which it is necessary to have a job.

$$\text{Dimension Standard of Living}(t) = (\text{NID}(t) * \text{ER}(t))^{(1/2)}$$

For the final construction of the index, following the methodology used in HDI-2010, one fundamental change consisted of the change in the geometric mean of the indexes of the 3 components.

$$\text{HDI}(t) = (\text{D.Health}(t)^{1/3} * \text{D.Education}(t)^{1/3} * \text{D.Standard Living}(t)^{1/3})$$

The final values obtained for each dimension, as well as the global index value, are normalized so that each case takes a value between 0 and 1. For this normalization, instead of using a predefined cut-off point beyond which achievements are ignored, HDI-2010 takes as its reference the maximum values observed in each component. Following the alternatives proposed by Mazumdar (1999) and Horrel (2000), have also been considered the minimum values observed in the series used as a point of reference for normalization.

Normalization of the Dimension Index:

$$\text{Dimension Index } (i) = \frac{\text{Estimated Value} - \text{Minimum Value}}{\text{Maximum Value} - \text{Minimum Value}}$$

To analyze the improvements in each component, as well as the global improvement over the two periods of time, values were subtracted of the indexes calculated for each time period ($t_2 - t_1$) (Kakwani, 1993), as indicated in the following.

$$\text{Improvements in the dimension indexes: } \Delta Di(t_2-t_1) = Di(t_2) - Di(t_1)$$

Improvements in the overall index of human development:

$$\Delta HDI(t_2-t_1) = HDI(t_2) - HDI(t_1)$$

4. Results. The values referring to HDI of Andalusian regions, calculated for 1991 and 2001, are shown in Table 1. In the first place in the 2001 ranking we see diverse regions composed of the metropolitan areas of the capitals of provinces, as well as in the coastal areas, since these areas enjoy higher levels of human development. The first territory in the ranking enjoys the HDI of 117.25% with respect to the mean for 2001, although the highest value for 1991 was 125.60%. In contrast, the values for the areas of Huescar and los Montes are markedly low. Both these areas are in the province of Granada and have the values of 84% and 86% of the mean for Andalusia in 2001 (Table 1), slightly higher than the values registered in 1991. These data show the significant contrasts that can occur in the same province, since the province of Granada includes areas located among both the first and the last positions in the ranking.

Table 1. Values of HDI in Andalusian regions for 1991 and 2001 and their variation

Position	Code	Territorial Unit	HDI 2001	% with respect to the mean 2001	HDI 1991	% with respect to the mean 1991
1	G5	Fertile plain of Granada	0.866	117.3	0.803	125.6
2	H5	Metropolitan Area of Huelva	0.854	115.5	0.781	122.2
3	M6	Western Costa del Sol	0.853	115.4	0.811	126.9
4	S5	Metropolitan Area of Sevilla	0.851	115.2	0.80	125.2
5	M4	Malaga - Valley of the Guadalhorce	0.846	114.5	0.789	123.5
6	A6	Almeria -Countryside of Nijar	0.843	114.1	0.776	121.4
7	CO5	Metropolitan Area of Cordoba	0.835	113.0	0.809	126.6
8	J1	Countryside of Jaen	0.829	112.2	0.767	120.1
9	CA4	Bay of Cadiz	0.825	111.7	0.782	122.4
10	J2	Sierra Morena of Jaen	0.809	109.5	0.760	118.9

The End of Table 1

Position	Code	Territorial Unit	HDI 2001	% with respect to the mean 2001	HDI 1991	% with respect to the mean 1991
11	A3	Eastern Almeria	0.806	109.0	0.690	108.0
12	CA2	Countryside of Jerez	0.802	108.6	0.746	116.7
13	CA6	Countryside of Gibraltar	0.795	107.6	0.726	113.7
14	H2	Riotinto Mining Region	0.791	107.1	0.716	112.0
15	A7	Western Almeria	0.791	107.1	0.697	109.1
16	J6	La Loma	0.776	105.0	0.718	112.4
17	H4	Western coast	0.772	104.4	0.606	94.9
18	M2	Mountains of Ronda	0.768	103.9	0.680	106.4
19	H3	Andevalo	0.766	103.7	0.638	99.8
20	H6	Condado	0.764	103.4	0.614	96.1
21	J5	Countryside north of Jaen	0.763	103.3	0.68	106.3
22	CO6	Puente Genil	0.754	102.0	0.65	101.7
23	S4	Aljarafe	0.752	101.8	0.635	99.3
24	CO2	Valley of the Guadiato	0.748	101.2	0.658	103.0
25	M5	Axarquia	0.748	101.2	0.622	97.4
26	H1	Sierra of Huelva	0.743	100.5	0.609	95.2
27	S6	Countryside of Carmona	0.739	100.0	0.63	98.6
28	CO8	Subbetico Mountains of Cordoba	0.737	99.8	0.648	101.4
29	A2	Upper Almanzora	0.737	99.7	0.685	107.2
30	CA1	Northeastern coast of Cadiz	0.735	99.4	0.595	93.1
31	S7	Ecija	0.728	98.5	0.627	98.0
32	A5	Alpujarra Mountains of Almeria	0.726	98.2	0.61	95.5
33	J3	El Condado-Las Villas	0.722	97.7	0.615	96.3
34	G10	Coast of Granada	0.722	97.7	0.588	91.9
35	S8	Lower Guadalquivir	0.721	97.5	0.598	93.5
36	CO1	Los Pedroches	0.721	97.5	0.631	98.8
37	S9	Countryside of Moron and Marchena	0.719	97.3	0.598	93.5
38	CO3	Upper Guadalquivir of Cordoba	0.719	97.3	0.609	95.3
39	M1	Antequera	0.718	97.1	0.621	97.1
40	M3	Sierra of Las Nieves	0.714	96.6	0.53	83.0
41	S2	Silver Route	0.71	96.1	0.559	87.5
42	G3	Baza	0.708	95.8	0.619	96.8
43	S11	Estepa	0.705	95.4	0.619	96.8
44	CO4	Palma del Rio	0.701	94.9	0.582	91.0
45	A4	Countryside of Tavemas	0.698	94.5	0.521	81.5
46	CA5	La Janda	0.697	94.4	0.579	90.6
47	A1	Los Velez	0.696	94.2	0.585	91.5
48	G8	Valley of Lecrin	0.694	93.9	0.548	85.8
49	S3	Fertile plain of Sevilla	0.692	93.6	0.576	90.2
50	S10	Osuna	0.688	93.2	0.567	88.7
51	G7	Alhama-Temple	0.685	92.7	0.593	92.7
52	J7	Alcala la Real	0.682	92.2	0.595	93.1
53	CA3	Sierra of Cadiz	0.681	92.2	0.565	88.4
54	J8	Sierra of Magina	0.681	92.1	0.584	91.4
55	CO7	Countryside of Baena	0.675	91.4	0.569	89.1
56	J4	Sierra of Segura	0.673	91.1	0.598	93.6

The End of Table 1

Position	Code	Territorial Unit	HDI 2001	% with respect to the mean 2001	HDI 1991	% with respect to the mean 1991
57	G4	Western Granada	0.67	90.7	0.573	89.6
58	G6	Guadix	0.668	90.3	0.517	80.9
59	G9	Alpujarra Mountains of Granada	0.667	90.2	0.552	86.4
60	S1	Sierra Morena of Sevilla	0.662	89.6	0.586	91.6
61	J9	Sierra of Cazorla	0.652	88.3	0.552	86.4
62	G2	Los Montes	0.639	86.5	0.54	84.5
63	G1	Huescar	0.622	84.1	0.533	83.5

Source: Developed by the authors.

The order of the list of territories is based on the value of their 2001 HDI.

In general, the 15 first positions in the index are occupied by the same areas in 1991 and 2001, even if the order has changed during these years. From this we can deduce that the most developed regions in Andalusia have been located in the same areas during the decade analyzed. The situation is not as clear for the last 10 positions, although certain areas have maintained their negative positions at the end of the list (Los Montes and Huescar). We should therefore also consider the differences of the absolute values from the values estimated for the time periods considered (Table 2). This shows a general, although not homogeneous, evolution of the human development levels. As can be seen in Table 2, none of the first 22 counties in the ranking based on its change in HDI reached the mean for Andalusian HDI in 1991. In other words, the greatest increases in HDI correspond to the areas that were most backward at the start of this analysis. This situation can be seen as positive, since it shows that during the decade analyzed specific backward regions came closer to the mean values.

Table 2. Analysis of the evolution of HDI in the territories of Andalusia, based on their components

Position	Code	HDI Change	Health Change	Standard Living Change	Education Change
1	M3	0.184	0.122	0.238	0.168
2	A4	0.178	0.020	0.167	0.230
3	H4	0.165	0.015	0.136	0.263
4	S2	0.151	0.005	0.117	0.236
5	G6	0.150	0.027	0.136	0.196
6	H6	0.149	0.001	0.104	0.261
7	G8	0.146	0.024	0.115	0.215
8	CA1	0.140	0.016	0.154	0.190
9	G10	0.135	0.013	0.133	0.187
10	H1	0.134	0.004	0.009	0.229
11	H3	0.128	0.008	0.091	0.220
12	M5	0.126	0.008	0.147	0.174
13	S8	0.123	0.016	0.101	0.184
14	S10	0.122	0.013	0.125	0.155
15	S9	0.121	0.015	0.105	0.174
16	CO4	0.119	0.006	0.101	0.174
17	CA5	0.118	0.011	0.120	0.165
18	S4	0.118	0.015	0.127	0.170
19	CA3	0.116	0.003	0.120	0.160
20	A5	0.116	0.089	0.164	0.091

The End of Table 2

Position	Code	HDI Change	Health Change	Standard Living Change	Education Change
21	S3	0.115	0.017	0.092	0.166
22	A3	0.115	-0.008	0.131	0.182
23	G9	0.115	0.053	0.135	0.120
24	A1	0.111	-0.012	0.139	0.134
25	CO3	0.110	0.028	0.082	0.156
26	S6	0.109	-0.001	0.110	0.164
27	J3	0.107	-0.008	0.117	0.147
28	CO7	0.106	0.013	0.071	0.153
29	CO6	0.104	0.011	0.082	0.163
30	S7	0.102	0.015	0.083	0.151
31	J9	0.101	0.011	0.116	0.11
32	G2	0.099	0.008	0.103	0.126
33	M1	0.097	0.033	0.101	0.121
34	G4	0.097	0.009	0.083	0.135
35	J8	0.097	0.008	0.105	0.121
36	A7	0.094	0.016	0.126	0.117
37	G7	0.092	-0.012	0.128	0.116
38	CO2	0.090	-0.004	0.048	0.17
39	CO8	0.090	0.002	0.091	0.131
40	CO1	0.089	-0.01	0.086	0.133
41	G3	0.089	0.006	0.090	0.125
42	G1	0.088	0.010	0.123	0.088
43	M2	0.088	0.037	0.097	0.11
44	J7	0.087	0.017	0.085	0.105
45	S11	0.086	-0.008	0.100	0.119
46	J5	0.084	0.025	0.084	0.115
47	S1	0.076	-0.011	0.074	0.111
48	J4	0.075	0.021	0.068	0.094
49	H2	0.075	0.063	0.046	0.111
50	H5	0.073	0.024	0.097	0.092
51	CA6	0.069	0.023	0.107	0.071
52	A6	0.067	0.011	0.111	0.077
53	G5	0.064	0.025	0.090	0.074
54	J1	0.062	0.003	0.089	0.083
55	J6	0.058	0.001	0.082	0.075
56	CA2	0.057	0.020	0.092	0.055
57	M4	0.057	0.015	0.095	0.058
58	A2	0.052	-0.005	0.123	0.034
59	S5	0.051	0.013	0.096	0.044
60	J2	0.050	0.014	0.061	0.068
61	CA4	0.043	0.020	0.102	0.008
62	M6	0.042	-0.009	0.142	-0.005
63	CO5	0.026	0.025	0.082	-0.023
		0.1	0.015	0.107	0.132

Source: Developed by the authors.

Units ordered based on the value of the change in their HDI 1991-2001.

The average growth of the 15 territories that grew least (Table 3) is 0.087 less than the average growth of the 15 areas that grew most. Further, in considering the dimensions that compose the HDI, the 15 territorial units that grew least in the component of health have worse values as compared to 1991, although, as will be shown later, these negative changes do not occur in the regions with the worst initial values. The mean total change in the dimension of health shows the most moderate growth of 3 considered, a fact that can be explained by the slow pace of advances in the variables included in this component. As to the components of standard of living and educa-

tion, the change in the 15 territories with the least growth is 0.073 and 0.155 less, respectively, relative to the 15 units with the greatest growth. These data show well-differentiated progress, although it remains to analyze whether these different paces have generated larger or smaller internal imbalances.

Table 3. Average growth of values of HDI and its dimensions for the period 1991-2001 in the 15 territorial units with the highest and the lowest growth

	HDI	HEALTH	STANDARD of LIVING	EDUCATION
15 territorial units with the highest growth (1)	0.143	0.041	0.147	0.208
15 territorial units with the lowest growth (2)	0.056	-0.005	0.074	0.053
(1)-(2)	0.087	0.046	0.073	0.155

Source: Developed by the authors.

To analyze the way in which different rhythms of growth in human development influence the territorial balance in Andalusia, we use the linear correlation coefficient (Table 4), as well as the standard deviation. The linear correlation coefficient is applied to the relationship between the values that refer to the global index for 1991 and the evolution of the values of this index in the period considered (1991-2001). These values are used to determine the relationship between the changes described and the starting situation. In an ideal situation, the greatest changes in the global index would correspond to the most backward regions, which would provide evidence of the process of convergence between the regions. The absolute values of the linear correlation coefficient range from 0 to 1, so that the unit 1 represents the maximum correlation. In reality, if we consider the sign, the correlation coefficient would take values from -1 to +1. In this case, the magnitude of the relationship is determined by the numerical value of the coefficient, with the sign reflecting the direction of this value.

Table 4. Correlation index for lines of the HDI and their components in 1991 and the changes registered in the period 1991-2001

	HDI	Health	Standard of Living	Education
CIL	-0.775	-0.856	-0.451	-0.701
Significance	p = 0.0000	p = 0.0000	p = 0.0002	p = 0.0000

Source: Developed by the authors.

Calculating the linear correlation index between the values of the index in 1991 and the differences or the performances of the index in the period 1991-2001, the estimated value of -0.775 implies greater growth in the regions with worse results in 1991, in other words, the process of convergence. The analysis of the coefficient of variance that refers to 3 dimensions shows that the greatest convergence occurred in the component of health, in which the coefficient estimated at -0.856 indicates more intense growth in the regions with the worse starting point in 1991. In contrast, the value of -0.451 for the standard of living does not show such an intense relationship between growth and zones with worse initial results. From the data presented, there is a process of territorial rebalancing in health and education, which shows the value of both policies as axes in the process of territorial leveling of development in Andalusia.

5. Conclusions. According to the adaptation of the methodology proposed by the UNDP, when measuring the levels of human development for Andalusia, the first positions in the 2001 ranking are held by the regions around metropolitan areas of the capitals of provinces, as well as the coastal zones, since these areas enjoy greater levels of human development. The calculation of HDI for Andalusia shows significant contrasts. The first 15 positions in the index are held by the same areas in 1991 and 2001, although the order of these positions changed during the decade. What can be deduced is that the most developed regions in Andalusia continue to be located in the same areas. For the first time, the stark contrasts within a heterogeneous region of a developed country are highlighted.

In the years from 1991 to 2001 there was general growth in human development indexes of all Andalusian territories, although it does not necessarily mean homogeneous growth. The greatest increases in HDI correspond to the areas that were most backward at the starting point of our analysis. This situation can be interpreted as positive, since it shows how, in the decade analyzed, certain backward regions grow closer to the average value of Andalusian development. Finally, can see a greater process of territorial rebalancing in health and education, which shows the value of both policies as axes in the process for evening out territories in the development of Andalusia.

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