Demographic structures and the geographical distribution of the municipalities of the Guadiana hydrographic basin: Iberian Peninsula

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Abstract: The behavior of the population is a basic datum to be taken into account in any of the studies to be considered and in any of the possible scenarios that may be represented from a future perspective. Therefore, when evaluating the present to act in the future, it is necessary to have enough information about the population, both to observe the behavior and real satisfaction of the social demand and to design an adequate economic and social policy that responds to the basic needs of the population that occupies and consumes the space. This is an investigation of quantitative type, in its methodological approach, through the use of census data of population considering the period 2001-2011. In the study of the municipalities located in the basin Guadiana population size categories apply. Also, the structure of the current population is examined and a predictive model of the evolution of the population in order of being able to rationally anticipate future trends in the populations analyzed were performed.

Key-Words: Rurality index, Socio-Spatial dynamics, Predictive models, Population analyse; River Guadiana; Population system

1 Introduction

The reality of rural areas in Europe shows numerous and important territorial imbalances of different types and levels (EC, 2010a). The permanent nature of these regional disparities has increased since the recent enlargement of the EU, and the need to move towards territorial convergence, favoring the inclusion of the principle of territorial cohesion in the objectives of the EU (art. 158 del Tratado de Lisboa). As a result, territorial cohesion has become a relevant issue in EU policies, and a priority in legislative proposals for cohesion policies for the period 2014-2020 (EC, 2011) (Sanchez-Zamora et al., 2014).

In this context of territorial disparities, it is evident that European rural areas do not evolve homogeneously, which confirms the existence of different spatial dynamics. The concept of rural territorial dynamics refers to the processes of development in the socio-economic structure, the institutional framework and the environmental capital of rural areas, and the changes that accompany the effects of development (Rimisp, 2007). In this sense, it could be said that there are two types of rural areas that coexist within the EU: those that have the dynamics of development defined by strong economic growth, social cohesion and environmental sustainability, and those in which economic stagnation, depopulation and degradation

of the environment persist (Sánchez-Zamora et al., 2014).

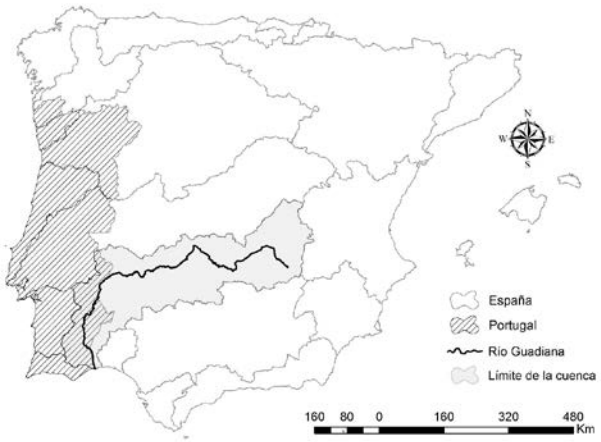
In recent years, the increasing intensity of changes and the diversity of dynamics that are taking place in rural areas have highlighted the need for research that can cope with the intellectual and political challenges that arise as a result of these issues. As a result, several projects have tried to distinguish between rural *"leaders"* and *"laggards"* in order to compare their characteristics and determine the factors that could explain these different processes of change (Sanchez-Zamora et al., 2014). Some of the most important projects in Europe include the Study on Employment, Growth and Innovation in Rural Areas (SEGIRA) (EC, 2010b), European Development Opportunities for Rural Areas (EDORA) (Kahila et al., 2009, Copus et al., 2011), and Dynamics in Rural Areas (DORAS) (Bryden, Hart, 2004). Beyond Europe's borders, one of the most important projects in Latin America is the Rural Territorial Dynamics Project (Rimisp, 2007). In this regard, several authors have tried to identify the key factors that influence the dynamics of territorial development from an economic perspective (Terluin, 2003; Agarwal, et al., 2009), social (Putnam, 1993; Whiteley 2000; Nelson, Sampat, 2001; Kahila et al., 2009) and environmental perspective (Hoggart et al., 1995; Courtney et al., 2006; Langlais, Tepecik, 2009).

The accelerated worldwide urbanization progress over the last few decades has given rise to the consolidation of an uneven pattern of concentration, that is to say a heterogeneous population distribution over a geographical space, thus creating territorial imbalances (United Nations 2008; Prieto, 2011). The spatial intensity and speed of recent changes in Spain and Portugal provides a paradigmatic example of the rapid shift to a new system of urban-rural relationship in the international basin of the River Guadiana, based on a modified dichotomy between urban and rural areas (Stellmes et al., 2013). In this regard, our research fits into the studies which analyze recent changes in the population settlement system and its effect on the spatial organization of the urban network in the international basin of the River Guandiana (Prieto, 2011). The main objective therefore is to determine population flows in the Spanish-Portuguese municipalities of the international River Guadiana basin. This objective is complemented by more specific ones, such as: a) Calculating the current rurality index of the basin; b) Assessing the current evolution of the population (2001-2011); c) Analyzing population structure; d) Drawing up a predictive model for population evolution starting from the analysis of the current population.

2 Materials and methods

The Guadiana River is the fourth longest river of the Iberian Peninsula, with 829 km^2 of the route. It is a river that belongs to the Atlantic slope, with a hydrographic basin of 67.733 km^2, extending through the autonomous communities of Castilla-La Mancha, where it is born, Extremadura, Andalucia, the Alentejo regions and the Portuguese Algarve. Its final course separates Spain from Portugal, making a physical border between Andalucia and the Portuguese Algarve, leading to Ayamonte and Vila Real de Santo António (fig.1).

Fig. 1: International basin of the River Guadiana location



Source: Compiled by author from NCGI (National Centre for Geographic Information) data.

The methodological approach of this research is quantitative. An analysis of spatial distribution of the population located in the international basin of the River Guadiana is performed. Starting from censual data we try to reproduce the make-up of the population system of the latest demographic census (2011) (Mora *et al.*, 2016)

One of the ways of presenting the results of municipal censual data is by grouping localities according to their population size. To this effect, 5 population strata were defined, thus achieving representation of all the municipalities in the international basin of the River Guadiana: under 500; 501 to 2000; 2001 to 5000; 5001 to 10000 and over 10000 inhabitants (Mora et al., 2015).

This paper will also analyze the current evolution of the population along the international basin of the River Guadiana in a period spanning from 2001 to 2011. In this regard, we are using as main data

Table 1: Percentage of the number of Spanish and Portuguese municipalities of the international basin of the river Guadiana by population size

Population	Number of municipalities			Municipalities %			Municipalities %		
	Total	Spain	Portugal	Total	Spain	Portugal	Total	Spain	Portugal
Under 500	106	106	0	21,33	22,84	0,00	100,00	100,00	0,00
501-2000	191	190	1	38,42	40,96	3,03	100,00	99,48	0,52
2001-5.000	97	91	6	19,52	19,61	18,18	100,00	93,81	6,19
5.001-10.000	56	42	14	11,27	9,05	42,43	100,00	75,00	25,00
Over 10.000	47	35	12	9,46	7,54	36,36	100,00	74,47	25,53
Total	497	464	33	100,00	100,00	100,00	100,00	93,36	6,64

Source: Compiled by author from INE-ES-PT data. 2011.

source the national censuses of the populations of Spain and Portugal. Bearing in mind Lindenboim and Kennedy's (2003) recommendations, we will work with revised, therefore definitive data.

In order to find out upcoming trends in that population, a predictive model of demographic evolution will be performed, bearing in mind demographic variables and ageing of the current population along the international basin of the River Guadiana (Requés, Rodríguez, 1996; Mora et al., 2017a).

This paper is supplemented by the application of the database into a Geographical Information System (GIS), in order to establish both spatial and temporal dynamics and their expression in the international basin of the River Guadiana (López, Pérez, 2005; Prieto, 2011; Mora et al., 2015).

3 Results

3.1. Grouping of municipalities by their population size

In the whole of the Guadiana basin most municipalities are small, since 59,76% of them have a population of less than 2.000 inhabitants. On the other hand, the municipalities with the most population (greater than 10.000) represent 9,46% of the total (Table 1).

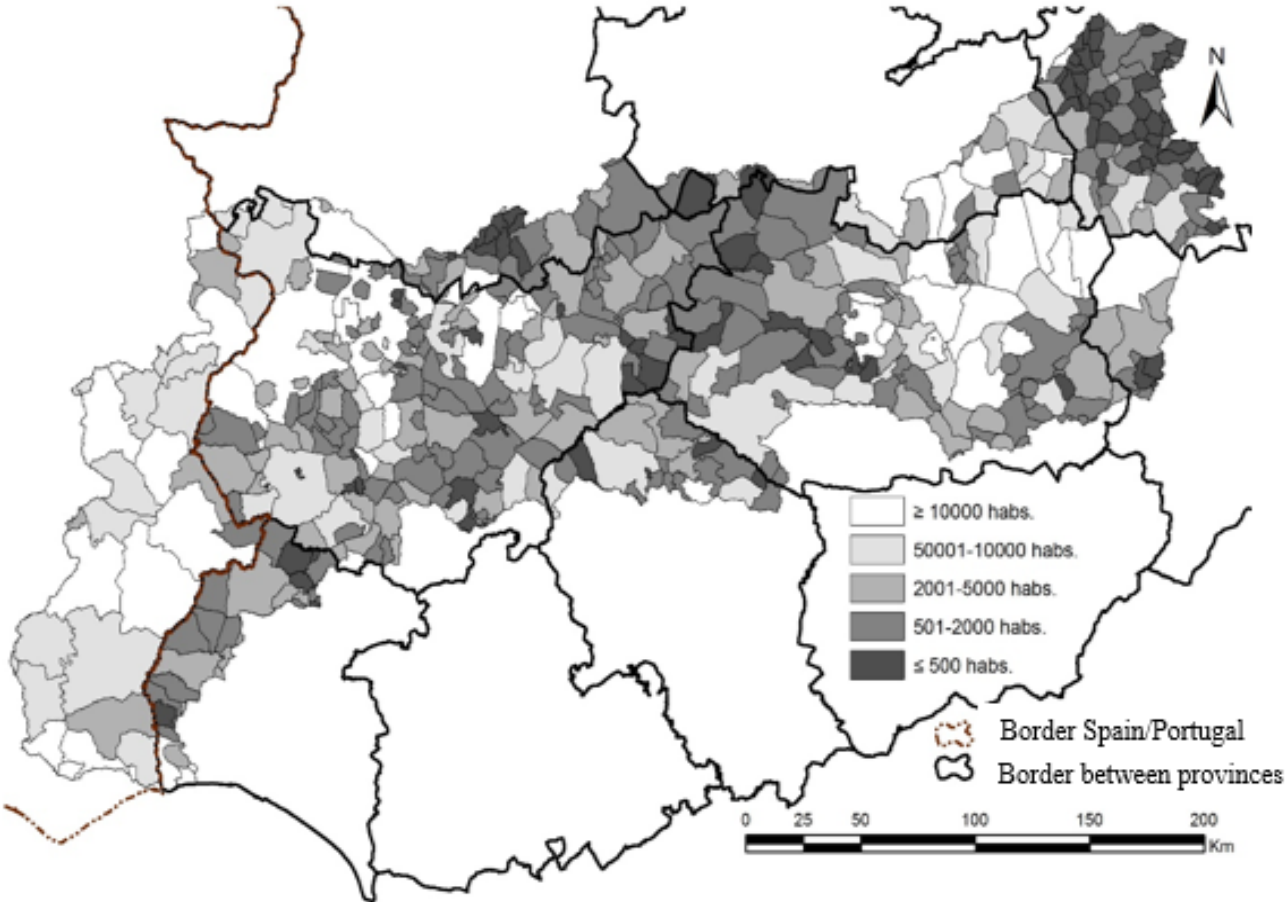
As shown in Table 1, most of the municipalities are in the Spanish demarcation, Of the 497 municipalities that have the Guadiana River as their backbone, 464 are Spanish, representing 93,36% of the total.

Most of the municipalities of the Spanish part are of small size, since 63,79% (296 municipalities) of them have less than 2.000 inhabitants (Table 1). These municipalities are concentrated mostly in the center of the basin, provinces of Ciudad Real and south of Toledo, while in the eastern part of the Guadiana (province of Cuenca) municipalities with a population of less than 500 inhabitants predominate. In the western part the smaller municipalities are located in the southeast of the province of Badajoz and north of Córdoba.

On the other hand, the municipalities with the most population (greater than 10.000 inhabitants) have the least representation, since they only constitute 7,54% of the total (35 municipalities). These municipalities are located at the ends of the basin, highlighting in the western part the cities of Badajoz, Merida, Don Benito and Villanueva de la Serena, while in the eastern part of Ciudad Real, Tomelloso or Daimiel.

In the Portuguese demarcation we find 33 of the 497 municipalities that includes the urban system of the Guadiana River, which comes to represent 6,64% of the total. Among the Portuguese concelhos stand out those that have a population that oscillates between the 5.001 and 10.000 inhabitants constituting 42,42% of the total, followed very closely by the concelhos with more than 10,000 inhabitants that represent 36,36% (Table 1).

Fig. 2: Distribution of the municipal population in the international basin of the river Guadiana



Source: Compiled by author from INE-ES-PT data, 2011 and NCGI (National Centre for Geographical Information) data.

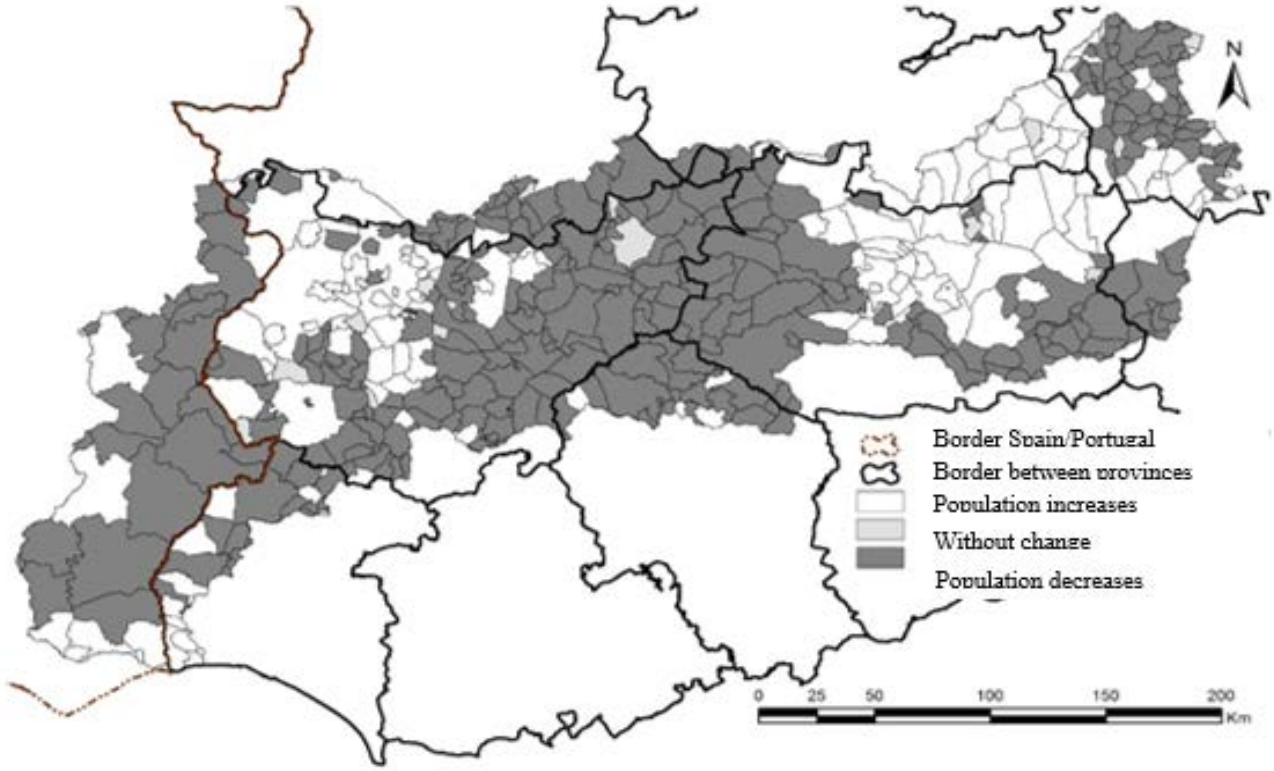
On the opposite side we find the concelhos that have less representation in the Portuguese demarcation. On the one hand, there are those with a population that ranges between 2.001 and 5.000 inhabitants, which constitute 18,18% of the total (6 concelhos), followed by those whose population varies between 501 and 2.000 inhabitants with a representation of the 3,03% of the total (1 concelho). It should also be noted that in the Portuguese demarcation there are no concelhos with less than 500 inhabitants (Table 1), quite the opposite of what occurs in the Spanish part where these municipalities constitute 22,84% (Table 1).

3.2. Population dimension by number of inhabitants

In the international basin of the Guadiana River live a total of 2.211.910 inhabitants, of which 1.766.580 inhabitants (79,87% of the total) reside in the Spanish part and 445.330 inhabitants (20,13% of the total) in the part Portuguese. In the basin as a whole, more than 1,2 million inhabitants (58,39%) settle in municipalities with more than 10.000 inhabitants, while only 239.624 inhabitants (10,83%) do so in municipalities with less than 2.000 inhabitants (Fig 2).

In the Spanish demarcation lives 79,87% of the total population of the basin (1.766.580 inhabitants). The majority of the population is concentrated in municipalities with more than 10.000 inhabitants, since it represents 54,83% of the total (968.590 inhabitants). The three largest cities are Badajoz with 151.565 inhabitants, Ciudad Real with 74.798 and Mérida in 57.797, adding up to three 284.160 inhabitants, which corresponds to 16,09% of the population residing in the Spanish part of the Guadiana (Table 2).

Fig. 3: Evolution of the population in the municipalities 2001-2011 of the international basin of the river Guadiana



Source: Compiled by author from INE-ES-PT data, 2011 and NCGI (National Centre for Geographical Information) data.

On the other hand, the population that lives in municipalities that range between 5.001 and 10.000 inhabitants adds 282.022 inhabitants, representing 15,96% of the total. This group is followed by 278.178 inhabitants (15,75% of the total) who live in municipalities with between 2.001 and 5.000 inhabitants, while in municipalities with less than 2.000 inhabitants there is the least numerous population group, since only They host 237.790 inhabitants, which represents 13,46% of the total population of the Spanish Guadiana demarcation (Table 2).

In the Portuguese demarcation it happens exactly as in the Spanish, because we observe that 72,53% of the population (322.981 inhabitants) is concentrated in the concelhos greater than 10.000 inhabitants. The three largest cities are Loulé with 70.622 inhabitants, Évora with 56.596 and Beja with 35.854, bringing together 284.160 inhabitants, representing 36,62% of the total demarcation (Table 2).

On the contrary, in the Portuguese concelhos that oscillate between the 5.001 and 10.000 inhabitants they live 100.097 inhabitants, what represents 22,48% of the total, it follows to him from far away the 22.252 inhabitants (5% of the total) that reside in concelhos with a population of less than 5.000 inhabitants. It should be noted that in the Portuguese part there are no concelhos that have less than 500 inhabitants, as it does in the Spanish part (Table 2). However, it should be noted that the Portuguese settlement system is very different from the Spanish, because there the municipality is made up of numerous smaller local entities, called freguesias, being much less than 500 inhabitants.

The Guadiana basin has had a population growth of 5,56% between 2001 and 2011, which has meant an increase of 116.555 more inhabitants. However, this growth has been uneven on both sides of the border, since in the Spanish demarcation the increase had been 7,14% (117.733 more inhabitants), while in the Portuguese part it has suffered a decrease of -0,26% (1.178 inhabitants less). (Fig. 3).

However, the superiority of female staff does not occur throughout the population histogram.

3.3. Structure of the population

In the population histogram of the Guadiana basin in 2011, it is observed that there is a predominance of

Table 2: Percentage of number of inhabitants living in Spanish and Portuguese towns in the international basin of the river Guadiana by population size

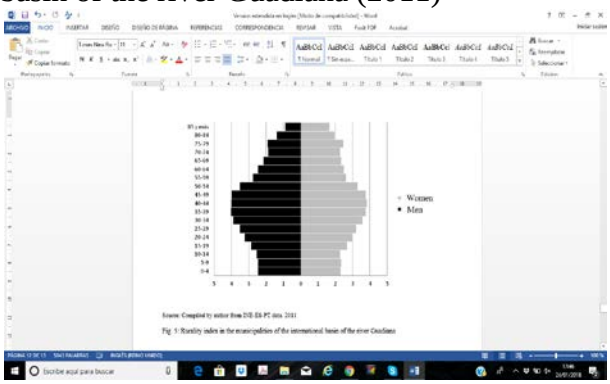
Population	Number of municipal			Inhabitants %		Inhabitants %		
	Spain	Portugal	Total	Spain	Portugal	Spain	Portugal	Total
Under 500	29.630	0	29.630	1,68	0	100	0,00	100,00
501-2000	208.160	1.834	209.994	11,78	0,41	99,13	0,87	100,00
2001-5.000	278.178	20.418	298.596	15,75	4,58	93,16	6,84	100,00
5.001-10.000	282.022	100.097	382.119	15,96	22,48	73,80	26,20	100,00
Over 10.000	968.590	322.981	1.291.571	54,83	72,53	74,99	25,01	100,00
Total	1.766.580	445.330	2.211.910	100	100	79,87	20,13	100,00

Source: Compiled by author from INE-ES-PT data. 2011.

females (15.000 more women than men), with a masculinity ratio of 98.62% (Fig 4).

In the first years there are more male staff, since more men are born than women (106 children per 100 girls) as can be seen in the greater length of the lower bar histogram on the male side. From there, the troops gradually balance themselves as they ascend in the age groups of the population histogram. It is observed that from the age of 60, women begin to predominate in all the cohorts of the population histogram, reaching even in the last cohort (> 85) to almost double their number compared to that of men, as a consequence of the longer life expectancy female: 84 years compared to 78 for men. The greater longevity of women is due to male over-mortality due to biological, labor and social reasons (lifestyle more exposed to risk factors) (Fig 4). (INE, 2011).

Fig. 4: Population histogram of the international basin of the river Guadiana (2011)



Source: Compiled by author from INE-ES-PT data. 2011

The population histogram of the basin presents a clear bulbous shape, with a narrow base, indicative of fewer and fewer cohorts, due to the low birth rate and a cusp with wider steps that show a large volume of the adult population, due to the longer life expectancy. This allows us to affirm that we are facing an aging population, characteristic of developed societies.

In the analysis of the age groups we found a large presence of staff in the population group over 65 years and over. In this cohort, there is a clear predominance of female staff (57,02% of the total population over 65 years old) compared to the male group, due to the greater longevity of women and the high level of emigration abroad, mostly male and which affected the populations of the Guadiana basin very significantly.

In this group there is an entrant or notch in the ages between 70 and 74 years (born between 1937 and 1941) that affects both sexes, although it is more perceptible in the female group: corresponds to the "unborn" during the Spanish Civil War. This fact was aggravated because the adults who had to procreate at that time were also scarce ("hollow generation" of those born in smaller numbers during the wars of the late nineteenth century and the flu epidemic of 1918).

This *"hollow generation"* is prolonged in the following steps (up to 55-59 years) due to the low birth rate in the post-war years due to the painful situation that followed the Civil War (international blockade of the Franco regime, economic autarky, shortage ...) and foreign immigration in its most intense stage (1960-1973) (INE, 2001).

The bulk of the population of the Guadiana basin (66,57%) is within the adult population (15-64 years). In this group, the most significant demographic aspects would be, first, the increase in the birth rate due to the so-called *baby boom* of the 1960s and the beginning of the 1970s. The cohorts born between 1957 and 1966 (45-55 years) correspond to the *birth boom*. This phenomenon was motivated by the economic development that the country experienced since the end of the fifties until the mid-seventies.

The second demographic aspect to consider in the adult population group is the setback that begins to suffer the population histogram from the age cohort 30-34 years (1977), when the length of the bars begins to decrease due to the decrease in fertility, which was a consequence of the important political, social and economic transformations that took place both in Spanish and Portuguese society as of 1975 and 1974 respectively (INE, 2011).

The group of young people (0-14 years old) is very small, since it only contains 14,44% of the population of the basin, due to the continuous decrease in fertility mentioned above, therefore, since 1977 the young population has reduced cohort to cohort, which has a direct consequence in the aging of the population and endangers generational replacement.

Ultimately, the amount of the population of the Guadiana basin presents a histogram, characteristic of a developed society´s aging population. The causes of this aging of the population must be sought in a very low birth rate and in a high life expectancy. The first cause is the result of changes in mentality (secularization of society, changes in family habits, incorporation of women into the workplace, availability of contraceptive means, among others), of the economic crisis that affected the developed world since 1973 (oil crisis), cultural development (prolongation of studies) and the increase in the standard of living of the population since the mid-seventies have generated a considerable reduction in fertility. (INE, 2011).

The aging of the population, by increasing the dependency ratio, can pose problems in the medium and long term of the viability of the current social protection systems, especially with regard to pensions, as well as in the health and welfare aspects. However, this is not so much a demographic or economic problem, since if employment increases, the dependency rate can decrease with the arrival of young immigrants who contribute more income to the system, through contributions.

In the future, it is foreseeable that aging will be accentuated in the international basin of the Guadiana River, because the population between 55 and 64 years old (10,35% of the total population) will begin to retire in the short and medium term, which will generate difficulties if the generational change or the arrival of new settlers is not guaranteed.

3.4. Predictive models of population evolution (2023)

In the case of maintaining the current demographic trends of the Guadiana River basin, the population in the coming years would be reduced, since the number of births would continue to decrease in the coming years. This is because since 1977 (cohort of age 30-34 years) the population has been falling gradually, so the decrease in births would be determined by the reduction in the number of women of childbearing age, being at these ages those generations of less numerous women who were born during the birth crisis of the eighties and nineties. (INE, 2014).

Another cause would be that by 2022 life expectancy in men would reach 81.8 years and 87 in women, which is a gain of 2,5 years and 1,9 compared to the current values. At the same time, life expectancy for people who are 65 years old would increase up to 20,2 years more for men and 24,1 years for women by 2022, which would cause an over-aging of the elderly population. This will have as a consequence that the death rate will grow, due to the fact that there will be more and more population in the higher age groups. (INE, 2014).

One of the possible consequences is that by the year 2023 there would be more deaths than births, which would cause a negative vegetative balance, mainly due to the decrease in the birth rate. By age, the population for 2023 will be reduced in the age brackets between 20 and 49 years, while the population would increase in the upper half of the population histogram. In fact, all age groups over 50 years of age would experience an increase in cash (Mora and Mora, 2015).

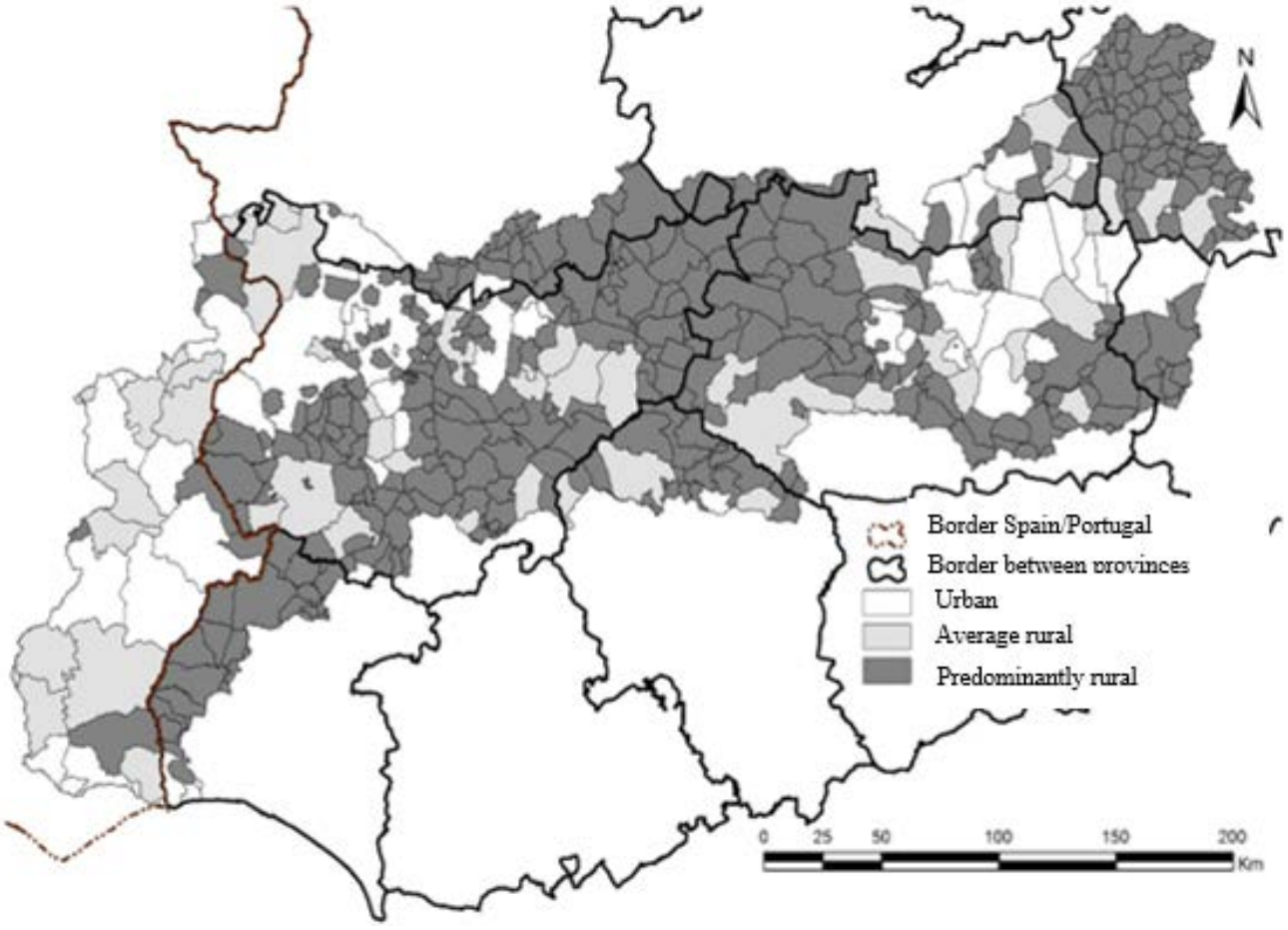
The consequences of the aging of the population will pose a challenge for the future society, since the demographic changes that are taking place will require social, economic and political reforms that the aging process requires. This fact can have a direct effect in the increase of health expenses, social benefits and disability, due to the greater number of retired people and lower active population, since by 2023 it is estimated that there is one worker for each retiree which could put in

danger the sustainability of the system (Mora et al., 2017 b).
This situation can be reversed as long as the demographic model changes, so policies must be encouraged to increase the birth rate, which would cause a decline in the rate of aging. However, this fact must be accompanied by a greater economic development that causes an increase in immigration and thus rejuvenate the structure of the population in the basin.

3.5. Index of rurality in the Guadiana basin

In the last century, different rurality indices have been created according to the conditions of each country (Zamudio et al, 2008). The Ministry of Agriculture, Fisheries and Food of the Government of Spain, which establishes as dominant rural municipalities with less than 2.000 inhabitants, intermediate rural municipalities between 2.000 and 10.000 inhabitants and urban centers with more than 10.000 inhabitants.
For the present study is established as dominant rural municipalities with less than 5.000 inhabitants, because we understand that it fits more to the traditional model of settlements in Spain and the Law of Bases of Local Regime, intermediate rural municipalities that are between 5.000 and 10.000 inhabitants, which usually have a greater number of facilities and urban municipalities with more than 10.000 inhabitants.
This adjustment in the established parameters is done in order to adapt them to a better representation of the reality of the municipalities located within the Guadiana river basin. (Mora et al., 2016).
The municipalities that make up the Guadiana basin have a predominant rurality index, but we must highlight other indices such as the intermediate rural and the urban that have an important weight in the Guadiana basin.

Fig. 5: Rurality index in the municipalities of the international basin of the river Guadiana



Source: Compiled by author from INE-ES-PT data, 2001-2011 and NCGI (National Centre for Geographical Information) data.

The Spanish demarcation of the basin is the one that has the most municipalities with rural index, most of them located in the central part of the basin (provinces of Ciudad Real and south of Toledo); in the eastern part, where the municipalities of the province of Cuenca and Albacete stand out; and finally, in the western area are the municipalities that make up the southeast of the province of Badajoz, north of Córdoba and west of Huelva. On the other hand, in the Portuguese demarcation, concelhos with a rural index have the lowest weight as a whole, marking the disparity that exists on both sides of the border (Fig 5).

Municipalities with an urban index are those that have more than 10.000 inhabitants. These concelhos have a more important weight in the Portuguese area, where we review concelhos such as Elvas, Évora, Moura or Serpa, among others. In contrast, in the Spanish part the urban index has a lower weight, however, the most prominent urban municipalities are Villarrobledo, Tarancón, Manzanares, Ciudad Real, Don Benito, Mérida or Badajoz, among others (Fig 5).

This disparity between the rural and urban world has increased in the last decade (years 2001 and 2011), since even though the population of the Guadiana basin has grown demographically, it has not done so equitably, which has caused this contrast to be accentuated. This imbalance is because the municipalities that have grown the most in the decade analyzed have been the provincial capitals and their adjacent municipalities. Examples of these are Badajoz, Mérida, Olivenza, Ciudad Real, Daimiel, Manzanares, Don Benito and Almendralejo in the Spanish part; Loulé, Castro Marim, Tavira, Vila Real de Santo Antonio, Beja and Évora in the Portuguese part. On the other hand, where the population has been lost is in the central municipalities of the basin, in the western part and in the north and south-east, just in the municipal areas where the rural index predominates (Fig 5).

4 Discussion and conclusions

The peculiarities of the spatial distribution of the population located in the international basin of the Guadiana River constitute, mainly, unfavorable conditions to successfully address a solvent process of spatial planning. We have a population system that has little relationship with the current economic structure and whose dispersion and demographic weakness complicates the provision of services and provision of infrastructure and the maintenance of a minimum economic activity.

In the international basin of the river Guadiana live a total of 2,211,910 inhabitants distributed in 497 municipalities, of which, around 60% of them have a population of less than 2000 inhabitants, although in these municipalities only live 10.83 % of the population, on the other hand, in the municipalities of more than 10,000 inhabitants live 60% of the total population. As it can be concluded that the international basin of the Guadiana River has a spatial distribution of the population very dispersed, in which populated deserts alternate with medium and high concentrations of population in the nuclei of greater relevance of the territory, corresponding to the headwaters region, capitals of the regions and province.

The population analysis of the last decade shows that the municipalities that make up the Guadiana basin have a predominant rurality index, but we must highlight other indices such as the intermediate rural and the urban that have an important weight. This disparity between the rural and urban world has increased in the last decade, since although the population of the Guadiana basin has grown demographically, it has not done so homogeneously, which has caused this demographic contrast. This imbalance is due to the fact that the municipalities that have grown the most in the decade analyzed have been the provincial capitals and their adjacent municipalities.

The population histogram of the international basin of the Guadiana River represents an aging population, typical of a developed society, due to the migratory processes, the low birth rate and the increase in life expectancy. If the current demographic trends are maintained, the current system of social protection would be endangered, especially with regard to pensions, since by 2023 it has been estimated that there is one worker for each retiree, which is an unsustainable situation.

In the international basin of the Guadiana River there is no governing nucleus capable of organizing the entire territory. To this is added the structural fragility of the internal urban network (Pillet et al., 2010, Panadero and Pillet, 1999, Cebrián, 2007). This fragility must be related to the spatial location of the urban nuclei characterized by the dispersion of the settlements that make up the network (Cañizares, 1999). Faced with this reality, the structuring of the territory of the Guadiana basin has to find a balance point between the conservation of rural spaces (repositories of a large eco-cultural deposit) and the decision making that involves more or less significant changes both at a qualitative level as quantitative.

The whole process has to rest, inevitably, on the strengthening of the core network of functional area, trying to break the demographic and economic

atony that characterizes them and making them capable of providing intermediate public services in their area of influence and the time to use these as support of commercial activities, avoiding duplication of services and replicas of equipment in all the small nuclei that are close to the headers.
The overcoming of the difficulties to achieve a balanced territory from the point of view of the distribution of the population, referring the concept of balance to a new model of rurality whose integral definition should not be delayed, will require a broad socio-political consensus based on solidarity and aware at the same time of the unification of the regional space, with possession / maintenance flows, its use between rural and urban areas characterized by fluidity and the renunciation of exclusive patrimonialism (López and Prieto, 1999).

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Notes

1. The April 2 Law 7/1985, providing the Bases for Local Regulation, in article 26, stipulates:

1. *Stand alone or conjoint municipalities will provide, in all cases, the following services:*
   a) *For all Municipalities:*
   Public street lighting, cemetery, rubbish collection, street cleaning, household drinking water supply, sewage network, access to population centres, surfacing of public roads and food and drink control.
   b) *For Municipalities with a population over 5,000, they will also provide:*
   Public park, public library, market and waste treatment.

2. Defined as number of men for every 100 women dwelling in the international basin of the River Tajo January 1st 2011. RM = Men/Women*100

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