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Location conditions for the clustering of creative activities in extra-metropolitan areas: Analysis and evidence from Spain

A.I. Escalona-Orcao[a,*], L.A. Sáez-Pérez[b], B. Sánchez Valverde-García[c]

[a] Department of Geography, University of Zaragoza, Pedro Cerbuna 12, 50009, Zaragoza, Spain
[b] Department of Economic History and Public Economics, University of Zaragoza, Pedro Cerbuna 12, 50009, Zaragoza, Spain
[c] Department of Statistical Methods, University of Zaragoza, Pedro Cerbuna 12, 50009, Zaragoza, Spain

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ABSTRACT

This article investigates the territorial conditions associated with the existence of creative activity clusters in extra-metropolitan areas. This issue is timely because the demographic, social and economic stagnation that continues to affect many of these areas requires recognition of the innovative dynamics that could alleviate it. We worked in a study zone composed of 2498 Spanish municipalities of between 1000 and 50,000 inhabitants distributed throughout the country. We began by identifying 514 municipalities with relative concentrations, or clusters, of creative activities. Next, we evaluated which factors explain the formation of the clusters identified: traditional factors related to markets and government policies—*hard* factors—or new factors related to, *inter alia*, *amenities*, tolerance, and the local *climate*—*soft* factors. To do this, we applied an econometric analysis that both manages employment and business data as exogenous variables and controls whether the demographic size and creative profile of the clusters influences the intensity of the clusterisation. The models obtained match the prediction only partially because they attribute the majority of the explanatory power to some *hard*-type factors but do not confirm the expectations raised by the *soft factors*. As a possible explanation we do not disregard the possibility that the literature has overvalued the benefit that extra-metropolitan or rural areas can extract from their specific advantages in the realm of "soft" factors. We believe that our study offers a valuable perspective on how creative activities are inserted into extra-metropolitan economies, and in this way, we contribute to a relevant social debate about rural development in both national and international spheres.

1. Introduction

This article investigates the territorial conditions associated with the existence of creative activity clusters in the small cities and municipalities located outside of large urban areas. This issue is timely because the demographic, social and economic stagnation or decline of many of rural localities requires recognition of the innovative dynamics that might exist and the extent to which they can contribute to confronting and resolving this structural crisis (Camagni & Capello, 2013; Mayer & Baumgartner, 2014). This is a long-standing problem whose influence affects the development of people and their communities, in the terms suggested by Sen (1999), capability approach and freedom, rather than arising as much from economic aspects. So, these sparsely populated rural areas usually have higher economic standards and lower unemployment rates than congested regions (Alcaide, 2011), but on the other hand, some *public goods*, such as those more relevant in the Welfare State –education, health- and infrastructure relating to physical and digital accessibility, are insufficient or of lower quality. So for rural citizens in depopulated areas, the options for defining their life project are fairly limited compared to urban citizens. It should also be pointed out that Spain's fast transition towards economic and social modernity witnessed one of the most extreme processes of rural depopulation in Europe (Collantes & Pinilla, 2011). For this reason, it is important to find activities that contribute as much to the revitalisation of local society and to territorial cohesion as they do to economic growth.

In relation to creative activities—advertising, architecture, the art and antiques market, crafts, design, designer fashion, film, interactive leisure software, music, the performing arts, publishing, software, and television and radio (UNCTAD, 2010)— international institutions consider that they can foster intelligent, sustainable and inclusive growth on all levels and recommend reinforcing their potential (European Commission, 2012). This recommendation is endorsed by recent studies that clarify the contribution of creative activities to rural development through the creation of high quality firms (McGranahan & Wojan, 2007); improved economic and social viability (Roberts & Townsend, 2015), and sometimes the development of international networks of

* Corresponding author.
E-mail addresses: aescalon@unizar.es (A.I. Escalona-Orcao), lasaez@unizar.es (L.A. Sáez-Pérez), belensv@unizar.es (B. Sánchez Valverde-García).

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collaboration (Balfour, Fortunato, & Alter, 2016). Although there are more critical works which present the difficulties of these activities in rural areas and the limitations of their impact (Anderson, Wallace, & Townsend, 2015; Argent, Tonts, Jones, & Holmes, 2013) the dominant argument seems to be that creative activities are one of the determinants of smart rural growth (Jakob & Van Heur, 2015; Naldi, Nilsson, Westlund, & Wixe, 2015) and that in all cases, there is a positive relationship between the existence of creative clusters and economic behaviour, such that in rural municipalities that contain clusters, this behaviour is better than average (Escalona-Orcao, Escolano-Utrilla, Sáez-Pérez, & Sánchez-Valverde García, 2016).

Our focus delves into a line of inquiry dominated by case studies (Freire-Gibb & Nielsen, 2014; Lafuente, Vaillant, & Serarols, 2010; Murphy, Fox-Rogers, & Redmond, 2014; Roberts & Townsend, 2015) and develops on a broader scale than usual because the study zone is composed of the 2498 municipalities of more than 1000 and less than 50,000 inhabitants located outside of large urban areas in Spain and distributed throughout the country (Ministerio de Fomento, 2016). The article begins by identifying and localising municipalities with relative concentrations, or clusters, of creative activities. In our subsequent review of the theories that could explain the localisation of these clusters, we see that together with the traditional factors brought by markets and government policies (infrastructures and other "hard factors"), other distinct factor ("soft factors") come into play. These soft factors are related to immaterial questions such as, *inter alia*, the evaluation of *amenities*, tolerance and the local atmosphere. These hypotheses are verified using an econometric analysis that not only manages employment and business data as exogenous variables but also controls whether the municipalities' demographic size and creative profile influences the intensity of the clusterisation. The models obtained confirm the predictions in the new debates because they attribute the majority of the explanatory power to some *hard*-type factors but, interestingly, do not confirm the expectations raised by the *soft factors*. In this line of inquiry, we believe that our study offers a valuable perspective on how creative activities insert themselves into extra-metropolitan economies, and in this way, we contribute to a relevant social debate about local development, which is now being discussed in both national and international spheres.

2. Material and clustering method

Spain has 7366 municipalities with fewer than 50,000 inhabitants situated outside of large urban areas (Ministerio de Fomento, 2016). These municipalities represent 90.8% of the total Spanish municipalities, 32.2% of the population, and 90.7% of the surface area of the country. Table 1 clearly shows the marked fragmented structure in Spanish municipalities, as more than 80% of those considered have populations under 2500.

The municipal structure is the legacy of the sustained population losses affecting Spanish rural areas, especially inland, from which they have yet to recover. The existence of an inland Spain depopulated by the exodus of its rural population to the large cities in the centre and the periphery of the country can already be seen in the middle decades of the 20th century, when the number of provinces losing population was steadily increasing.[1] This enormous spatial demographic shift meant that "… in the space of one generation, Spain's rural population fell by more than 25 per cent. Because initial population densities in many rural communities were already low, large parts of the country became demographic deserts" (Collantes & Pinilla, 2011, p. 1). Depopulation is shown in the average population density, 19.79 inhabitants/km^2, well below the average for the European Union, 40 inhabitants/km^2, and even lower in large inland areas (Aragón, Castilla-León, Castilla la Mancha) which average 10 to 11 inhabitants per km^2 (Ministerio de Medio Ambiente, Rural y Medio Rural y Marino, 2009).

Restricted data availability for the smallest municipalities has led us to centre our work on the set of 2498 municipalities with more than 1000 inhabitants. The information managed arises out of the statistics on businesses and employment on the municipal scale provided by the General Treasury of Social Security (in 2012) and refers to activities that are internationally considered to be creative. All of these activities generate "… tangible produces or intangible services—intellectual or artistic—with creative content, economic value and market objectives" (UNCTAD, 2010) and can be categorised into four types: Heritage, Arts, Media and Functional Creations. The NACE Rev. 2 headings that fit such definitions are presented in Table 2. The activities included in the first three categories are usually identified with the so-called cultural industries,[2] whereas the "Functional Creations" categories, which are the most numerous and heterogeneous, include activities that relate to business and individual demands for goods and services with creative content (Méndez, Michelini, Prada, & Tébar, 2012).

When interpreting these data we must bear in mind that despite their potential, creative activities, like all other sectors, have experienced severe decline due to the economic crisis. The household budget survey (INE, 2016) shows that the average spend on culture in Spanish homes fell by 44.7% from 2007 to 2014, so that the proportion of cultural spending to total spending, previously around 7%, was down to less than 5.7% by the end of the period studied. As Spain began to recover from the crisis, cultural spending did not begin to recover until 2015, and then only weakly.

To identify which of the municipalities studied contain relative concentrations, or clusters, of creative activities, we have calculated the horizontal localisation quotient (HC), a measurement that is close to the conventional localisation quotient but that considers the magnitude of the activity in the locality (Fingleton, Igliori, & Moore, 2004; Polèse, 2012).[3] Although the HC denotes the existence of a cluster when it includes positive values in a single variable, employment (*e*) or businesses (*f*), the small size of the majority of the municipalities (34.7% of which have fewer than 2000 inhabitants and 69.3% have fewer than 5000) suggests the requirement that this condition be met simultaneously in both, that is, HC_$e > 0$ and HC_$f > 0$. In this way, we minimise the risk of detecting spurious clusters because all employment

Table 1
Size distribution of the Spanish extra-metropolitan municipalities.
Source: Population census, 2011

Size (inhabitants)	Municipalities	
	Number	%
25,001 a 50,000	72	1,0
10,001 a 25,000	287	3.9
De 5001 a 10,000	412	5.6
De 2501 a 5000	603	8.2
De 1001 a 2500	1133	15.4
de 501 a 1000	1035	14.0
de 101 a 500	2686	36.5
hasta 100	1136	15.4

[1] 8 provinces out of 50 lost population from 1941 to 1950; 16 from 1951 to 1960; 23 from 1961 to 1970 (Bielza de Ory, 1989; Tamames, 1976).

[2] Thus, they are collected in the Satellite Count of Culture in Spain (*Cuenta Satélite de la Cultura en España*) (Ministry of Education, Culture and Sport (*Ministerio de Educación, Cultura y Deporte*), 2012).

[3] Indeed, the horizontal quotient is defined as the number of businesses or employments related to an activity in excess of the expected number, with the latter being the number that exists when the activity in the locality has the same importance as a reference space producing an LQ equal to 1. It is calculated for employment by first obtaining the LQ expressed as LQ = $(E_{ij}/E_j)/(E_i/E)$, with LQ being the location quotient of activity *i* in municipality *j*; E_{ij} are the employment from activity *i* in municipality *j*; E_j, is all of the employment of *j*; E_i, is the employment from the activity *i* in the entire study area; and E is the total number of employments in the study area. Then, E_{ij} is replaced by $\hat{E}_{ij}$ to obtain LQ = $(\hat{E}_{ij}/E_j)/(E_i/E) = 1$, with $\hat{E}_{ij}$ being the number of employment necessary for LQ = 1, given the other values. Finally HLQ is obtained by calculating HLQ = E_{ij} - $\hat{E}_{ij}$. With the variable for firms, the process is the same (Fingleton et al., 2004).