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Desafíos, políticas y gobernanza de los territorios en la era post-covid

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### EXTENDED ABSTRACT

#### **Title: ANALYZING COMPONENTS OF REGIONAL POPULATION CHANGE IN SPANISH REGIONS**

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#### **Abstract:**

In recent years, population distribution and aspects related to demographic dynamics have appeared on academic and political agendas. Public administrations at local, regional, national, and European level are building structures to support these issues, taking into account that they can be addressed with an economic (budgets) as well as a technical approach. The demographic challenge has become one of the most relevant policy lines for most public administrations at different levels (local, regional, national, European).

From academia, scholars of different subjects have addressed this issue from different approaches. The concepts of "places left behind", "depopulation", "empty places", "inner places " or the analysis of " shrinking regions " are examples of how the specialized literature is addressing these issues.

At European context, population dynamics, together with population flows, are being investigated in detail as a result of territorial imbalances. This is essentially a regional issue affecting certain areas of European countries. The general framework of analysis corresponds to an integrated regional system that includes European countries. In particular, the shrinking of European regions is a relevant line of applied research

included in ESPON 2020.<sup>1</sup> This document emphasized the importance of spatial context in population dynamics, through the concept of “*Complex Shrinking*”. It refers to study of clusters considering the interaction of different issues that explain the phenomenon, including geography, demography, and economy variables. In this paper we add an additional issue: the spatial interaction of territorial areas. We focus our attention on studying to what extent the spatial interaction of local areas in terms of population growth could determine a new territorial typology of geographical areas that could help to better fit policies related to demographic strategy improving the demographic situation of certain areas. To do this we analyze the sources of population change and therefore, the main drive force of population change. The aim of this paper is to exploit demographic change at regional level as a means to detect different or similar patterns that may offer evidence of territorials’ behaviors, and, consequently, the possibility of applying different tools to change population dynamics of certain areas. To improve this exploratory part of population analysis, we introduce shift-share technique to identify how the behavior of neighbor areas influences population dynamics of each region. Spatial spillover generated between neighbors’ territories are the basis to explain to what extend population dynamics of certain regions are affected and influenced by surroundings. We apply the analysis to the context of Spanish provinces (NUTS 3), considering as neighbor areas each province with a first common border.

The Bank of Spain (investigation of studies), in its Annual Report 2020, recognizes the strong disparities between the different Spanish provinces, not only economic, but also demographic (Albertos-Puebla, 2019, among others). On this study and considering elements related with the historical fact and others, one of the main contributions is to classify Spanish provinces attending to their depopulation risk, adding, as novelty, new tools that allows to define a new regional typology that improve the political recommendations. In the same way, and as far as we know, some studies (AVANT, FUNCAS, between others) are contributing to analyze different areas focusing on local development of territories and classifying regions (NUTs 2) and municipalities (LAU’S) according to their depopulation risk. Nevertheless, to the best of our knowledge, none of them incorporates the spatial demographic environment of regions.

It should be borne in mind that the main objective of the rankings performed on the demographic dynamics of regions is to help to identify policy guidelines to change the trend of population flows and improve the quality of life in the regions. In this case, and as consequence of the tendency to cluster both demographic and economic variables in Spanish provinces, the failure to consider the spatial dependence of the population among growing or shrinking Spanish provinces limits the usefulness of the information derived from the depopulation rankings of Spanish provinces. In addition, the literature review also fails to take into account the relation between the different components of the population changes and the political responsibility that could be assigned to every level of government. In this sense, it is necessary to highlight that population change is the result or can be affected by the effects derived from the interaction of different levels of government.

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<sup>1</sup> European Shrinking Rural Areas Challenges, Actions and Perspectives for Territorial Governance (ESCAPE)

In the case of Spain, policy decisions could be addressed at different territorial levels. In particular, policies to influence population dynamics could be tackled at the local, regional or national level. Therefore, the governance of territories is crucial to assess the effectiveness of policies in the regional context. In this sense, in order to design effective policies, it is necessary to determine to what extent each level of government is responsible for population change.

In this context, we consider the regional government as the base, as it corresponds to our base unit of analysis (province). In this case, there are two levels of government for making decisions on demographic issues: national and regional. The national government makes decisions in the interest not only of a particular region, but of the whole region as a whole. Regional and national levels of government can share or overlap political decisions. To avoid overlap, knowledge of the sources of population changes and the nature of spillover effects between provinces will help to better understand the behavior of demographic changes. Provinces should be analyzed taking into account their geographical situation and the surrounding area as relevant factors for determining their socio-economic situation and thus also their population flows as national or foreign migrants.

In addition, there is a third political action which, although is not a real level of government, could be considered as an extension of regional government, we refer to political decisions that affect neighboring regions. In this case, such decisions are taken by a certain regional government, considering the interconnections between territories. Bringing together the three contexts: national, regional, and inter-regional could lead to a better understanding of responsibilities between national and regional levels of government, so that policy recommendations would be more effective.

In this study and applying the spatial shift-share suggested in Montanía et al (2021), the main interest is to identify territorial connections in population dynamics, showing which level (scale) of government could be related to the political decisions in modifying population dynamics. Our main contribution is to identify the main driving forces contributing to demographic change, approximating which level of government is involved, and providing some general hypotheses and policy recommendations to fight against depopulation.

We apply this methodology to detect patterns in term of provinces with population increases and declining. To explain behaviors in the three context (national, neighborhood and regional) and according to the three-age cohort.

From a methodological point of view and following researchers such as Nazara and Hewings (2004) and Ramajo and Márquez (2008), among others, extended shift-share technique consists on adding the spatial interactions between regions, including the spatial dimension in the shift-share methodology.

Therefore, this methodology allows us to deepen on the sources of growth of the Spanish provincial population and contextualize the analysis of the population dynamics, taking into account the spatial patterns drawn along Spanish regions. With respect to the empirical literature about the Spanish provinces, we extend the study to three age cohorts: less than 15, between 15 and 64 and more than 64. Results obtained could provide a diagnosis that could improve regional policies fitted to different regional context (Amcoff, 2007).

Our approach emphasizes the connections between the three different cohorts and the Spanish territorial structure, highlighting the relationships between the two different levels of political administration: the national and the regional.

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