Facultad de Ciencias Económicas y Empresariales

DIAGNOSIS OF DIGITAL CONNECTIVITY IN RURAL SPAIN

Autor: Mencia de la Lastra Olalquiaga

Director: Juan Felipe Jung Luisardo

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ACRONYMS

AI	Artificial Intelligence
APL	Arranjos Productiveos Locais (Local Productive Arrangements)
B2B	Business-to-Business
B2C	Business-to-Consumer
EU	European Union
FTTH	Fibre to the Home
GDP	Gross Domestic Product
ICT	Information and Communication Technology
LTE	Long Term Evolution
NPM	New Public Management
OECD	Organisation for Economic Co-operation and Development
PPP	Private Public Partnerships
UN	United Nations
VR	Virtual Reality

Abstract

España Vaciada and the Digital Divide are two phenomena that have significant impacts on the sustainability and well-being of Spain's rural areas. The former, which describes the phenomenon of empty interior regions, resulting from the concentration of population in a limited number of areas, has felt the negative repercussions of the unequal distribution of broadband connectivity which continues to punish its rural areas in the form of digital under-connectivity.

Literature has extensively captured the increasingly prominent role of digitalisation in the lives of individuals and businesses as a facilitator of everyday tasks, both small and large scale. The widespread adoption of digital technologies has radically impacted daily life and altered the way that society produces, consumes, communicates and innovates. Without a doubt, it has opened a door of endless opportunities by granting businesses and individuals with unprecedented access to information and reach.

However, society´s overdependence on digital technologies was exposed by the COVID-19 pandemic, when digital became the default as opposed to an option; the closure of schools, businesses and a general societal stand-still made virtual interactions the only viable option. Whilst appreciating the key role of digital infrastructure in supporting the surge in demand for digital services like streaming or online education platforms, it is impossible to ignore the victims of the Digital Divide who are excluded from full digital access.

The thesis uses Kernel Density estimates to examine the distribution of broadband connectivity in Spain and identifies the patterns of connectivity, exposing how the Digital Divide exacerbates existing inequalities, particularly in rural municipalities. It contests that addressing the Digital Divide requires an approach that considers both the supply and demand of digital infrastructure.

After conducting this research, the findings suggest that public investment must be allocated where demand for digital infrastructure can be stimulated the most, on the basis that the supply of digital infrastructure will be most effective where there is underlying demand for it.

Key words: broadband, depopulation, digitalisation, digital divide, market failure

Resumen

España Vaciada y la Brecha Digital son dos fenómenos que tienen importantes repercusiones en la sostenibilidad y el bienestar de las zonas rurales españolas. El primero, que describe el fenómeno de las regiones interiores vacías resultante de la concentración de población en pocas zonas, ha sentido las repercusiones negativas de la desigual distribución de la conectividad de banda ancha, que sigue castigando a sus zonas rurales en forma de infra-conectividad digital.

La literatura ha recogido ampliamente el papel cada vez más destacado de la digitalización en la vida de personas y empresas como facilitadora de las tareas cotidianas, tanto a pequeña como a gran escala. La adopción generalizada de las tecnologías digitales ha tenido un impacto radical en la vida cotidiana, abriendo una puerta de oportunidades al conceder a empresas y particulares un acceso y un alcance sin precedentes.

Sin embargo, la excesiva dependencia de la sociedad respecto a las tecnologías digitales quedó al descubierto con la pandemia, cuando lo digital se convirtió en la opción por defecto en lugar de una opción; el cierre de escuelas, empresas y un estancamiento general de la sociedad convirtieron las interacciones virtuales en la única opción viable. Aunque se valora el papel clave de la infraestructura digital para apoyar el aumento de la demanda de servicios digitales como el streaming o las plataformas de educación en línea, es imposible ignorar a las víctimas de la Brecha Digital que están excluidas del pleno acceso digital.

La tesis utiliza estimaciones de Densidad Kernel para examinar la distribución de la conectividad de banda ancha en España e identifica los patrones de conectividad, exponiendo que la Brecha Digital exacerba las desigualdades existentes, particularmente en los municipios rurales. Sostiene que abordar la Brecha Digital requiere un enfoque que considere tanto la oferta como la demanda de infraestructura digital.

Tras llevar a cabo esta investigación, las conclusiones sugieren que la inversión pública debe asignarse allí donde pueda estimularse más la demanda de infraestructura digital, partiendo de la base de que la oferta de infraestructura digital será más eficaz allí donde exista una demanda subyacente de la misma.

Palabras clave: banda ancha, despoblación, digitalización, brecha digital, fallos del mercado

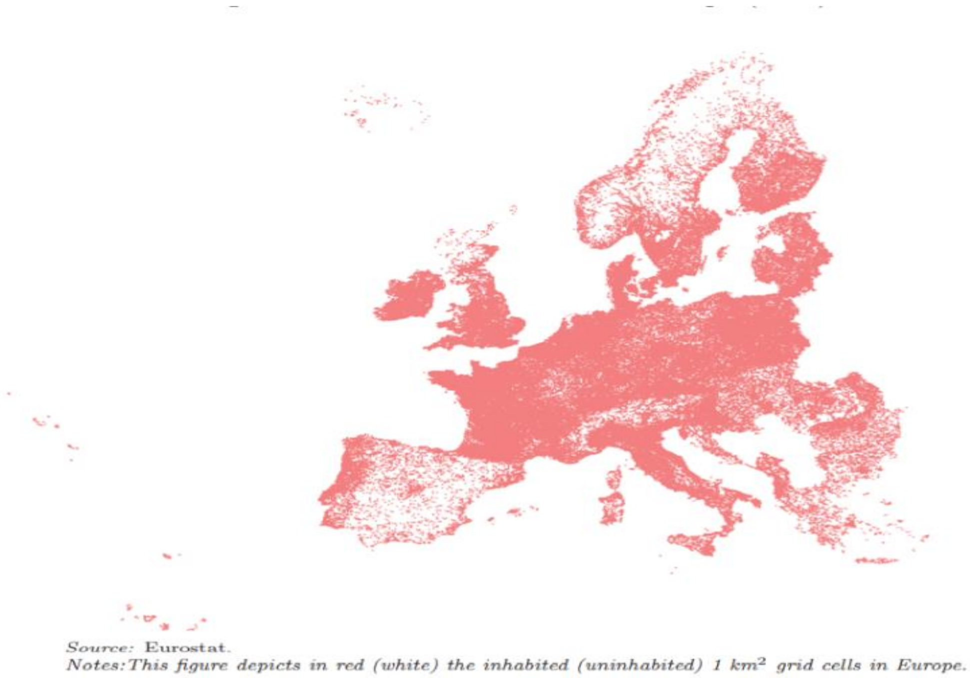
1. Introduction

1.1 Motivation

The main inspiration for this thesis is a map, which depicts a snapshot (Figure 1) of inhabited Europe (Eurostat, 2020) in which each red dot represents a km^2 of inhabited land while white areas reflect the bare parts, those uninhibited. It reveals that the only areas of land in Europe with comparably low population density are the Alps and Scandinavian countries. The phenomenon of *España Vaciada* - “Empty Spain” - has been at the front and centre of Spain´s demographic challenges and refers to the depopulation and abandonment of Spain's rural areas and the associated loss in economic activity of those interior regions.

As the map depicts, Spain´s population and its corresponding wealth is instead highly concentrated in few areas, those being its main cities like Madrid, Barcelona and the Balearic Islands which benefit from a high foreign population given their popularity as an expat destination. In essence, agglomeration economies like these enhance the productivity of firms and workers in dense urban environments, who vacate rural areas in the process.

Figure 1. Map of Uninhabited Europe



Source: Eurostat (2020)

Data captured by the National Statistics Institution (INE) reflects the declining population of Spain´s rural areas which has been shrinking at a rate of 0.7% annually since 2015 and growing urban populations (0.5% annual average increase) – contributing to the struggles of the former and success of the latter (INE, 2020). These movements are manifested in macroeconomic indicators like higher unemployment rates, lower income level and limited access to social services; the combination of which fosters a vicious cycle of increasing deprivation. This cycle works on the simple basis that the fewer resources (e.g., human capital) that exist in an area, the less effective (hence less attractive) it will be for new resources to be invested in it. One of the best examples for this is education since it is apparent that limited access to good education is bound to push talented individuals to seek elsewhere for opportunities, which can be found in main cities like Madrid or Barcelona. As young people flee to urban hubs, the incentive for private organisations to set up schools without support from the state declines due to a shrinking addressable market (fewer students) that implies lower profitability.

This thesis chooses to explore this demographic challenge in the context of the Digital Divide since digitalisation has defined the last 20 years in terms of socioeconomic evolution and will continue to do so, catalysed by the unprecedented investment in innovation and improvement of existing technologies (AI, VR, 5G, 3D printing...to name a few). I chose to evaluate how this transition plays out in Spain which is already marked by structural demographic challenges. Its skewed population distribution highlights a major hurdle for equal opportunity across the country and incites a preference for urban hubs over rural areas. Understanding the role of this demography in promoting the persistence of inequality is crucial to analyse the opportunity for digitalisation to narrow the inequalities and its danger of exacerbating them. Coupling the phenomena of *Digital Divide* and *España Vaciada* (inspired by Figure 1) brings into question whether the spread of digital access in Spain displays a similar pattern of heterogeneity as the spread of its population. The emptiness of rural interior regions seems to be both a symptom and cause of their low population density since a lack of connectivity hinders their economic growth opportunities. Over time, urban-rural disparities become magnified as cities are quick to adopt new technologies while rural areas struggle to catch up, leading to a widening gap.

Whilst the map of inhabited Europe reveals the phenomenon of *España Vaciada*, the COVID-19 pandemic exposed the vitality of digitalisation as a tool of adaption and resilience. As national lockdowns came into effect across Europe – lasting from 28 days in the case of Germany and 99 days in Spain – the everyday of many was forced to transition into virtual mode. Leaning on technology so heavily for work, education, communication and entertainment exposed the extent of our dependence on access to digital services; from online classes to streaming entertainment. However, this extensive use of technology was possible based on two factors: (i) access to a digital device (ii) access to connectivity of sufficient reliability and speed to withstand those activities almost seamlessly or with minimum disruptions.

However, this was not the reality for much of the world. Over a third of children – 463 million globally – were not able to access remote learning when COVID-19 shuttered their schools (UNICEF, 2020). This scale of school closures shed light on the gap in digital devices, training and connectivity which set back participating in what the rest of the world labelled a "new normal" (Fineberg et al., 2021). For example, households who did not benefit from a 1:1 device-to-person ratio during lockdown were forced to prioritise device-usage for the income–generating activities – jobs - over children´s studies. Organisations like *Ayuda en Accion,* in Spain, struggled to support families and teachers with the difficulty of their online transition in areas like Virxe da Cela de Monfero (A Coruña), worsening their despair over inability to download documents, interact using digital resources, multimedia or even join a Zoom call (Ayuda en Accion, 2020).

1.2 Objectives

The ultimate objective of this paper is to add value by proposing a solutions framework based on criteria that might guide an adequate allocation of government resources towards digital infrastructure. By accounting for the real limitations that the state may face, the framework suggested will aspire to present a potential approach to confront the Digital Divide in Spain.

Prior to the introduction of a solutions framework, the thesis aims to underpin the causes of the depopulation of Spain´s interior regions which is symptomatic of a widening rural-urban divide, whilst recognising that these large areas of liveable territory present an opportunity that is unmatched in Europe. This includes identifying the most prominent demographic trends that are shaping the characteristics of Spain's population going forward.

Secondly, the project will deliver an accurate picture of connectivity in Spain to reflect the existence of the digital divide and draw conclusions on the distribution of broadband coverage using empirical data. The analysis, using Kernel Density estimates, will be used to produce a diagnosis of Spain´s state in terms of connectivity, identifying strengths and weaknesses.

1.3 Investigation question

This thesis concentrates on responding to the following investigation question:

To what extent does the Digital Divide manifest rural-urban disparities in Spain in the context of *España Vaciada*?

1.4 Justification

The commitment of this thesis to the Digital Divide in the context of the depopulation of rural areas in Spain is justified on various grounds.

Foremost, the topic combines two of Spain´s most pressing challenges to date; *España Vaciada* and the *Digital Divide*. The new digital context invites further rural-urban inequalities, despite its potential for opportunity. Although the Digital Divide is a challenge faced by nations across the world, Spain´s demographic structure makes it especially vulnerable to the inequalities that digitalisation creates in its wake. This puts in question the real risk for Spain´s existing inequalities to become endemic as a result of the Digital Divide.

In particular, the role of digitalisation and its positive relationship to economic growth explore topics encountered throughout my university studies in the modules of International Economics and Microeconomics, as well as a more personal interest in macroeconomic trends, inspired by Hans Rosling. In this field, the paper goes beyond the learnings of these modules by applying the theoretical concepts acquired (Market Failure, Multiplier and Accelerator effects) to a real scenario. By using both qualitative and quantitative analysis of empirical data, the paper puts into practice the theory at hand.

With the aim of building a framework, this paper is an opportunity to put forward a viable template for public sector action based on a diagnosis of Spain´s connectivity as a contributor to municipal disparities. From the interpretation of historical data to the proposal of a basic model, this dissertation will consolidate existing skills and foster new of competencies in data interpretation.

On balance, the theme of this thesis is meaningful and enriching to the larger effort in fighting the Digital Divide and in favour of an inclusive future for Spain´s rural areas.

1.5 Methodology & Structure

This thesis is comprised by four main chapters. **The first chapter** is an analysis of existing literature from previous authors surrounding the theme of *España Vaciada*, the urban-rural divide and demographic trends. Beginning with literature on the political and demographic context of Spain, this first section will highlight the implication of the two in promoting an unequal distribution of resources and population across the country. The second will investigate further into the arrangement of Spain´s territory by type of municipalities (urban, rural intermediate and rural small) according to the National Statistics Institute (INE) classifications. The third part of this literature section focuses of extracting conclusions based on the information and data of previous authors on global and national demographic trends, using the publications of organisations such as *OECD* papers and *European Commission* publications to offer insight into what features characterise Spain´s population. Essentially, the first body of this paper seeks to identify the forces driving heterogeneity between Spain´s rural and urban areas. The analysis aspires to extract an empirically founded interpretation of *España Vaciada.*

The second chapter consists of a literature review on digitalisation in order to introduce the concepts of digitalisation and the Digital Divide, as well as explore its association to economic growth and resilience. In its first section, Chapter 2 gathers readings from key authors in the field of digitalisation and sources such as the *European Commission* publications on the matter to gather an understanding of how digitalisation has been defined in previous works. Secondly, it will focus on the positive relationship between GDP and digitalisation that has been studied so far, identifying the main ways in which digitalisation translates to socioeconomic growth as well as the factors that hinder it. Thirdly, the chapter will look at the undersupply of digital infrastructure in rural areas in the economic framework of a market failure. Overall, this section establishes a sound understanding of the concepts that will be analysed in the following sections and consolidates the relevance of addressing the Digital Divide.

The third chapter will be an empirical analysis of the Digital Divide in Spain, founded on the patterns identified in the first and second literature analyses. The aim of this section will be to produce a diagnosis of Spain´s Digital Divide by applying the understanding of *España Vaciada* in the context of the investigation question. In suit, an analysis will be carried out on the digital inequalities that exist in Spain, which will be measured across broadband data sourced from the Spanish government database for *Broadband Coverage in Spain time series (2013-2020*) according to municipalities, provinces, autonomous communities and nationally. The data will by synthesised for the purpose of this study, to create a smaller database comprised of the municipal level data coverage across four technologies: Fibre to the Home (FTTH), LTE (4G), Internet speed (Cob>100Mbps) and 5G. Before carrying forward the analysis, the main broadband technologies (FTTH and LTE) will be explained in terms of their rollout in Spain since their maturity of deployment will be relevant when understanding their distribution. Using the selected data, the distribution of coverage (as a % of coverage) will be illustrated for each indicator via Kernel Density estimates. The four resulting graphs will be analysed in terms of the disparities between high and low connected groups to understand the current spread of broadband infrastructure in Spain. While it would be interesting to study the evolution of these indicators over time, the paper will use the latest available figures (June 2020) for its Kernel Density estimates in order diagnose Spain´s *current* situation.

The fourth chapter is an inductive approach founded on the observations made from the literature reviews and the empirical analysis of the Digital Divide in Spain. This final chapter will proceed to establish a solutions framework to address the Digital Divide based on the economic theory of supply and demand, as well as considering the importance of a feasible and sustainable approach. The paper will establish three conditions on which to assess the level of existing or potential demand for digital infrastructure, deduced from earlier observations and analysis. Under this inductive methodology, the paper will address the potential role of small cities as mini-hubs in bridging the Digital Divide and explore empirical cases of this model in other economies.

Finally, the thesis will gather the main conclusions deduced from the investigation carried out throughout the thesis.

2. Context of "España Vaciada"

"We will cherish and preserve our rural areas and invest in their future. They are a core part of our identity and our economic potential."

- ***Ursula von der Leyen, President of the European Commission***

2.1 Demographic Context

The recent increase in urbanization in the Spanish economy has been accompanied by a new phase of rural depopulation in Spain, known as *España Vaciada* as highlighted by Gutiérrez et al. (2020a) which has surfaced the discussion on the inequality between rural and urban areas, as reported by the central bank of Spain (Banco de España, 2021). To understand the regional or municipal disparities of Spain, it is important to understand the political and demographic context of the country. This chapter lays out the implications of Spain´s political structure on how the country implements public policy and, more importantly, delves into the underlying trends of its demography which serve to interpret how inequalities may manifest themselves. Instead of providing a snapshot of the current situation, the main demographic trends are telling of the direction in which the population is headed. This way, one can foresee the potential risks that the country may face and implement proactive policies to minimise the pitfalls by adapting to the evolving population features.

At the same time, depopulated areas offer an unprecedented opportunity; Spain´s atypically uninhabited areas empty areas are liveable, such that they could offer an environment as good, or even better, than other empty parts of Europe. As earlier mentioned, when mapped, Spain´s vast areas of empty land are as unpopulated as the Northern part of Scandinavia (Figure 1). However, in Scandinavia the vacancy of empty zones is explained by survivability; they present harsh climate zones of unfertile land, difficult mountainous terrain and dark winters. Over time, limited access to resources and poor crops leading to starvation, created large swaths of sparsely populated land (Roto, 2012). In contrast, it is harder to understand what lies behind Spain´s emptiness given its geographical proximity to other European countries and Africa, and generally moderate climate - hot summers and cold winters in the interior regions, and mild summers and cool winters on the coastal zones.

Surely, this loads Spain with the opportunity to receive people and set up production facilities, particularly appealing for those requiring large areas of affordable land.

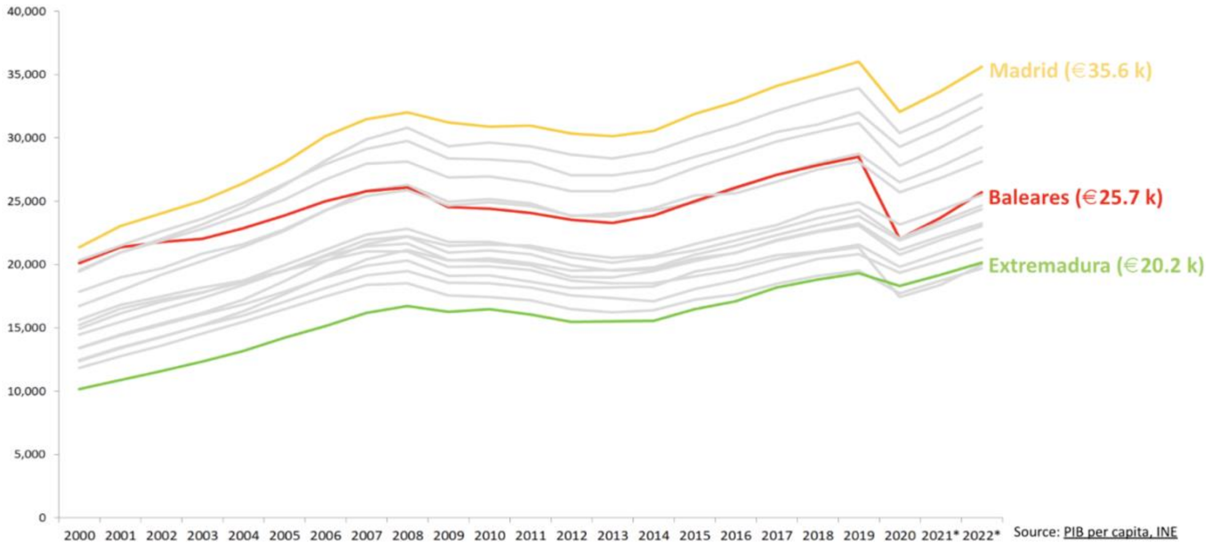
2.11 Political Structure of Spain

Spain´s political structure is extremely relevant to understanding its interregional differences. The country is made up of 17 regions referred to as Autonomous Communities ("Comunidades Autonomas") which characterise the way in which the country is run. Although, the country was highly centralised during the dictatorship, Spain´s constitution (adopted in 1978) created the state of autonomies under a pact that confirmed Spain as a multinational and multilingual state (Rabanal, 2020). Each of these communities has, as implied by the name, its own *autonomous* executive and legislative powers such that there are three layers of governance; central, regional and local (Art.137 of the Constitution). The initial aim of this decentralisation was to promote solidarity among people by leveraging economically privileged regions as drivers for development in less fortunate communities.

However, despite the Constitution's attempt to address inequalities through this principle, the persistence of imbalances becomes evident when various indicators such as economic, social, and demographic factors are analysed – beginning with the unequal distribution of economic resources. The period from the 1960s, marked by the urban-industrial revolution, saw the emergence of significant urban-rural inequalities, as well as between industrial and tourist regions compared to agricultural ones. Following the economic crisis of the 1970s, the tertiary sector saw unprecedented growth, known as "*terciarización"* (Roura, 2016) as employment in the service sector surged; from representing 36.5% of total employment in 1970, to accounting for 76.2% of all jobs in Spain by 2015. This exacerbated inequalities between regions that were better suited for tourism or hospitality, such as the Mediterranean coastal regions, and others like Asturias who instead saw their industries decline (Cuadrado-Roura and Maroto-Sánchez, 2012).

The distribution of Gross Domestic Product (GDP) per capita serves as a reflection of economic imbalances between regions. The gap in income per capita has increased in the last 20 years as the differences between highest and lowest income regions have widened with time (Figure 2) with Madrid maintaining a top position throughout. Comparing Spain´s interregional disparities to those in the United Kingdom (once London is excluded as an anomaly), one will find that the poorest 11 of 17 Spanish regions fall below the UK's lowest by the measures of GDP per capita. In this context, the imbalance of Spain's autonomous communities underscores the challenge of levelling up and equality, including digital equality.

Figure 2. Regional GDP per Capita in Spain



Source: INE, own elaboration

2.12 Demographic Structure of Spain

Spain´s national demography forms part of the broader geographic context of Europe and reproduces much of the demographic patterns observed in the continent. Although rural and remote rural areas comprise 83% of the total EU territory (European Commission, 2021), they are inhabited by a declining proportion of the population (30.6%) that is typically older than the population residing in urban areas.

To capture the public´s "Long Term Vision of Rural Areas", the Commission held a public consultation, in the style of a survey, to collect the input of 2,326 citizens across all EU Member States with the aim of identifying priorities for policymaking. The overriding opinion was that basic infrastructure was the most critical need for rural areas, which was voted by 50% of participants as the top priority (European Commission, 2021). The survey revealed that restricted access to services (like banks and post offices), coupled with insufficient broadband connectivity, exacerbates depopulation, out-migration, ageing, educational deficits, lack of skills, and gender-based employment disparities in rural and remote regions – leading to a higher risk of social exclusion in rural areas (European Commission, 2021a).

The difference in accessibility to services between rural and urban areas is present across Europe. Out of its European peers, however, Spain is marked by particularly acute differences in the access that its rural and urban populations have to different services, with analysis demonstrating that rural municipalities in Spain exhibit a lower level of accessibility to services when compared to other European countries. In terms of accessibility to services in urban areas, Spain is similar to other European countries, however this does not hold for its rural areas.

Rural provinces in Spain show reduced access to local services in comparison to their European counterparts, when measured in terms of distance to the nearest service - with the average citizen located 12.4 km from the nearest service, as opposed to 4.8 km, 7.6 km, and 4.7 km in the rural regions of Europe (Alloza, 2022). Municipal level analysis of Spain reveals a significant shortfall in the accessibility to services in rural areas; for example, citizens of rural municipalities compared to urban ones, find themselves 20 km further away from the nearest local services like schools, primary healthcare centres, post offices, small shops or sports centres. This disparity can be partially attributed to the geographical isolation of rural municipalities, which often results in greater difficulties and costs in providing specific services.

This is consolidated in data gathered by Kompil et al. (2019) which concluded that cities enjoy greater access to services due to the presence of agglomeration economies (Duranton and Puga, 2020). The term suggests that enhanced physical proximity leads to better interaction between companies and employees and the provision of services at a more cost-effective rate due to shared infrastructure (Bolter and Robey, 2020). This is supported by the fact that Madrid and Barcelona have the best accessibility to services, with an average distance of 1.5 km and 1.6 km, respectively. On the other hand, predominantly rural provinces such as Teruel, Zamora and Cuenca are at the lower end of the spectrum, with their inhabitants having to travel far greater distances, an average of 15-20 km, to access a local service, exceeding the EU average of 4 km several times over.

2.2 Rural Spain

Although there are varying definitions for the term “rural”, this paper will focus on Spain´s official definition by the National Institute of Statistics (INE) as the primary source of statistics for the country. In its glossary, INE splits territorial areas under two main classifications of “urban” or “rural”, and subclassifies the latter into rural “intermediate rural” and “small rural”. The difference between intermediate and small rural areas is significant because they present different development in terms of resources, both skilled human capital, financial capital and physical infrastructure (schools, hospitals, …) thus are not equipped equally to adopt digitalisation. It is worth noting these varying degrees of ruralism when considering potential solutions to address the rural-urban divide. Foremost, it is important to note that starting from a point of basic infrastructure, some skilled human capital and sufficient financial capital, may require a different policy approach and resources to those required digitalise a region from scratch.

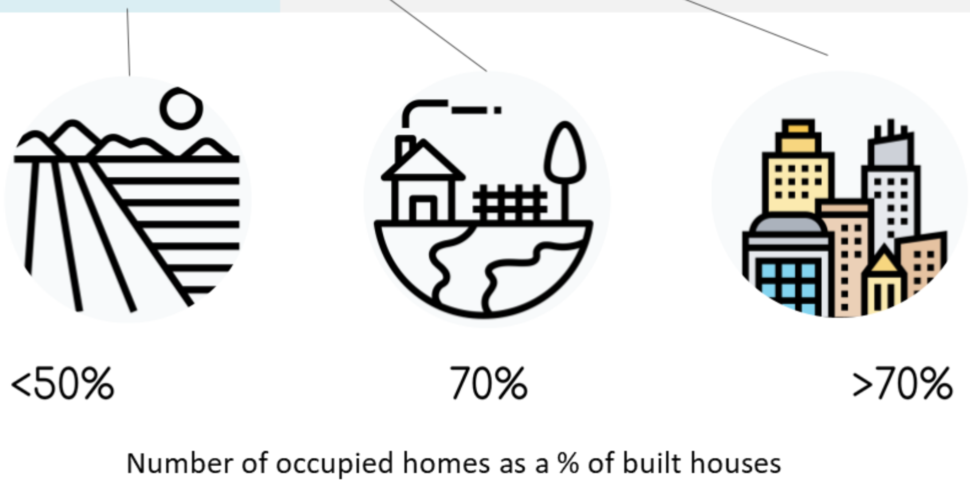
According to the official definition for municipalities by the National Institute of Statistics (INE) in 2020:

- *Urban municipalities are those with more than 10,000 inhabitants*
- *Rural municipalities lie below the 10,000 threshold:*
    - *Rural intermediate (2,000-10,000 inhabitants.)*
    - *Rural small (up to 2.000 inhabitants).*

Classifying Spain's 8,132 municipalities using the INE (2020) categorizations of urban, intermediate rural, and small rural municipalities reveals a disparity in the populations of the country's municipalities. The majority (72%) of Spain´s municipalities, without considering their size in km^2, fall under the category of small rural, while only 9% are urban and hold populations above 10,000 (Figure 3). Despite a population threshold of under 2,000 inhabitants to classify as small rural, the mean population size of small rural areas in Spain stands at 459 inhabitants, such that the reality is that small rural areas are much smaller than the threshold allows for. They have plenty of margin (1,641 people) before they could classify as rural intermediate. This disparity is exemplified by the contrast between the smallest municipality (Illán de Vacas) with only three inhabitants versus Madrid, with a population of three million.

Figure 3. Classification of Municipalities in Spain (2020)

Type	% of total	Mean population	N. Municipalities
URBAN	9.3%	49,749	753
RURAL INTERMEDIATE	18.5%	4,573	1,502
RURAL SMALL	72.3%	459	5,877



Source: INE, own elaboration

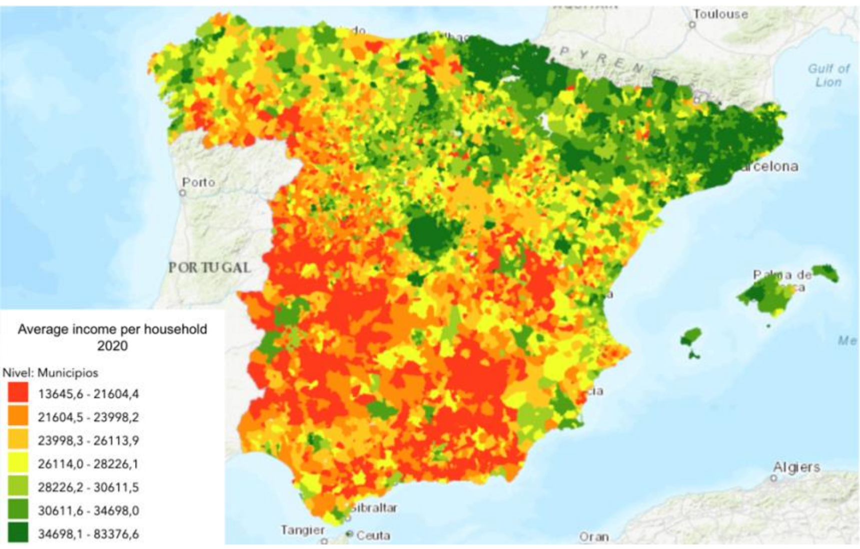
Examining the emptiness of rural towns reveals a correlation between the level of urbanization and the occupation of homes for urban, rural intermediate and rural small (>70%; around 70%; <50%, respectively) which indicated that only half of the available houses are inhabited in small rural areas. The more urban an area, the higher the occupancy of its buildings, which highlights two key characteristics. Firstly, it acknowledges the high density – defined as the consequence of urban evolutions (Duranton and Puga, 2020) - of cities and the strain it puts on infrastructure such as the number of homes built. Urban areas are 73.6% occupied, a figure that has some room for growth given the over construction that took place in Spain prior to the 2008 Global Financial Crisis. On the other hand, the occupancy rate in rural areas is under half which reflects the population drainage that rural areas have suffered, despite their capacity to accommodate double their current population.

Housing occupancy is another indicator of the extreme concentration of the population in urban centres (those with over 10,000 inhabitants) and the decline of rural areas. At the extreme end of the spectrum are ghost towns, abandoned settlements, which usually contain substantial visible remains of buildings (Chuah, 2020). The concept of ghost towns dates to the 19th and early 20th century, when pioneers in the American West establishing many small towns and abandoned these areas once resources and economic opportunities declined, leaving behind desolate abandoned towns.

A very tangible way of measuring inter-municipal inequalities, is using "cost of housing" as a percentage of income since it accounts for the rent price differentials across the country and instead focuses on the real impact of income on purchasing power. A report named *"Income Inequality between North and South in Spain: A Study of Rent as a Percentage of Income"* (Cinco Dias, 2022) extracted data from the Ministry of Transport and Mobility to examine this indicator. It located the regions where rent was a disproportionately larger portion of income for households, revealing that the highest relative cost of housing corresponded to areas of high population density, including the Balearic Islands and Madrid (visible in Figure 1) where rent occupied an alarming 36%-40% of monthly income for families.

Figure 4 visually confirms existing North-South divide in terms of wealth, with Southern households being comparatively poorer. The map depicts a concentration of red areas in the southern interior regions of the country for which average household income stood in the €13,645 to €21,604 band in 2020, reflecting similar lows to those in Figure 2 (GDP per capita). This poses a difference significant with municipalities closer to main cities like Madrid and Barcelona concentrating high income areas (where annual household incomes were on average superior to €30,611).

Figure 4. Mean Income per Household (2020)



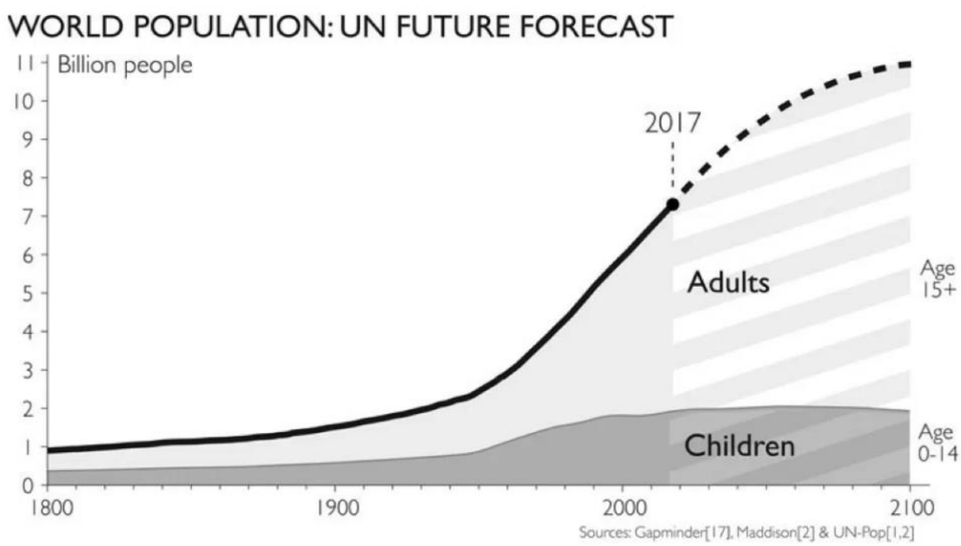
Source: INE

2.3 Demographic Trends

2.31 Ageing Population

Spain is no exception to the phenomenon of an aging population, as the global population continues to grow but at a slower rate than before. According to United Nations´ projections, the slowdown in population growth will continue and the population will eventually plateau at around 10 to 20 billion people by the end of the century (United Nations, 2017). However, the composition of the population is also an important factor to consider. Although the overall population is expected to grow, the number of children is hardly expected to increase (see Figure 5), pulling up the average age of the population. Instead, as today's youth grow into adulthood, the number of adults will increase by one billion by 2045.

Figure 5. World population Forecast



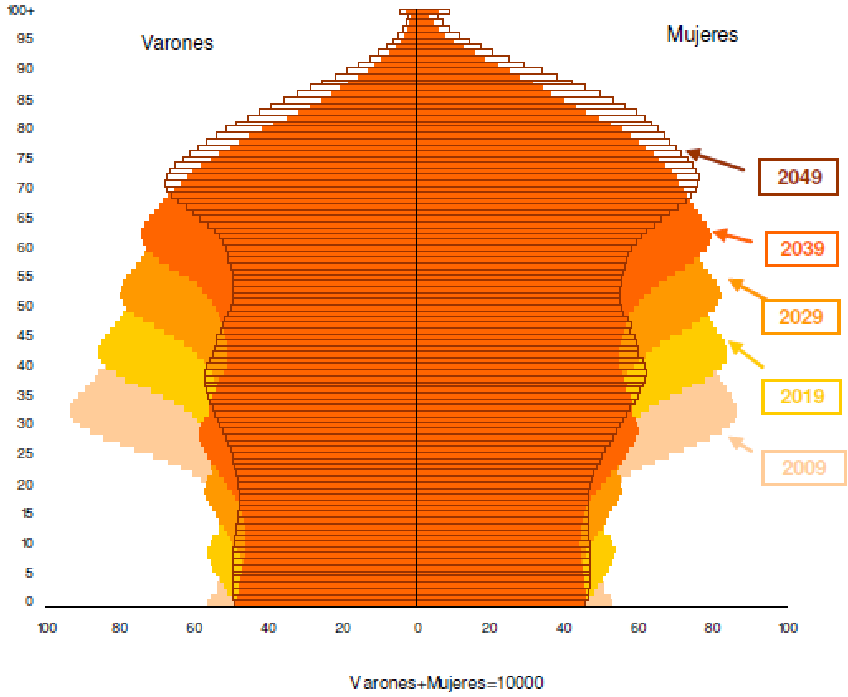
Source: Gapminder using UN forecast, 2017

This pattern will repeat three times over, with these adults becoming part of the 45-to-60 year old group, and eventually reaching the 60-to-75 year old group by 2060. For society, this implies a growing dependency ratio, which measures the economically dependent population as a proportion of the economically productive population (World Health Organisation, 2022). Currently at 30% (Idescat, 2021), the dependency ratio in Spain has been steadily increasing for the past 20 years and is projected to reach 80% by 2050 (OECD, 2021), such that for every 10 working individuals there would be 8 non-working dependent ones, as graphically demonstrated in a top-heavy population pyramid (Figure 6).

The ageing population is felt most acutely in rural regions, 8% of which have a median age of 60+ years (Cano, 2020) such that a municipality could be entirely dependent if its few inhabitants depend on benefits, pensions or incomes of others, such as children who may work in urban areas. Across the world, the natural demographic pattern is for older population to live in urban areas for a variety of reasons; from enjoying more peaceful surroundings, to a lower cost of living and the reduced need to live near cities for work.

Between 2015 to 2020, Europe has shown faster growth of the elderly population in rural areas of 1.8% annually, compared to 1.6% in urban ones (Eurostat, 2023). In contrast, the number of working-age people and younger people in rural regions declined by an average of 0.6% and 0.7% each year, respectively, while predominantly urban regions saw growth of 0.1% and 0.3% each year for these same groups, indicating that they likely left rural areas to pursue education or employment opportunities.

Figure 6: Population Pyramid of Spain



Source: INE, 2019

2.32 Low Fertility Rate

Standing at 1.2, which is well below the replacement rate of 2.1, the fertility rate in Spain is one of the lowest in the world (Defensor del Pueblo, 2018) and has unlikely prospects of becoming higher in the future. As a result, Spain´s population growth will depend heavily on immigration in order to prop up its working age population. There was a rapid increase in the percentage of immigrants living in Spain from 3% in 1998 up to 15% in 2009 when it plateaued, yet the contribution of immigrants to the working population remains vital to sustaining the rising dependent population (INE 2020). In practice, Madrid is one of the largest receptor regions for immigration in Spain, so much so that one in four people living in Madrid were not actually born in Spain.

2.33 Low Child Mortality & High Life Expectancy

Both the extremely low child mortality rate of 0.2% and remarkable increase in life expectancy of 84 years in Spain (Macrotrends, 2023) accompany the ageing characteristic of the population. Over the last century, the average lifespan in Spain has surged by a substantial 40 years, which is a noteworthy achievement. As a result, the elder population aged 80 years and above accounted for 6% of the total population; a figure at par with Germany´s and only surpassed by Italy where this group accounts for 7% (2018). It is also worth highlighting that the survival rate has increased exponentially, from a mere 33% in 1910 to above 90% (2018) and expectations that in 2050, 95 out of every 100 new-borns will reach the onset of old age.

3. Literature Review: the Role of Digitalisation

"Digitalisation increases productivity, money-making capacity and entrepreneurism, which are all so important to growth"

- David Malpass, President, World Bank Group

3.1 Defining digitalisation

The current era of digitalization is defined as a "global engine for constructing dynamic, sustainable, and innovative economies" (World Economic Forum, 2023). The widespread use of digital technologies such as the internet, smartphones and social media has significantly impacted daily life and altered the way we produce, distribute, consume, and innovate.

In basic terms, digitalisation makes doing things simpler and more efficient. However, it goes without saying that its implications are revolutionary for society. Peter Thiel, who co-founded PayPal in 1998, alongside Elon Musk and Yu Pan, has described the impact of technology as a "Zero to One" progress for society. In fact, he argues that progress can manifest in one of two modes; horizontal or vertical. Horizontal progress means improving existing tools or applying them in new contexts (i.e. using them in new sectors or countries) which translates to incremental improvements. Conversely, vertical progress involves addressing a problem in an innovative manner, by presenting an entirely new way of doing things. As such, Thiel emphasises that technology (vertical progress) has never been an automatic feature of history (Thiel, 2014) since it is more challenging to envision since it involves venturing into unchartered territory to create new technology. This resonates with the infamous phrase of Henry Ford, when following the launch of the Mobile T in 1908 which thanks to its affordability introduced a new mode of transport for the masses, claimed that had he asked people what they wanted "they would have said faster horses" (horizontal progress) as opposed to a new form of travel (vertical progress).

That said, it is vital to distinguish digitalisation and technology, beginning with the fact that the two are tightly intertwined. Their relationship is best defined as one of mutual facilitators. Technology refers to the tools, methods, and systems used to produce goods or provide services; examples might include cars, printers and the devices that we use day-to-day to connect. Digitalisation is the *integration* of digital technology (European Commission, 2018) into society in everyday processes – whether it be working, making payments, voting, paying bills or communicating. Hence, digitalisation involves using technology to automate, streamline, and optimize processes, with the goal of making them faster, more efficient, and more accessible. Therefore, the concept introduced earlier (Zero to One) defining the importance of technology is relevant for digitalisation, since technology provides the means to achieve digitalization in a world where it has become increasingly indispensable for humans.

3.2 Economic impact of digitalisation

Measuring digitalisation and its impacts is challenging, given the fast pace of the digital transformation and the breadth of its implications for society, as well as the endless questions surrounding its impact. How might one monitor the digital revolution's progress across all sectors of the economy? How can one measure the disturbance of established business models and the emergence of new ones? How should policies' effects on the digital economy be tracked and evaluated? What occupations and economic activities will emerge in the future? How will digital transformations impact the well-being of society and its citizens at large?

3.21 Measures of economic impact

Whilst there are countless proxies to measure economic impact, the most obvious one to capture digitalisation's effect on economic growth is Real Gross Domestic Product (GDP) which is the standard inflation-adapted measure of the value of final goods and services produced by a country during a period (OECD, 2009). Evidence continues to mount regarding the positive correlation between real GDP and digitalisation. Studies across the board argue that digitalisation contributes positively to the economy and is often treated it as a catalyst for economic growth. Overall, organisations share the common belief that digitalisation boosts growth, despite quantifying the impact of digitalisation on growth differently. One study found that digital technologies have the potential to add $2.2 trillion to $6.7 trillion in annual GDP growth globally by 2025 via "online talent platforms, big data analytics, and the Internet of Things" (McKinsey & Company, 2018) whilst the World

Development Report on Digital Dividends (World Bank, 2016) estimated that a 10% increase in high-speed internet penetration can lead to a 1.3% increase in GDP growth in developing countries. The European Commission's report on the Digital Single Market (European Commission, May 2015) even found that the EU could increase its GDP by 4.8% by 2020, if it increases the digital adoption and use of digital technologies by citizens and businesses. To break down the levers in which digitalisation adds economic value, one can look at various income sources that contribute to a country´s economic prosperity. For the purpose of this paper, the selected factors were productivity, job creation, investment and globalisation which encompass the impact of digitalisation on both consumers and producers.

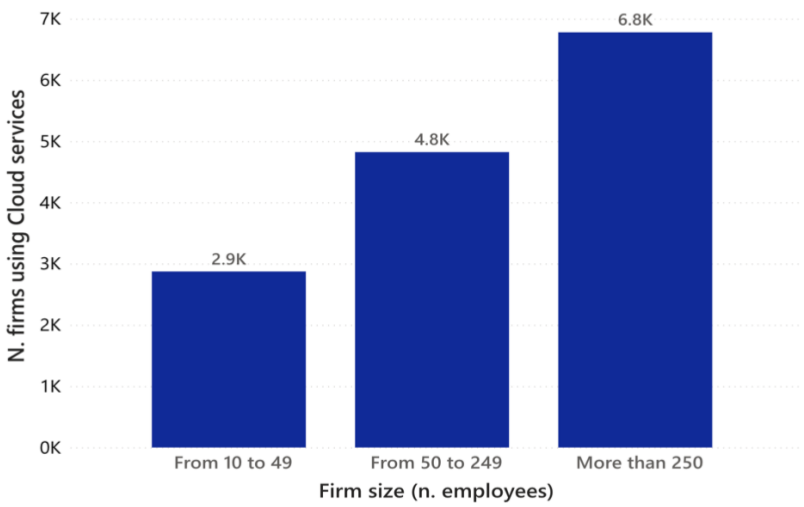
I. Productivity: Productivity measures the efficiency with which inputs are transformed into outputs (Surridge and Wolinski, 2016). As a classic proxy for economic growth, a rise in productivity has been associated with digitalisation, with a study conducted by the McKinsey Global Institute finding that digital technologies have the potential to increase productivity by as much as 25% (McKinsey, 2012). Additionally, a study by the Productivity Commission in Australia found that the use of digital technologies in the country's economy led to a 1.5% annual increase in productivity between 2004 and 2014. On a global level, OECD research also offered insight into the fact that countries disposing of higher levels of digitalisation also demonstrated higher productivity levels, attributing this to the potential of digital technologies to enhance communication, collaboration, and the information sharing:

- *Automation of tasks:* reduction in time taken to complete tasks and more accurate completion.
- *Improved access to information:* faster access to better information, leading to better informed decisions.
- *Data driven decision-making:* using algorithms to make decisions save human time and freeing up time for workers to employ in other production tasks.
- *Streamlining communication:* virtual communication encourages higher reachability between employees.

II. Job creation: One of key way in which digitalization promotes socioeconomic growth is through the creation of new jobs. The development and implementation of new technology often requires a skilled workforce, leading to the creation of jobs in fields such as software development, data analysis, and digital marketing. As new jobs are created, unemployment falls, resulting in a greater pool of consumers with increased purchasing power which renders higher consumption levels. To meet the rising aggregate demand for goods and services, derived demand for workers increases which continues the cycle. An excellent study estimated the impact on GDP growth and job creation in the German economy of investment in during its 2014 National Broadband Strategy (L. Katz et al. 2010). Between 2010 and 2014, the government envisioned the direct creation of 304,000 jobs, mainly in construction, telecommunications and electronics. However, the spill over effects of derived demand generated another 71,000 jobs for affected sectors such as distribution (The Impact of Broadband on Jobs and the German Economy, Table 5). It also discovered that the externalities of infrastructure investments in highly penetrated areas were higher than in the *Landkreise* (Germany´s rural regions) but argued in favour of the higher potential of rural areas which must be unlocked by continued investment in bridging the Digital Divide (Katz, 2010). The other side of coin is that the digitalisation and automation of processes can lead to job destruction which has also been captured in literature (e.g. Arntz et al., 2016; Balsmeier & Woerter, 2019). Evidence gathered on the case of Switzerland found that digitalisation favoured creation of high skilled employment but reduced employment for low-skill jobs which are at higher risk of being substituted by advanced technology (Yu et al., 2022). However, this idea has been challenged by organisations such as the OECD which argued that despite 9% of jobs being automatable, workers would simply be required for other tasks as opposed to being replaced (Arntz et al., 2016). The question that remains in debate is whether digitalisation has a net positive effect on employment, meaning that the gains to employment offset any job destruction that it may incur.

III. <u>Investment in ICT:</u> Investment, which refers to expenditure undertaken by firms to increase their capital stock, plays a crucial role in determining a country's GDP. The injection of investment into the economy results in an immediate increase in GDP which is the function of consumption, investment, government spending and net exports. However, the effect derived from the initial investment is proportionally larger due to two phenomena; the multiplier effect and the accelerator effect. A paper on the case of the Multiplier–Accelerator Effect (Mourao and Popescu, 2022) revisits these macroeconomic concepts which have been observed for over two centuries and are based on the relationship between investment and overall spending. As communities become wealthier and their economies expand, they tend to increase their spending on housing, public structures, and infrastructure. Today, spending by firms largely focuses on investments in ICT (information and communication technology) which the World Bank observed during the pandemic, when it studied 25,000 businesses across 28 countries (World Bank Springs Meeting, April 2022). Results showed that digital investments surged across all firm types, with medium-to-large firms exhibiting a larger increase of 34% and 45% respectively, while micro-to-small firms saw a milder increase of 15% to 25%. Remote working also gained traction in enterprises and forced them to fast-track their transition to cloud-based systems which facilitate collaboration efficiency (Mihalec, 2020) – meaning easier access and sharing of files. By moving to the cloud, businesses can reduce their physical space requirements while ensuring that all company information is readily available to the entire workforce in a "flexible and scalable" manner (Forbes, 2020). In Spain, the percentage of firms whose operations embrace cloud services is increasing, however efforts in this transition are more popular among larger firms (Figure 7) because their scale implies higher costs and there are greater benefits of using cloud services to scale up and streamline work.

Figure 7. Investment in Cloud services in Spanish Firms by Size



Source: INE, own elaboration

IV. Globalisation & E-commerce: As previously discussed, the relationship between digitalisation and globalisation is one of mutual reinforcement since digitalisation has facilitated globalisation and vice-versa. One of the predominant forms in which digitalisation has enabled globalisation for the trade of goods is e-commerce, which is broadly defined as "the sale or purchase of goods or services...through electronic transactions conducted via the internet" (Eurostat, 2023). Its value creation can be understood on two dimensions; (i) the scope of use and (ii) the type of e-commerce use B2B/B2C (Kraemer et al, 2005). In its early stages, when online retail had yet to gain a foothold, online sales stood at a meagre $5.0 billion. Two decades later, e-commerce sales have skyrocketed past the $800 billion mark (ARTS, 2021), catalysed by the first year of the pandemic, in which e-commerce sales rose dramatically to $815.4 billion in 2020 (43% increase from 2019). In the early 2000s, the University of California conducted a study (Kraemer et al, 2005) that validated this correlation between globalization and e-commerce on a global scale. Its first hypothesis (H1) stated that the extent of e-commerce utilization would be greater in firms that have undergone globalization, and this was supported by the results, as globalized firms demonstrated a higher degree of e-commerce usage ($b = .13$, $p < .001$), even after accounting for effects of size, industry, and country. It verified that digitalisation has become crucial to competitiveness, especially for small businesses to compete more effectively with larger companies.

3.22 Digitalisation as a Resilience Tool

Although there is extensive research on digitalisation as a driver of long run economic growth and innovation (Dabla-Norris et al., forthcoming), its role as a tool of economic resilience during downturns is less studied (Copestake et al., 2022). So far, the argument in favour of digitalisation has pointed to its capacity to unlock potential by streamlining processes across the economy and result in higher GDP. However, the utilization of digital technologies has also proved instrumental in assisting societies to cope with the adverse consequences of lockdowns, by enabling individuals to perform activities such as working, studying, socializing, and seeking medical aid remotely.

Furthermore, as the world has grappled with the challenges brought on by the pandemic, emerging markets have recognized the significant importance of digitalization in their efforts to surmount the crisis, recover in a sustainable manner, and establish a sturdy foundation to counteract any future shocks (OECD, 2021). Moreover, more digitalised firms showed more robust balance sheets during economic crises with lower losses, as captured by the World Bank Development indicators (2020 vs. 2019) of 24,000 businesses across 75 countries. Therefore, solid digital connectivity has proved valuable to enhance the resilience of its existing resources to withstand economic turmoil and encourage a robust recovery for its businesses.

3.3 Digital Divide

We have mentioned the broader benefits of digitalisation in an economy, however the benefits and opportunities generated by digitalisation are not homogenously distributed across the world or within societies. At subnational level, there is a surprising amount of heterogeneity as some regions fail to reap the full benefits of digitalisation for a variety of reasons, including their infrastructure, income level and geography. The growing inequality between the digitalisation of regions, has been defined as the Digital Divide; the gap between individuals, areas, or even countries in terms of opportunity to access IT and internet. It is important to flag that this gap – also called a "digital abyss" (Molinari, 2014) – should consider the differences in the *quality* of access that these regions have to digital services. Essentially, it reflects the inequalities that digitalisation often intensifies in our society as well as new inequalities that it brings about.

The concept of a "divide" depicts digital inequality as a gap between the digitalised versus the non-digitalised population – the connected versus the unconnected. Albeit this definition does not do justice to the complexity of what the Digital Divide really is. One of its first mentions was in 1995 which used the term in reference to the inequalities arising from the popularisation of personal computers (PCs) as Americans dialled into the information age (NTIA, 1955). The report suggested that the digital divide was the by-product of the "have" and "have-nots" of PCs which made the concept dichotomous; individuals either owned or did not own a personal computer. In the 21st century, this would be like dividing the world´s population into two groups of either "wealthy" or "poor", when in practice the majority find themselves in the middle-income levels. In his book *Factulness* (Rosling, 2018), the Swedish statistician Hans Rosling labelled this the "Gap misconception" which he defined as our bias to think of the world as polarised/dichotomous. By surveying millions, Rosling captured the consistent bias of people – regardless of their background, gender or field - towards thinking that the world population can be fit into either low income or high-income groups.

Applying this to digital connectivity helps to better understand that there is very little of the world that is not connected at all. Therefore, the Digital Divide is more accurately defined as the difference between those with access to *good quality* of digital access, and those underserved, which are an estimated 2.9bn people (World Economic Forum, 2022). This recognises that areas below a given threshold of connectivity are under-connected and therefore victims of the Digital Divide, such that it is possible to be both connected and suffer digital inequality. Empirically this holds true, since despite the fact that 95% of the world population resides within range of mobile networks (World Economic Forum, 2022), frankly only 53% of the world has access to *high-speed* broadband connection (the requirement to work, study and communicate virtually).

3.31 Factors affecting the Digital Divide

The rise of the Digital Divide can be attributed to numerous factors and whilst digitalisation can reduce inequalities, it also has the capacity to amplify them. The ability of an area to adopt digitalisation is dictated by the access that it has to resources; from its access to capital to invest in digital devices to its existing broadband infrastructure and the digital capabilities of its people. By playing a key role in the success of digital adoption, factors like these indicate the potential of an area to enjoy the full advantages of digitalisation earlier discussed. When it comes to the Digital Divide, the key characteristics that have proven to affect the degree of digitalisation in an area are the long-standing differences in income level, geography and gender, which often hinder "the accumulation of digital competences ...and technology" (Ragnedda, 2019). Studies suggest that low-income individuals, women and rural citizens are disproportionately affected by the Digital Divide and are thus most susceptible to suffering its consequences (Diop, 2022).

I. Income level: Income level strongly correlates with internet adoption and usage, with 33% of households without home broadband quoting subscription costs as the main reason for not having a connection and 37% citing device costs as the main cause (Horrigan and Duggan, 2015). In essence, low-income level areas face a significant cost barrier in terms of digital access, forcing them to be excluded from digital participation. This is owed to the fact that devices and subscriptions are, in relative terms, more expensive for low-income households as they represent a higher proportion of their disposable income. This results in particularly low connectivity rates among some households, especially those dependent on state grants through schemes such as the Minimum Vital Income in Spain or Universal Income in United Kingdom. Moreover, these households are also more likely to depend exclusively on smartphones as their sole form of access to the internet at home and while some see mobile broadband as a way to bridge this gap, there is rising concerned that it may limit users' ability to access important online services (Fallows, 2005).

II. Geographic factors: The digital divide between urban and rural areas in terms of internet access is well-established and is further perpetuated by the tendency of rural areas to be on the lower end of the income spectrum. Despite efforts to standardize pricing and quality of internet access, costs are still higher, quality is lower; the inadequacy of technology in rural areas poses a significant concern as residents of rural areas receive an internet connection that is over 30% lower than the speed enjoyed by urban areas (Ainsworth, 2022). Conversely, main cities and highly industrialized regions exhibit internet access that is twice as high as in rural areas (ITU, 2020) which accredited to the presence of more technologically advanced businesses in leading areas, promoting a higher uptake and usage of new technologies.

III. Education: The relationship between educational attainment and income is a strong one, with income playing a major role in explaining the differences in ICT uptake. Investigation points to the fact that individuals with higher levels of education are more likely to have access to and use digital technologies (Bullen et al., 2015). This disparity in access is also seen between individuals with tertiary education and those with the lowest levels of education. The latter group is growing in access to ICTs, but from a low starting point. Nevertheless, the increase in access and usage is an important step towards bridging the gap between those with different levels of education and income, which are paramount to ensuring a more equal and inclusive digital landscape.

IV. Age: The adoption of technology and internet connection, has also shown age-based differences as younger generations benefit from the advantage of growing up with technology so much that digital skills have become almost intrinsic to their education. Overall, PC penetration and internet access tends to be lower among older individuals, of which 20% use the internet at least occasionally, versus 98% of 16–29-year-olds (FRA, 2020). Early integration of technology in education is growing at fast pace, as reflected by the fourfold growth in sales of digitalised textbooks between 2008-2009 (Allen, 2023) with countries like Japan aiming for 100% digitalisation of core subject textbooks by 2024 (Japan Times, 2022). The drawback of this is that it leads to a widening gap between the skills of the younger and older in society, adding onto the inertia of some of the older generations to replacing face-to-face services with digital ones.

V. Gender: Gender differences in terms of digital access are almost negligible in developed countries like the United States where Internet use by men and women were statistically the same (Fallows, 2005), with a few exceptions such as Japan where men are responsible for almost twice as much internet usage than women (OECD, 2018). In these exceptions, cultural norms often curtail the opportunity for women and girls to engage in the digital world, due to reduced access to devices and education which is crucial to equip them with the adequate skills. On the topic, the OECD emphasises that "acting now to reverse these trends can pay off: the reports finds that greater inclusion of women in the digital economy and increased diversity bring value, both social and economic" (Wyckoff et al. 2018).

3.32 Digitalisation as a Market Failure

The inadequate connectivity of sparsely populated regions represents a market failure. The socioeconomic benefits of digitalisation qualify it as a merit good since it enhances social welfare, yet rural areas are often shunned from its provision. Despite the positive externalities of digitalisation discussed earlier in the chapter, this severe under provision of digital access is mainly owed to the fact that it is uneconomical for investors (Wallace, 2016). Deploying broadband infrastructure in low-density areas presents a significant expense and yields minimal profitability making the commercial appeal of less populated regions low in comparison to urban ones.

A similar market failure occurred in the initial stages of America´s electrification in the early 20th century, where extending electrical infrastructure to remote areas was deemed financially impractical for private investors (Pietrzak, 2020). Following a study which identified a clear concentration of the population in the East, private companies ruled out 94% of the population on the basis that electrifying areas with population density as low as a few individuals per square mile was unprofitable (NRECA, 2013). By 1932, merely 10% of rural America had access to electricity, and approximately 50% of those individuals had to procure their own power generators for residential use. This divergence in electrification status between urban and rural regions exacerbated the discrepancy in living standards, as rural areas of America found themselves in an electricity abyss until the Electrification Act (1936) which unlocked millions of federal dollars under government intervention. Cases like this reflect that when left to work on its own, the market turns a cold shoulder to rural areas given their low profitability, which in Europe has left a gap of 40% of rural-inhabitant Europeans without access to fast broadband connection (European Parliamentary Research Service, 2022).

3.33 Digitalisation in rural areas as a merit good

The potential of digitalization for rural areas is transformative, since it offers unprecedented opportunities in avenues that were previously unavailable, making it a merit good thanks to the positive externalities it generates, some of which are not captured in GDP measures (European Parliament, 2021). Online services have opened the door for businesses to engage with consumers outside of their geographic scope and likewise granted customers almost unlimited access to e-services by bridging distance barriers. Moreover, digital provision allows for delocalisation, which refers to the decoupling of service provision from specific locations, that may be a lever to revitalising rural areas (European Commission, 2018) by reversing the pattern of rural-to-urban migration mentioned in Chapter 2. As jobs that were once tied to urban cities are delocalised, workers have the freedom to work remotely from other areas for which rural areas might offer an appealing lifestyle.

However, this is only feasible with the provision of reliable connectivity. The consensus of the Eurobarometer (2021) reflected that digital connectivity and access to e-services were voted the most important factors in ensuring the future attractiveness of rural areas by 93% and 94% of participants respectively. In addition to investments in physical infrastructure for broadband connection, the successful adoption of emerging technologies demands for digital training, upskilling, and capacity building at local level. Unfortunately, most rural areas lack sufficient connectivity and are held back by their limited digital literacy, which can preclude citizens from accessing remote learning, new markets and increasing their productive potential. Paradoxically, if rural areas are not able to seize the opportunities created by digitalisation, the urban-rural disparities are exacerbated as opposed to narrowed (European Commission, 2021).

For rural communities, digital exclusion is a huge disadvantage, which economist Aleph Molinari (2014) compared to a “new illiteracy” when addressing a Ted Talk to the local community of San Miguel de Allende on the importance of bridging the Digital Divide. As discussed, the vitality of digital access in everyday business today is as essential as reading and writing since it is in essence a new way to interpret the world, live in it and progress in it. Molinari´s understanding of the profound urgency to change this reality for under-served communities, drove him to launch the *Learning and Innovation Network* to empower those without access via education across Mexico.

With distance from the nearest hub is too far to be realistic as a daily commute, rural dwellers often *move* to these areas of higher economic activity and better connectivity (Duranton and Puga, 2020). This loss of people is translated into an economic loss of value as talent leaving the regions reduces the income level of that region as a result of the brain drain. In turn, investments in those areas are less appealing with a shrinking population meaning shrinking demand for services – from healthcare, education, supermarkets - hindering future growth of those regions. In this situation, the multiplier-accelerator phenomena (Mourao and Popescu, 2022), is dampened due to insufficient resources on which to anchor investments.

4. Empirical Analysis: Digital Divide in Spain

"The more we use digital technologies, the more we should make sure that every citizen has the knowledge and skills to seize the opportunities provided by the technologies,"

- Gabriel Lim, "Bridging the Digital Divide" Forum (2018)

Rural and peripheral areas in Europe have historically lagged behind urban and peri-urban areas in terms of connectivity. In 2015, the European Digital Single Market Strategy was implemented to bridge this gap, resulting in an improvement in network coverage as reflected in the percentage of households with access to high-speed broadband of at least 30 Mbps (Desira, 2020). The digital divide persists, with 40% of rural dwellers lacking access to fast broadband connections, as noted by Ursula von der Leyen, the President of the European Commission, during her State of the Union address (September 2022).

Digital skills, another vital aspect of the digital transformation process, also remains a concern in rural areas, where digital capabilities among adults are lowest. In Europe as only 48% of rural inhabitants possess basic or above-basic digital skills, compared to 55% in towns and suburbs, and 62% in cities (Eurostat, 2019). Given the importance of digital skills for global competitiveness, the digital skills gap in rural areas highlights socio-economic disparities between rural and urban areas, deepening the digital rural-urban divide.

4.1 Digital inequalities in Spain

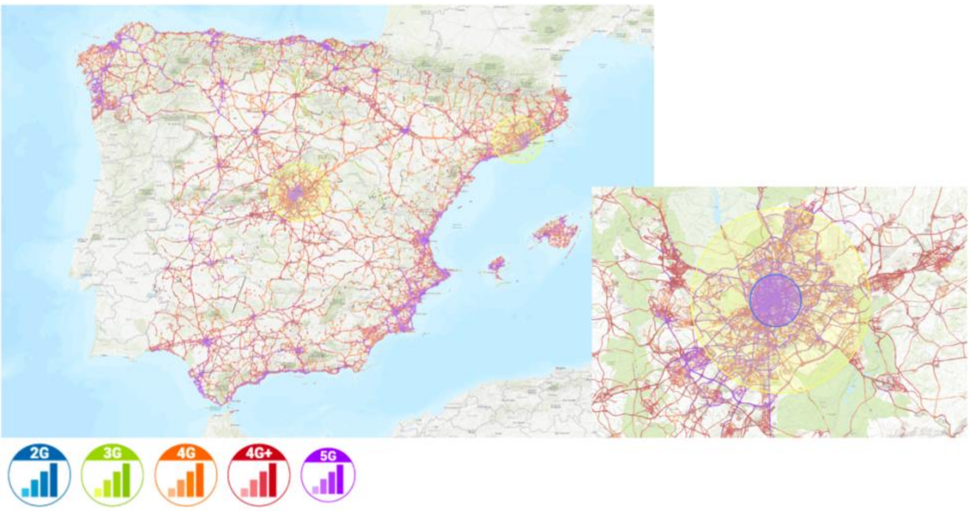
Across Spain, the heterogeneity in broadband connectivity between municipalities is marked by two main patterns. The first pattern is that the highest connectivity levels can be found in and *around* the areas of highest population density: Madrid, Barcelona and along the coastline. For reference, the city of Madrid has a population density of 5,337 inhabitants/km^2 meaning that its 3.35 million inhabitants are concentrated in 604km^2 of land (World Population Review, 2023) which is explicative for the high deployment of digital infrastructure in the area.

It is worth noticing that the municipalities surrounding these hubs are well connected given their proximity to economically active cities, illustrated by the 40 municipalities surrounding Madrid, many of which were formerly rural areas (Figure 8). This is endorsed by municipal-level data which shows that surrounding municipalities are accounting for an increasing proportion of the region´s population, whilst the city holds 49.2% in 2020 versus 57% in 1996 (INE, 2020). This suggests a second round of metropolitan growth (Giraldo, 2021) parallel to the first round of the 1960s when municipalities like Mostoles or Alcorcon transformed from rural agricultural towns to suburban hubs thanks to the economic activity generated in Madrid centre.

The second pattern is that the voids in connectivity left in the interior areas of Spain acknowledge the fact that they are too far from an economic hub to benefit from its activity. The lack of broadband infrastructure in interior regions is in tune with the lack of people that inhabit them, drawing on the phenomenon of *España Vaciada* that this paper explores. The combined effect of depopulated rural areas with their digital exclusion produces a real risk of Spain´s rural areas becoming economically illiterate and their emptiness becoming endemic.

The following section will assess the level of digital connectivity in Spain via four key indicators, to determine the extent to which digitalization is contributing to or alleviating existing inequalities. With most of Spain´s municipalities falling under the "rural" category (19% rural intermediate; 72% small rural), there is a question of how feasible it is to work and live in these areas in a technologically advanced and connected world. The connectivity indicators that the paper will examine are FTTH, LTE (4G), Internet speed (Cob>100Mpbs) and 5G, which should together shape a good understanding of the connectivity across Spain´s municipalities and are explained below.

Figure 8. Deployment of Mobile Broadband Infrastructure in Spain by Orange (2022)



Source: nPerf

4.11 Fibreoptics (FTTH)

"Fibre to the Home" is the fastest, and ultimately, most reliable fibre optic connection, which entails using fibre optic cables to deliver digital communication signals from operators' switching equipment to homes. Optical fibre is a broadband technology with virtually unlimited bandwidth potential, made from optically pure glass as thin as a human hair. Its high capacity is demonstrated by the fact that a single fibre can simultaneously carry millions of phone conversations or over 2,000 HDTV digital TV channels. To transmit information, it converts sound, text, or pictures into digital electric pulses, which are then transformed into light pulses by a laser diode. These pulses are then guided through the fibre to a receiving diode on the other end, where they are converted back into their original form. There are two main forms for the FTTH technology to operate:

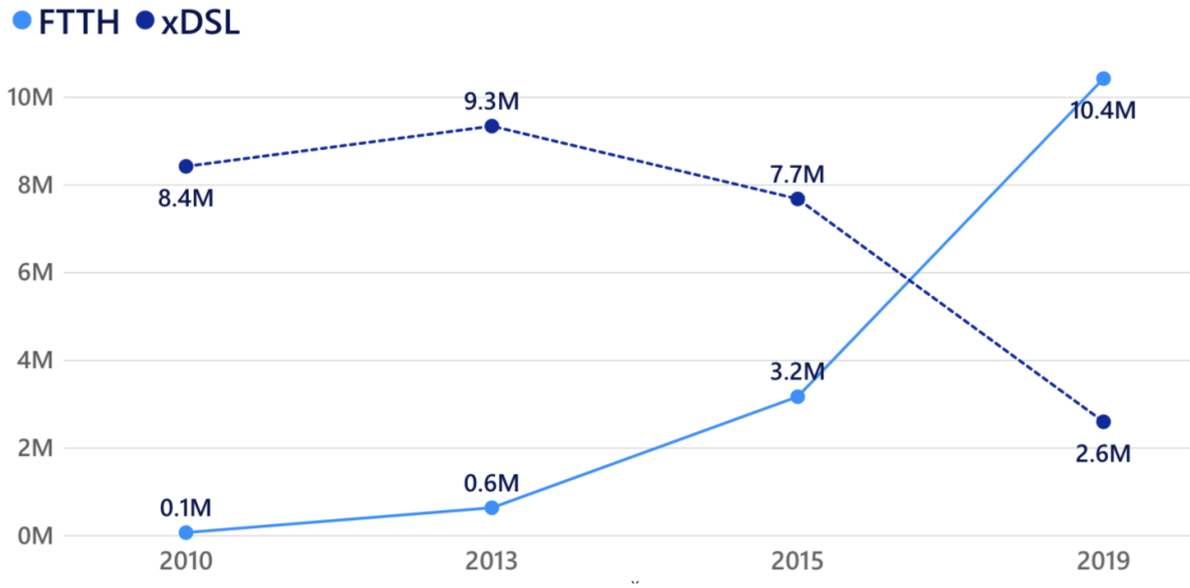
- *Point-to-Point (P2P) fibre network:* optical fibre paths connect a communication node to a single premise, and the optical paths are exclusively dedicated to traffic to and from that location.

- *Point-to-Multipoint (PON) or Passive Optical Networks fibre* network provides branching optical fibre paths from a communication node to multiple premises, where a portion of the optical paths are shared by traffic to and from multiple premises. This branching is typically achieved through power or wavelength splitters.

Figure 9: FTTH Rollout timeline

The telecommunications industry in Spain underwent a significant structural shift with the introduction of Fibre to the Home (FTTH) technology. Prior to its rollout in 2010, copper was the primary means of transmission in almost all service lines, with ADSL (the most common xDSL technology) accounting for over 90% of home connectivity in Spain (see Figure 10). However, the emergence of FTTH proved pivotal in 2011 when it already serviced 60,000 homes. This technology saw explosive growth by 2013, in large part owed to Telefonica's investment in key cities, yet ADSL still held a dominant market position. By 2019, FTTH had achieved a significant milestone, surpassing xDSL by fourfold and reaching 10 million households as Spain´s Ministry of Economics focused its efforts on the rollout of FTTH via its program PEBA-NGA (*Programa de Extensión de la Banda Ancha de Nueva Generación*). The program, launched in 2019, is co-financed by the European Regional Development Fund (ERDF) and follows a clear agenda of providing high-speed broadband to white spots and improving connectivity in grey areas.

Figure 10. Number of Households using FTTH vs. XDSL in Spain



Source: Perfi-tel, own elaboration

4.12 LTE (4G)

LTE stands for Long Term Evolution, and it is a cellular technology that enables the fourth generation of mobile networks (preceded by 1G, 2G and 3G) that enables voice calls, text messages and mobile data on devices that are 4G LTE compatible. The "G" stands for generation, of which 1G was the old analogue system, 2G was digital which is a speed of 10-200 kbps (for reference, the first iPhone was 2G!), 3G much faster digital system of

384kbps+, 4G started at 5Mps and 5G has been introduced to some degree and presents the future of opportunity for the integration of virtual reality and artificial intelligence.

The LTE technology essentially connects a user´s device to an external network and consists of two main components: the base station (eNodeB) and the core network. The former communicated with the mobile devices over the air, via signals in a Multiple Input Multiple Output (MIMO) technology, which uses multiple antennas on both the transmitter and receiver side to improve the signal quality and increase the data throughput to the core network which provides services like authentication, billing and data routing. As a device moves from one base station to another, the LTE network itself provides what is called a "handover" which transfers the connection without interruption to the nearest base station without interrupting the connection. This seamless handover of base stations explains why, as users, we are unaware to changes between base stations when moving from one place to another.

Figure 11. LTE (4G) Rollout timeline

In 2005 Spain begun to issue licences for 3G networks and, eventually, 4G networks allowing internet connection on mobile phones. Shortly after, in June 2006, these networks were upgraded to HSDPA (High Speed Downlink Packet Access) which increased the navigation speed substantially. The first 4G network in Spain was launched in 2011 by Telefonica, Spain´s largest telecom, and was swiftly followed by Orange and Vodaphone who introduced their own networks one year later. The government also subsidised SMEs (small-to-medium size enterprises) investing in 4G networks in connection-deprived areas, as well as auctioning off €1.65 billion of spectrum licenses for 4G networks. The revenue generated from the auction was in turn used to fund other initiatives aimed at promoting digital infrastructure and connectivity in the country. By 2014, 4G coverage existed for major cities including Madrid, Barcelona, Valencia, Seville and Malaga. Between 2017-18, Europe experienced a boom in mobile data, channelled by the concept of "free roaming" which came into effect in 2017 (European Commission 2017). It enabled mobile network users to use mobile data (like 4G) on their domestic contract from anywhere in the EU – that is to say, free of additional charges. That year, Spain also began testing the waters of 5G in select cities, envisioning future high-speed mobile connectivity as Telefonica announced its plans to upgrade its existing 4G network and initiate 5G trials. Meanwhile, the government announced €20 million subsidies to incentivise telecoms to deploy 5G networks in rural areas and even allocated a portion of spectrum named the Digital Dividend (approved in RD 805/2014) specifically for regional governments. 2020 saw significant investments in the roll out of 5G networks; the largest four telecoms (Telefonica, Vodaphone, Orange, MásMovil) planned a combined total investment of €5.5 billion between 2020 and 2025 (CNMC, 2021) to upgrade existing infrastructure, purchase new equipment and deploy 5G base stations.

4.2 Kernel Density Estimates

Upon examination of Spain's national level connectivity, the country appears to be advanced and well-connected, with almost total connectivity observed in its most connected areas. However, a closer look reveals the existence of sparsely connected areas, commonly referred to as *white spots*, which represent areas that are circumscribed. These white spots are indicative of the absence of fibreoptic or LTE infrastructure, which has yet to be installed in various Spanish municipalities. The urban-rural divide in connectivity highlights the disparities between the well-connected and those who lack connectivity in terms of availability and quality, which are the result of an unjust distribution guided by the private sector. Despite the public sector's efforts in collaboration with the private sector through mechanisms such as subsidies and public policy mentioned above, the divide remains significant.

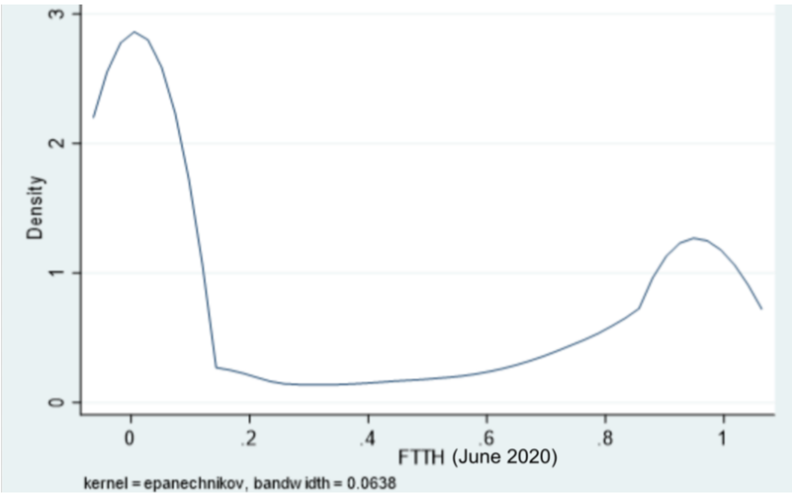
The study below explores the distribution of connectivity indicators across municipalities in Spain to identify the existence of the Digital Divide and its characteristics. To achieve this, this section aggregates the data of all municipalities in Spain to generate the distribution for each connectivity indicator (FTTH, LTE, COB>1000Mbps), in order to determine where and how the Digital Divide crops up. The Kernel Density Estimation (KDE) method functions the distribution as a continuous replacement for the discrete histogram and was employed below to graphically present the distribution of each indicator, with the area below the area below the line representing 100% of the distribution (Pruim, 2011).

This methodology focuses on the level of connectivity regardless of size of municipality, which is a known constraint of the KDE generated, since they do not differentiate between largely and sparsely populated areas. Despite this limitation, the study sheds light on the Digital Divide in Spain and demonstrates that each connectivity indicator works on a different timeline, with distribution depending on the progress of the broadband technology. The findings of this study help to reveal the significant scale of the Digital Divide in Spain and the phenomenon of the "catch up effect" as newer technologies (5G in Figure 12c) have a longer way to go before they are distributed to most municipalities.

4.21 FTTH Distribution

The distribution of FTTH, provides an outstanding example of the disparity between rural and urban connectivity levels (Figure 12a), taking on a bimodal distribution that clearly identifies two distinct groups. The first group (right) represents the areas with the highest FTTH connectivity levels, with a high mean. However, the second group (left) displays a shockingly high density of areas with below 20% coverage, increasing as connectivity approaches 0, indicating a significant number of municipalities lacking in fibreoptic connectivity. This distribution reveals a structural issue characterized by a high number of under-connected and unconnected zones. Considering this, it is crucial to identify the areas that can be targeted for improvement. Based on the findings of this project, one can assume that the lower tail of the distribution (left) represents the areas that need to be addressed. Perhaps the lack of profitability in deploying FTTH results in a market failure or gap in these areas, resulting in the observed disparity.

Figure 12a. Kernel Density estimate (FTTH)

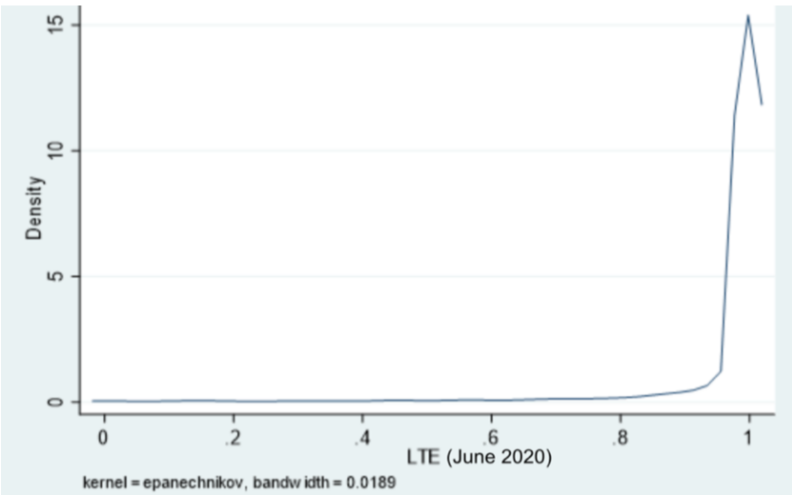


Source: Mineco, own elaboration using Stata

4.22 LTE (4G) Distribution

In examining the distribution of 4G connectivity (Figure 12b) across Spain's municipalities, it becomes apparent that it is markedly dissimilar to that of FTTH. It is characterized by a right-skewed distribution that reflects the country's successful efforts over the past two decades to deploy 4G technology, which has reached almost all areas of the country. This is evidenced by the graph showing municipalities tending towards a mean connectivity of around 98%, with a significant proportion having achieved full 100% coverage (density of 12.5 approximately). Additionally, a small spread is visible, indicated by a low standard deviation, which suggests that the distribution is relatively homogeneous. These observations are consistent with the historical rollout of 4G, which has been ongoing since 2005, and the significant government efforts to address under-connected areas through subsidies and allocation of spectrum.

Figure 12b. Kernel Density estimate (LTE)

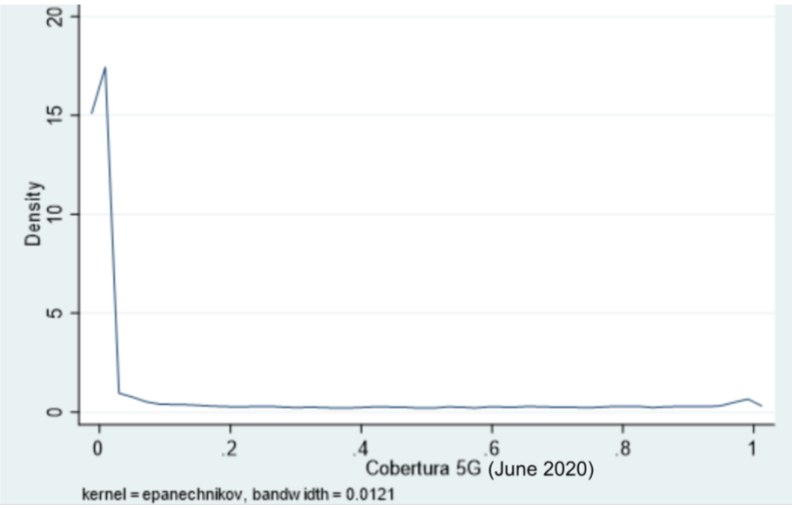


Source: Mineco, own elaboration using Stata

4.23 5G Distribution

In terms of municipal distribution, the adoption of 5G is highly left-skewed (Figure 12c) indicating that only a few regions have embraced this technology, which is still relatively new compared to its predecessor, 4G - conversely, 4G adoption was almost evenly distributed. Currently, most municipalities fall within the 0-5% connectivity window (left peak) indicating that 5G is practically non-existent in these areas. However, a small group of high-density urban areas, such as Madrid, Barcelona, and Valencia, who were first to benefit from the deployment of 5G networks, exhibit a high level of 5G coverage with 96.91%, 98.99%, and 99.44%, respectively (Mineco, 2021). This distribution highlights how new technologies can reintroduce disparities since as 5G becomes more widely available, this shape will transition in to two groups - those receiving the benefit of ongoing public and private investment, and those left behind unconnected. it is expected to form two groups: the connected and the non-connected, more like the distribution of internet speeds, eventually covering almost all areas of the country, as observed with the adoption of 4G in Figure 12b.

Figure 12c. Kernel Distribution estimate (5G)

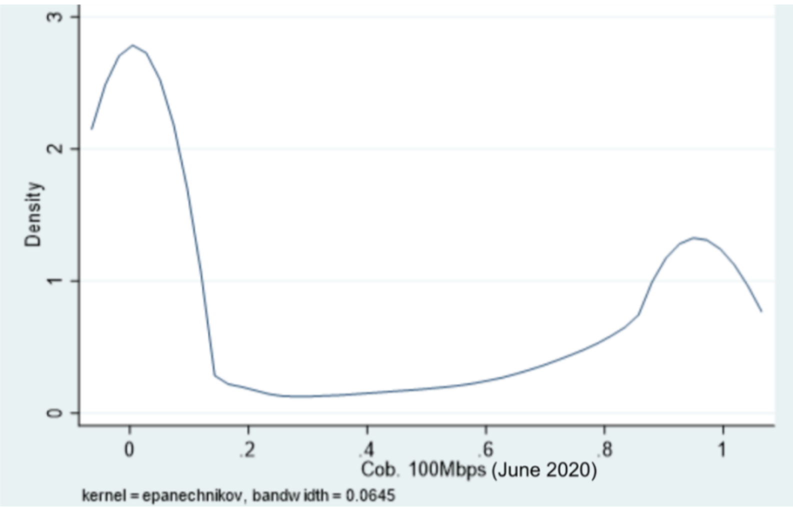


Source: Mineco, own elaboration using Stata

3.44 Internet Speed distribution (Cob>100Mbps)

Among all the indicators considered, the one that is most surprising is that of internet speed, as it speaks to the quality of digital access that municipalities are exposed to. Put into perspective, an internet speed of 100 Mbps is fast enough for a household of up to four people if to stream videos in HD, participate in video chat meetings over Skype or Zoom, and playing multiplayer online games (Hoslin, 2023). The shape of this distribution accurately reflects the demographic structure of Spain, whereby the population is heavily concentrated in a few areas, as indicated by those found on the right side of the graph, which, thanks to incentives for private companies to set up connectivity there, enjoy high-speed connection with a coverage of 80% or more. However, the lower tail of the distribution corresponds to the essence of this thesis, which is to identify the disparities in terms of connectivity in Spain, revealing that many, or more accurately, most areas suffer from underconnectivity. Ultimately, the distribution speaks to the quality of internet, as measured by speed, to which they have access. This diagnosis proves that, besides successful deployment of the infrastructure for connectivity, ultimately the internet speed that it offers is a better measure of the extent to which a municipality can use digitalisation to their economic and social advantage.

Figure 12d. Kernel Distribution estimate (Cob>100Mbps)



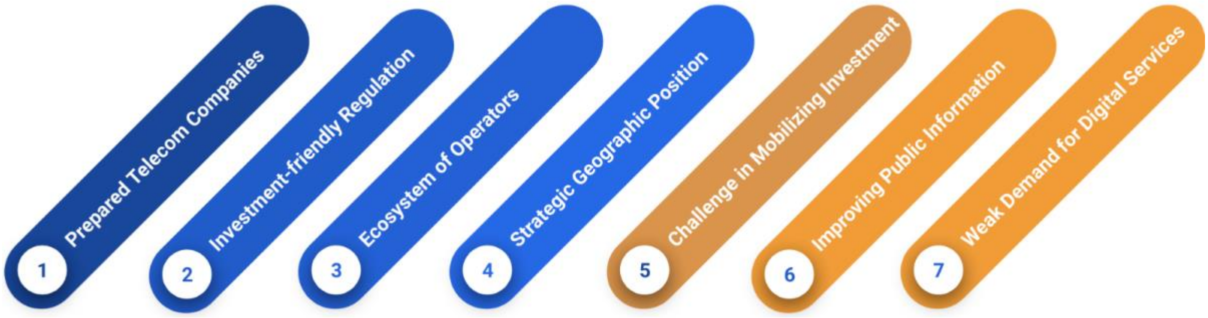
Source: Mineco, own elaboration using Stata

4.3 Diagnosis of connectivity in Spain

Following the examination of connectivity distributions across Spain and the mapping of the disparities between municipalities, it has become clear that certain areas are inhibited from reaching their full potential due to an absence of digital access. In practice, this means that within a single province, some households enjoy a level of digital connectivity that would suffice for a medium sized family to access digital services as part of their daily, while in proximity others may lack any form of connectivity whatsoever.

The process of enhancing broadband connectivity in regions that are currently lacking requires several things: from identifying hurdles, to mobilization of public and private investment, improvement of public information systems and strengthening demand for digital services via education. This costly endeavour is complicated by the escalating cost of network deployments in areas with insufficient coverage, as the coverage of regions lacking adequate broadband availability involves. Over time, this generates disparities and, more importantly, growing ones. Identifying the position from which Spain affronts the digital divide, implies identifying the strengths that it can leverage, as well as recognising its weaker points where it may face hurdles.

Figure 13. Connectivity diagnosis summary



Source: own elaboration

4.31 Strengths

Prepared telecommunication companies:

- Know-how in the roll out of fibre optic networks, laying digital and physical network infrastructures and manage investments expeditiously (Rodil, 2022).
- Experience with areas of complex orography which is the case for some parts of Spain.

Investment-friendly regulation:

- Adequate competitive and regulatory conditions have contributed to promoting connectivity in rural areas (Telefonica, 2022).
- Effective public attention on rural areas and the need to incentivise the private sector to invest in the provision of broadband connection (Pedros and Sivakumaran, 2019).

Ecosystem of operators:

- Specialized ecosystem of providers surrounding the deployment of networks has been created in the last 20 years with major equipment manufacturers having established their headquarters and presence in Spain (Mineco, 2020).

Strategic geographic position:

- Iberian Peninsula's privileged geographical position is strong and strategic to its role as a central hub for Europe.
- High connectivity and security capacities of its networks, agility of expansion and capillarity in fixed and mobile broadband (Mineco, 2019).
- Ability to generate electricity free of emissions from renewable sources.

4.32 Weaknesses

Challenges in Mobilizing Investment

- Incentive programs used so far are insufficient to mobilize investment from operators in residual areas.
- New sources of information should be incorporated into the decision-making process for public policies.

Improving Public Information Systems

- Information systems are not sufficiently developed to take full advantage of available data.
- Ongoing need for improved information systems: leveraging technologies like Big Data and Artificial Intelligence to identifying areas with inadequate coverage, enabling better targeted public aid, and facilitating private investment (Mineco, 2020).

Weak Demand for Digital Services

- Low operating income due to low population density and low adoption of digital services.
- Deployment of networks and provision of services in certain rural areas are unprofitable (NRECA, 2013).

4.33 The Role of Public Policy

Ultimately the Digital Divide as a market failure is born from the under provision of digital access in the free market, such that public intervention is necessary (Randall et al., 2020) and the following chapter will propose a solutions framework that appreciates the role of the government as a driver of investments and a facilitator for private investment. Since the 1980s, public policy has been mainly driven by the New Public Management (NPM) reforms, which were prompted by the rising budgetary constraints, escalating infrastructure costs, and the influence of the private sector (Turner et al., 2015).

As a result, governments gradually shifted away from directly providing public services and to unlocking private sector investments and collaboration through incentives. Therefore, the public sector has taken on a co-production role (Bovaird et al., 2015) with an instrument most known as Private Public Partnerships (PPP). PPP mode is positioned between entirely public and fully privatized, and it is associated with the partnership between public and private stakeholders for the development of infrastructure based on shared risks, responsibilities, costs, and benefits (Grimsey & Lewis, 2007; Koppenjan, 2005).

In the case of Spain, PPP are crucial to address the digital divide from a supply and demand perspective, for which the support of the private sector (both telecommunications companies and other businesses) is necessary, although this must be coordinated at European and National level. Chapter 5 will focus on building a framework to approach the best allocation of public funds to deliver a feasible long term and, eventually, sustainable solution to address the Digital Divide in Spain.

5. Solutions Framework

"Digital transformation requires changes to processes and thinking – changes that span your internal organizational silos."

- George Westerman, Founder of the Global Opportunity Initiative

5.1 Approach for a solution

Any potential solution to address the Digital Divide must consider both the demand and supply of digital infrastructure as the foundation to determine where resources can be best allocated to alleviate inequalities. The demand side involves identifying the areas in which demand for digital infrastructure can be most stimulated by investment, determining where supply is best allotted (Kader, 2022). Rolling out digital infrastructure without understanding where demand already exists or where it can be created, could lead to the misallocation of resources (Chang-tai and Klenow, 2009) since the capital invested will fail to maximise its socioeconomic benefits. The IMF quantified inefficiencies in public investment at 30% (the value of output forgone as a percentage of the public capital invested), revealing that the economic and social impact of public investment critically depends on its efficiency (IMF, 2015).

Therefore, this paper contests that before constructing the supply-side of any solution, one must first map out the areas in which investment has justified prospects of fostering demand for digital infrastructure. This approach reflects the earlier example (Chapter 3) of the first stages of electrification (Pietrzak, 2020), which began by conducting research with the objective of locating the areas where impact would be greatest – using the criteria of population density and level of existing industry. Similarly, the framework suggested by this thesis works on establishing the necessary conditions for an area respond efficiently to the injection of resources into its digital infrastructure, measurable by indicators like the PIE (Public Investment Efficiency).

Diagnosing the situation of an area and the strength of its demand for digital infrastructure is crucial to understanding the level of government funding that deploying infrastructure truly requires. For example, areas with a good foundation of existing demand exhibit a good prognostic to permeate a supply-side investment in digital infrastructure. Establishing what these areas might look like, means choosing the criteria that make a municipality attractive receptor of investment.

5.11 Conditions for digital demand

In line with the discussion in the previous chapters, the level of digital demand in an area is guided by the existing resources in that area, as part of the cycle which leads more concentrated areas in terms of businesses and people, to be more economically prosperous, earlier referred to as *agglomeration economies* (Duranton and Puga, 2020). On these grounds, the paper will establish the following conditions (first mentioned in Chapter 1) to locate the best allocation of public/private funds:

(1) *Basic infrastructure:* both physical and organizational structures, comprising of transportation and communication, sewage systems, education and healthcare services, access to clean water.

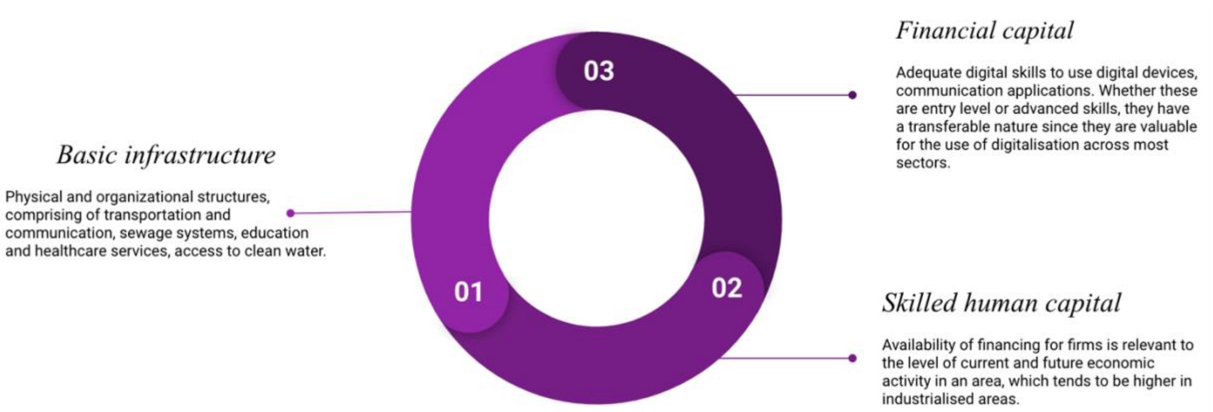
(2) *Skilled human capital:* sufficient workforce with adequate digital skills to use digital devices, communication applications, and networks to access and manage information (UNESCO, 2018). Whether these are entry level or advanced skills, they have a transferable nature since they are valuable for the use of digitalisation across most sectors.

(3) *Financial capital:* availability of financing for firms is relevant to the level of current and future economic activity in an area (Kent, 2017). Availability of financial capital tends to be higher where some industry has already been established.

By anchoring in these, public spending can be channelled effectively into boosting existing resources to create solid demand for digital infrastructure and as a result ensure that its supply yields a high impact thanks to the level of adoption or “readiness”. However, as noted above in the classification of municipalities (Figure 3), there are degrees of ruralism which imply that the beginning conditions can vary considerably in terms of infrastructure, skilled human capital and financial capital. This will likely determine how well an investment in digital infrastructure yields – under the hypothesis that the better the position of the region under the three conditions, the more effective an investment in digital infrastructure supply will be.

Building on the argument that bridging the Digital Divide is a key tool to protect social cohesion and avoid the risks of an endemic depopulation of Spain´s interior regions, the points of action for the government need to be well-targeted to maximise the return on investment in rural regions. From a practical perspective, areas of different degrees of ruralism must be dealt with differently because their starting point.

Figure 14. Approach to solutions framework



Source: own elaboration

5.12 Different starting points of Intermediate and Small Rural

Intermediate rural areas that dispose of some skilled human and financial capital as well as the basic infrastructure to operate a business efficiently, present a better prognostic than smaller less developed rural regions. Those that have already established some level of industry, already have a source of demand for digital infrastructure since they benefit from a structure in which digitalisation can be integrated in order to improve productivity. Investment in these areas could thus be targeted at scaling up the size of its existing businesses, as a way of increasing their demand for digital infrastructure, a process which leverages their existing business model, operations system, equipment and skills.

On the other hand, small rural areas present an entirely different case in terms of investment type and magnitude. For "small" deeply rural areas that do not count with basic infrastructure, some skilled human capital nor sufficient financial capital, satisfying the three conditions means that these conditions need to be *built*. As opposed to focusing solely on the supply of digital infrastructure, the government would first have to create the conditions for its success by addressing the demand-side factors.

Investing in building basic infrastructure such as healthcare or education centres incurs a costly expense, in absolute and relative terms, whilst generating a low-level impact in terms of job creation – the number of staff needed for a small population is minor. The requirement for some skilled human capital would involve education to integrate digital capabilities in the population with a long-term horizon. However, closing this gap in the short-term would mean importing skilled individuals or teams, via incentive mechanisms such as generous tax breaks or subsidies to make the move from a more urban area appealing – to facilitate their relocation. Likewise, importing financial capital into deep rural Spain calls for sizeable grants to compete with its alternative allocation in other areas of the country.

In order to approach the deployment of digital infrastructure in a gradual manner, the public sector would first take advantage of the points in which demand for digital infrastructure can be best stimulated, namely small cities or intermediate rural areas, before targeting small rural areas for which the necessary conditions (Figure 14) would have to be created from scratch. The following section will delve into the potential role of small cities as hubs in order to generate positive economic repercussions of agglomeration in the digitalisation and growth of rural areas in their scope of influence.

5.2 Empirical cases: opportunity for small cities

Currently, the major hubs for Spain are few but have a large area of influence, such as Madrid for which the economic prosperity created initially in the capital, has a sizeable radius of repercussion (discussed in Chapter 3, Figure 8). The effects of economic activity derive from the high quality of infrastructure, skilled human capital (both domestic and foreign) and concentration of available financial capital thanks to its half a million companies (Comunidad de Madrid, 2019). The combination of these generates strong demand for digital infrastructure and the investment in technologies, including 5G are employed to maximise results.

As earlier established, municipalities surrounding Madrid benefit from the economic activity and private investment as it reproduces, and generates second round effects on two levels: firstly, because they are able to benefit from the availability of jobs or capital to set up their own businesses, and secondly, as the city of Madrid grows, companies relocate slightly further out and bring further prosperity and population to these areas. However, interior rural areas of Spain are often excluded from the positive network effects of economic growth in “mega-cities” (de la Torre, 2022) since commuting to them is unrealistic, resulting in a closing retroactive circle.

In this sense, mega-cities do not have sufficient capillarity to reach small interior regions. However small and medium sized cities have the potential, based on the conditions above, to create similar second round effects for their surrounding areas. Since their starting point provides the adequate infrastructure, skilled human capital and some financial capital, they are an attractive target for public provision of digital infrastructure because they already have a certain level of demand for it, which can be stimulated via investment. Cases of successful agglomeration, also referred to as *clusters*, can be observed in within Spain, Europe and other countries which have focused public investment in areas that will generate the most significant spill overs, in turn benefiting the economies of the rural areas that they encompass.

5.21 In Spain: the case of Malaga

Mid-sized cities like Malaga have been incredibly successful in embodying this framework which led to its rise as a prominent tech hub for Europe and nucleus of digital activity. Like many others in Spain, the city´s economy was traditionally founded on tourism but took a pivotal turn in the early 1990s with the launch of its *Technology Park* which identified the importance of digitalisation as a driver of economic growth (discussed in Chapter 3). This initiated a movement of turning Malaga into a hub of activity (Fiter, 2022) by leveraging its existing conditions to attract businesses and individuals alike. Applying the “Approach to solutions framework” suggested by this thesis, the case of Malaga founded its success on the following conditions:

(1) *Basic infrastructure:* basic infrastructure was crucial in stimulating demand for digital infrastructure since it meant that the city could accommodate for businesses and individuals to live and work in and around the area. This includes the availability of schools, universities, healthcare and, crucially, a solid transport network including an airport – features that made accessing the region both feasible and attractive for

incomers to settle. Moreover, the availability of schools and universities created a level of demand for digital infrastructure which could be further fostered by investments in boosting the digital capabilities of students.

(2) *Skilled human capital:* existing human capital in the area and entrepreneurial culture, fostered by its education systems, encouraged the development in areas like technology such that the boosted by a strong focus on education and innovation, thanks to the quality of its universities, reducing the need to import skilled human capital thanks to institutions like the University of Malaga (UMA) which acts as a source of skilled human capital (Esteban, 2022).

(3) *Financial capital:* this was initially generated by the hospitality sector via tourism and, as the city transitioned into a technology hub, the source of financial capital has become the network of incoming technology firms, alongside European funding: a combination which has incentivised the concentration of private sector companies.

Malaga leveraged these conditions, in addition to its cultural appeal, to attract more individuals and businesses. Its success in becoming a hub is mirrored by its 32% population growth of since 2000 (with a total population of 1.7 million in 2021) and forecast to reach 2 million by 2037. This translates to double the pace of population growth than the rest of Spain (INE, 2022) given the inflow of foreign and domestic migrations. Foreigners, as a result of international corporations setting up production in the city, contribute to the quality of skilled human capital – with as many as 31,814 having moved to Malaga in 2021 (INE, 2022). Domestic migrations are another source of Malaga´s growing population thanks to its attractive labour opportunities, accommodating climate and infrastructure, with a net migration flow of 4,983 Spaniards in 2021.

5.22 In Europe: the case of Germany

Germany presents an empirical case for a successful hub-model in a country of demographic and socioeconomic similarities to Spain. Whilst it has a slightly larger population of 83 million and smaller territory (358 km2) than Spain´s 47 million and 505km2 respectively, Germany is a comparable profile to Spain in Europe. Common features beyond their location and membership in the EU include their average living costs, positions as receptors of international tourism and strategic automotive sectors which accounts for 12% of Spain´s GDP (World Data, 2022). Structurally, Germany is also organised in a decentralised manner comprised of 16 federal states – similar to Spain´s autonomous communities.

The German economy endorses a hub model, making it home to a number of regional and national clusters which are best understood as "self-sufficient networks" of industry, research and public-private organisations (Gleicke, 2015). The government has promoted this model through *cluster policies* and initiatives like the Leading-Edge Cluster Competition to foster the formation of efficient cluster structures (Rothgang et al, 2021). As such, Germany has leveraged the role of its medium cities, which are fairly spread across the country to create clusters of innovation, with examples like Dresden – informally known as the Silicon Saxony cluster - which is specialised in electronics and home to companies like Siemens.

The strategy has generated positive externalities for surrounding rural areas like Lichtenberg with a population of 1,600 inhabitants, thanks to its commutable proximity (46.6km) from Dresden, which the European Commission cited as a "key factor in the effectiveness of innovation" (European Commission, 2006, p. 7). The collaboration and knowledge spill over from nearby economic activity are accessible for inhabitants of Lichtenberg, resulting in employment opportunities, digital training and availability of financial capital (Martinidis, 2021).

5.23 Globally: the case of Brazil

However, thus approach can also be found in countries like Brazil. In the last 40 years, Brazil has developed economic clusters as growth points to boost its competitiveness, with the configuration of over 744 official *Arranjos Productiveos Locais* (LPA - Local Productive Arrangements) (Pires, 2013). These LPAs – the Brazilian version of a cluster – act by concentrating small and medium sized enterprises (SMEs) in mid-sized cities to attract suppliers and workers (Alderete and Bacic, 2020). So far, the development of hubs in Brazil has been led by the federal government, which has identified key locations for hubs to be established where there is already sufficient infrastructure, similar to the conditions proposed by this paper (section 5.11).

These loci aim to attract private investment and foster a ring of economic growth around them, particularly in underserved or marginalised areas so that they also benefit from the innovation and growth of sector activity. Like Spain, Brazil suffers from intermunicipal heterogeneity in terms of employment and income, such that the objective (*2004 LPA Pluriannual Plan*) was for every municipality, including rural ones, to be supported by at least one LPA (Alderete, 2016).

Public investment has nurtured these hubs by funding firms within target areas, building technology centers with the right digital infrastructure for SMEs, setting up Special Economic Zones (SEZs) which offer incentives for foreign capital and attractive tax credits for innovation (Parente and Piccinetti, 2012). This demonstrates the stimulation of economic growth by proximity (Moretti, 2021) by leveraging the existing infrastructure in certain areas (such as airport or transport corridors) to generate positive spill overs for surrounding rural municipalities.

5.3 Proposed framework: Mini-hub Model

Based on the initial study of Spain´s demography (Chapter 2), the role of digitalisation (Chapter 3), and the empirical cases, the thesis is conducive to a solution based on mini-hubs, which would be selected on the grounds of the starting initial conditions. This implies replicating the model of big cities on a gradually smaller scale such that all rural regions are encompassed by a “mini-hub”.

Feasibility is a crucial aspect of the proposed solution framework, which takes into consideration real limitations of public spending. It acknowledges the relative urgency of addressing the widening disparities of the Digital Divide and emphasizes the importance of feasibility of any proposal. Real limitations for public spending, such as time and budget, must be taken into consideration when investing in digital infrastructure. The implementation of the proposed solution framework incurs costs that require supervision and measurement of effectiveness. It is important to take a long-term horizon and focus on public investments that justify the attraction of funding to rural areas (Medeiros, 2022) for the private sector to unlock further economic growth and development.

The injection of well-targeted investment may be a one-off expense, while areas that require more profound investment may not be self-sustaining. The framework aims to identify areas with a good foundation for demand for digital infrastructure, as shown in Figure 14, and invest accordingly. For example, setting up basic infrastructure such as healthcare or schools by the state will become an operating expense for the public sector that is not offset by the returns and does not appeal to private investment.

5.31 Mini-hub model

The literature readings, research and inductive methodology, conduces to the solution of replicating these small-scale hubs that have already worked in big cities, as means to cover the entire terrain of Spain. Establishing smaller, yet more frequent points of strong connectivity, would be the next step in extrapolating the empirical successes of the model in countries like as Germany, Brazil or in Spanish cities like Madrid or Malaga. By increasing capillarity, rural areas would gain proximity to a connectivity nucleus by making it a feasible commute – less than 100km is defined as half of a long-distance commute (Öhman and Lindgren, 2005).

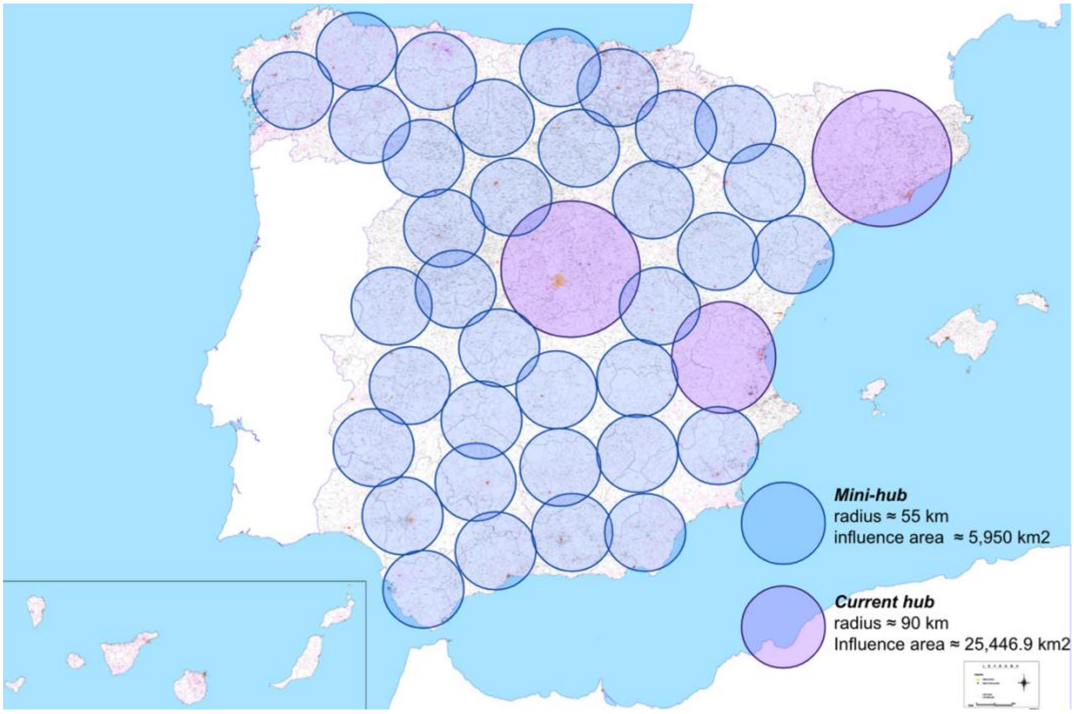
The hypothesis that an initial investment in an area which meets these three conditions (Figure 14) is better targeted and has broader positive externalities than starting from scratch, would allow us to filter those municipalities that display a good prognostic. Focusing on the areas that meet the necessary conditions for solid demand of digital infrastructure, the method suggests that medium-to-small cities or intermediate rural areas should be priority candidates for public investment, in line with Medeiros and Rauhut (2018) who support the vision of medium towns as crucial anchors in achieving territorial cohesion.

In practice this means identifying which areas cover these conditions, as long as their combined areas of influence (i.e. the radius) cover the entire span of Spain as drawn up in Figure 15. Looking forward, the next steps would be to use the criteria (Figure 14) to identify municipalities where demand for digital infrastructure can be stimulated most effectively. That is to say, listing the areas in which €1 of public spending will foster the greatest impact to demand for digital infrastructure. As demonstrated in Figure 15, reducing the size and increasing the number of hubs results in greater capillarity and proximity of rural areas or “growth points” as Dubyna (2021) suggested and is exhibited in the previous empirical cases of Malaga, Germany and Brazil.

An example, For example, Huelva is a small-city found in the southern region of Spain with a rising yet small-scale industry and population of 144,000. Like Malaga, compared to

Madrid or Barcelona, the city is relatively small yet already home to 7,500 companies most of which are industrials, including the oil refinery CEPSA (Aiqbe, 2022). Within a 50km vicinity of Huelva, there are numerous remote municipalities like El Almendro (47.1km) which has a population of 848 (Andalucia Statistics Institute, 2022). Due to its deeply rural location, the area is unconnected in terms of most indicators, relying solely on LTE (4G) as its form of broadband connectivity (0% connectivity in fibreoptics, 5G and coverage below 100Mbps). However, it lies within the area of influence of Huelva such than an investment in Huelva is likely to create opportunity for El Almendro´s population in terms of employment, access to skills and access to capital. As Huelva´s concentration of business and population intensifies, there will be increased incentive to grow the city further out. This has already happened for Malaga as manifested in rise in housing costs which now occupy an average of 43% of disposable income (mentioned in Chapter 2), which encourages the movement outwards to its area of influence.

Figure 15. Mini-hub model



Source: own elaboration

6. Conclusions

Based on the diagnosis of *España Vaciada*, this thesis first exhibits Spain´s abnormal population density concentrations in a limited number of areas, resulting in empty interior regions and an increase in urban-rural disparities across indicators such as income. The consequences of this trend are manifold, including the risk of further migration towards central hubs such as Madrid or Barcelona, exacerbating inequalities (European Commission, 2021) and threatening the sustainability of these urban centres.

Furthermore, the diagnostic of Spain´s broadband connectivity, using Kernel Density estimates, revealed the existence of the digital divide in Spain since a significant number of municipalities suffer from under-connectivity (Figure 12). This observation suggests that there is a risk of further exacerbating the disparities between urban and rural areas, as individuals and businesses may be forced to relocate to areas with better connectivity, further depopulating areas with lower connectivity. Combined with the phenomenon of *España Vaciada*, unequal access to digital connectivity exacerbates existing inequalities, particularly punishing rural municipalities, which are found on the lower end of the distribution.

Conclusion 1. The first conclusion drawn from the thesis is that addressing the digital divide requires a comprehensive approach that considers both the supply and demand of digital infrastructure. It argues that the demand for digital infrastructure must be the first consideration in order to identify where resources are best allocated to foster economic growth and alleviate digital inequalities. For this, it is crucial to identify the areas where investment can stimulate demand, for which the proposed framework emphasizes the importance identifying the criteria that make a region a good potential receptor of public investment in digital infrastructure. Following the initial research, the study deduces that installing digital infrastructure alone is not a sufficient condition for an area to reap the benefits of digitalisation. In order to capture the full benefits of digitalisation, there are three criteria on which digital demand can be anchored to provide a solid foundation to use digital infrastructure: (1) basic infrastructure (2) availability of some skilled human capital (3) availability of financial capital. In summary, it contends that identifying areas that meet these conditions to some degree, is the first step that should be taken before progressing with supply-side action.

Conclusion 2. Secondly, the thesis concludes that rolling out digital infrastructure *without* understanding where demand can be created is cost inefficient. In turn, this would lead to a misallocation of resources (Chang-tai and Klenow, 2009), since government funding since find itself underemployed in areas of low digital demand. This led to distinguishing the starting points of small rural areas and those slightly more advanced areas which are better equipped in terms of basic skilled human capital, financial capital and infrastructure. Whilst understanding that all areas, including the deeply rural areas of Spain, such as El Almendro, need to be served in terms of digital connectivity, this conclusion recognises that the investment required to successfully employ digital infrastructure in an area of negligible demand for digital infrastructure would need to create this demand before rolling out supply. Creating conditions for receptive digital demand entails an investment of a different scale altogether because it would have to invest in consolidating these three conditions before private investment can thrive.

Conclusion 3. An inductive study found examples of where anchoring public investments on the existing resources and capabilities of a region have created second-round effects of economic growth on surrounding municipalities (Giraldo, 2021). As attested by the gradual growth of its surrounding municipalities in terms of people and capital, Madrid offers a good example of this model in Spain, as well as other successful cases like the Basque Country, Barcelona and Germany. Malaga´s embodiment of the same model at a smaller scale offers encouragement for the opportunity of small cities to become hubs with sufficient proximity to rural areas to encompass them within a given radius of influence and therefore narrow the digital divide.

Conclusion 4. The final outcome from the study´s findings is an early/primary prototype that applies the successful model of main cities on a smaller scale like Malaga, such that the entirety of Spain´s territory is influenced by a mini-hub. These areas would not look to be as large as Madrid or Barcelona, but instead they would offer a smaller area of influence for the rural areas in their proximity. In order to further this model, the next consideration would be to select candidate municipalities, such as Huelva (mentioned above) to shortlist the municipalities around Spain that could serve as mini-hubs with the right investment as a function of their current availability of skilled human capital, financial capital and basic infrastructure. The next phase would require detailed topographic studies to contemplate the optimum distance of these hubs from each other, and the total number of mini-hubs needed to cover the Spanish terrain.

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7. Appendix

ANNEX I.

Table 1. Classification of Municipalities in Spain from INE (2022)

Type of municipality	*N. municipalities*	*Mean Population*
URBAN	*753*	*49749*
RURAL INTERMEDIATE	*1502*	*4575*
RURAL SMALL	*5877*	*459*

Table 2. Mean Coverage (%) of Broadband technologies per type of Municipality

Type of municipality	*FTTH (junio 2020)*	*Cob. 100Mbps (junio 2020)*	*LTE (junio 2020)*
URBAN	*83,02%*	*87,78%*	*99,98%*
RURAL INTERMEDIATE	*69,35%*	*73,11%*	*99,89%*
RURAL SMALL	*21,72%*	*21,90%*	*95,23%*

Table 3. Investment in ICT Cloud Services by Firm Size in Spain from INE (2021)

Total Empresas	*Total*	*De 10 a 49*	*De 50 a 249*	*De 250 y más*
F.1 % de empresas que compran algún servicio de cloud computing usado a través de Internet (1)	*32,41*	*28,73*	*48,23*	*67,79*

URBAN	Habitantes	FTTH (junio 2020)	Cob. 100Mbps (junio 2020)	LTE (junio 2020)
Mean	49.749	83,02%	87,78%	99,98%
Abarán	12.964	78,36%	84,87%	99,99%
Abrera	12.489	95,00%	95,00%	100,00%
Adeje	47.869	83,08%	83,08%	99,99%
Adra	25.148	56,59%	56,59%	99,96%
Aguilar de la Fronte	13.328	94,19%	94,19%	100,00%
Águilas	35.301	97,92%	97,92%	99,95%
Agüimes	31.619	87,79%	87,79%	100,00%
Alaquàs	29.561	93,38%	97,16%	100,00%
Albacete	173.329	87,91%	98,72%	99,99%
Albal	16.399	99,11%	100,00%	100,00%
Albatera	12.279	79,58%	89,72%	100,00%
Alberic	10.526	100,00%	100,00%	100,00%
Albolote	18.808	88,32%	88,32%	100,00%
Alboraia/Alboraya	24.454	88,46%	94,81%	100,00%
Albox	11.805	73,21%	73,21%	99,97%
Alcalá de Guadaira	75.279	93,19%	93,19%	100,00%
Alcalá de Henares	195.649	99,91%	99,91%	100,00%
Alcalá del Río	12.029	98,68%	98,68%	100,00%
Alcalá la Real	21.605	74,69%	74,69%	99,68%
Alcañiz	15.947	71,23%	71,23%	100,00%
Alcantarilla	42.048	99,84%	99,84%	100,00%
Alcàsser	10.039	90,67%	90,67%	100,00%
Alcaudete	10.498	97,68%	97,68%	99,99%
Alcázar de San Juan	30.576	92,65%	92,65%	99,98%
Alcázares, Los	16.138	43,69%	43,69%	100,00%
Alcobendas	117.040	96,65%	96,65%	100,00%
Alcora, l'	10.405	1,61%	83,50%	99,94%
Alcorcón	170.514	97,16%	97,16%	100,00%
Alcoy/Alcoi	58.994	97,31%	100,00%	100,00%
Alcúdia	20.241	79,72%	79,72%	100,00%
Alcúdia, l'	12.009	84,04%	84,04%	100,00%
Aldaia	31.864	94,11%	97,96%	100,00%
Alfafar	20.890	99,43%	99,75%	100,00%
Alfàs del Pi, l'	20.482	72,44%	72,44%	100,00%
Algaba, La	16.374	80,46%	80,46%	100,00%
Algeciras	121.957	83,26%	86,06%	100,00%
Algemesí	27.331	94,67%	97,96%	100,00%
Algete	20.611	96,26%	96,26%	100,00%
Alginet	13.380	80,38%	80,38%	100,00%
Alhama de Murcia	22.077	54,39%	74,78%	99,96%
Alhaurin de la Torr	40.345	88,49%	88,49%	100,00%
Alhaurin el Grande	24.705	100,00%	100,00%	100,00%
Alicante/Alacant	334.887	91,75%	99,21%	100,00%
Aljaraque	21.260	85,59%	86,08%	100,00%
Aller	10.613	68,18%	68,18%	99,63%
Almansa	24.419	91,28%	91,28%	100,00%
Almassora	26.270	68,36%	81,37%	100,00%
Almendralejo	33.474	100,00%	100,00%	100,00%
Almería	198.533	83,70%	86,33%	100,00%
Almonte	24.191	97,79%	97,79%	100,00%
Almoradi	20.803	100,00%	100,00%	100,00%
Almuñécar	26.514	68,15%	68,15%	99,71%
Álora	12.985	58,01%	58,01%	99,71%
Alovera	12.735	100,00%	100,00%	100,00%
Alpedrete	14.575	93,25%	93,25%	100,00%
Altea	22.290	98,35%	98,35%	100,00%
Alzira	44.352	97,46%	97,68%	99,99%
Ames	31.793	84,46%	87,86%	100,00%
Amorebieta-Etxano	19.339	83,93%	97,08%	100,00%
Amposta	20.738	98,83%	98,83%	100,00%
Amurrio	10.350	91,75%	93,97%	99,99%
Andoain	14.637	92,17%	98,45%	99,98%
Andratx	11.271	79,96%	79,96%	99,95%
Andújar	36.793	89,35%	89,35%	99,96%
Ansoáin/Antsoain	10.833	98,53%	98,53%	100,00%
Antequera	41.239	97,00%	97,00%	100,00%
Antigua	12.461	3,47%	3,47%	99,92%
Arahal	19.526	96,82%	96,82%	99,99%
Aranda de Duero	32.856	89,46%	89,46%	100,00%
Aranguren	10.859	67,77%	67,77%	100,00%
Aranjuez	59.607	86,48%	86,48%	100,00%
Archena	19.301	100,00%	100,00%	100,00%
Arcos de la Fronter	30.700	82,45%	82,45%	100,00%
Arenys de Mar	15.776	91,21%	91,21%	100,00%
Arganda del Rey	55.389	89,42%	89,42%	100,00%
Argentona	12.452	91,83%	91,83%	100,00%
Armilla	24.174	92,22%	92,22%	100,00%
Arnedo	14.875	100,00%	100,00%	100,00%
Arona	81.216	81,26%	81,26%	100,00%
Arrasate/Mondrag	22.001	48,95%	96,60%	100,00%
Arrecife	62.988	97,52%	97,52%	100,00%
Arrigorriaga	12.160	99,03%	100,00%	100,00%
Arroyo de la Encom	20.179	85,44%	85,44%	100,00%
Arroyomolinos	31.396	87,32%	87,32%	100,00%
Arteixo	32.262	78,49%	88,85%	100,00%
Arucas	38.138	91,71%	91,71%	100,00%
Aspe	20.714	69,23%	69,23%	100,00%
Astillero, El	18.111	90,66%	90,66%	100,00%
Astorga	10.867	96,87%	96,87%	100,00%

RURALINTER	Habitantes	FTTH (junio 2020)	Cob. 100Mbps (junio 2020)	LTE (junio 2020)
Mean	4.575	69,35%	73,11%	99,89%
Abadin	2.367	8,34%	8,34%	99,87%
Abadiño	7.599	91,21%	98,13%	99,97%
Abanilla	6.127	68,62%	68,62%	98,77%
Abanto y Ciérvana-Abanto Z	9.444	54,86%	90,19%	100,00%
Abegondo	5.406	14,69%	14,69%	99,99%
Ablitas	2.481	79,15%	79,15%	100,00%
Aceuchal	5.449	100,00%	100,00%	100,00%
Adamuz	4.192	47,04%	100,00%	100,00%
Adrada, La	2.480	30,15%	30,15%	100,00%
Agaete	5.586	76,31%	76,31%	99,48%
Agolada	2.344	0,07%	0,07%	99,87%
Agost	4.758	71,32%	71,32%	100,00%
Agramunt	5.371	97,30%	97,30%	100,00%
Ágreda	3.001	98,57%	98,57%	100,00%
Aguadulce	2.020	99,75%	99,75%	100,00%
Aguilar de Campoo	6.744	90,07%	90,07%	99,67%
Agullent	2.410	84,69%	84,69%	100,00%
Agurain/Salvatierra	5.062	95,22%	95,22%	100,00%
Aia	2.054	84,00%	84,00%	99,54%
Aielo de Malferit	4.618	96,48%	96,48%	100,00%
Aiguafreda	2.504	89,57%	89,57%	100,00%
Ainsa-Sobrarbe	2.201	90,26%	90,26%	98,48%
Aitona	2.591	99,85%	99,85%	100,00%
Ajalvir	4.712	98,86%	98,86%	100,00%
Ajofrin	2.264	100,00%	100,00%	100,00%
Alagón	7.163	100,00%	100,00%	100,00%
Alaior	9.065	86,16%	86,16%	100,00%
Alajeró	2.017	41,27%	41,27%	99,81%
Alameda	5.372	95,75%	95,75%	100,00%
Alameda de la Sagra	3.623	83,78%	83,78%	100,00%
Álamo, El	9.470	99,59%	99,59%	100,00%
Alaró	5.572	87,85%	87,85%	100,00%
Alba de Tormes	5.186	68,96%	68,96%	100,00%
Albaida	5.900	94,48%	94,48%	100,00%
Albaida del Aljarafe	3.197	93,29%	93,29%	100,00%
Albalat de la Ribera	3.360	78,97%	78,97%	100,00%
Albalat dels Sorells	3.977	98,87%	98,87%	100,00%
Albatàrrec	2.221	96,19%	96,19%	100,00%
Albelda de Iregua	3.446	69,12%	69,12%	100,00%
Alberite	2.422	100,00%	100,00%	100,00%
Albinyana	2.438	69,88%	69,88%	100,00%
Albuera, La	2.028	6,99%	6,99%	100,00%
Albuixech	4.017	100,00%	100,00%	100,00%
Albuñol	7.233	81,74%	81,74%	99,94%
Alburquerque	5.343	90,26%	90,26%	99,72%
Alcalá de los Gazules	5.219	52,56%	52,56%	100,00%
Alcalà de Xivert	6.680	75,08%	75,08%	100,00%
Alcalá del Valle	5.046	100,00%	100,00%	100,00%
Alcanar	9.418	48,35%	48,35%	100,00%
Alcarràs	9.514	76,77%	76,77%	100,00%
Alcaudin	2.230	10,16%	10,16%	100,00%
Alcolea del Rio	3.373	100,00%	100,00%	100,00%
Alcoletge	3.420	53,75%	53,75%	100,00%
Alcorisa	3.266	99,23%	99,23%	100,00%
Alcover	5.064	61,55%	61,55%	100,00%
Alcúdia de Crespins, l'	5.157	100,00%	100,00%	100,00%
Alcuéscar	2.593	90,10%	90,10%	100,00%
Aldea de San Nicolás, La	7.504	69,76%	69,76%	99,90%
Aldea del Fresno	2.838	65,81%	65,81%	100,00%
Aldea, L'	4.160	100,00%	100,00%	100,00%
Aldeamayor de San Martin	5.524	90,82%	90,82%	100,00%
Aldeanueva de Ebro	2.761	96,74%	96,74%	100,00%
Aldeanueva de la Vera	2.066	71,69%	71,69%	100,00%
Aldeatejada	2.064	55,99%	55,99%	100,00%
Alegria-Dulantzi	2.876	4,46%	4,46%	100,00%
Alella	9.801	100,00%	100,00%	100,00%
Alfacar	5.400	98,34%	98,34%	100,00%
Alfajarin	2.315	74,65%	74,65%	100,00%
Alfara del Patriarca	3.310	90,01%	100,00%	100,00%
Alfaro	9.476	100,00%	100,00%	100,00%
Alfarràs	2.797	10,53%	10,53%	100,00%
Alfoz de Lloredo	2.416	16,85%	16,85%	100,00%
Alfoz de Quintanadueñas	2.114	21,56%	21,56%	98,50%
Algaida	5.642	57,12%	57,12%	100,00%
Algarinejo	2.520	79,70%	79,70%	100,00%
Algarrobo	6.444	75,83%	75,83%	100,00%
Algodonales	5.550	0,00%	0,00%	99,53%
Algorfa	2.935	33,88%	33,88%	100,00%
Alguaire	2.971	64,53%	64,53%	100,00%
Alguazas	9.638	93,50%	93,50%	100,00%
Alhama de Almería	3.641	69,78%	69,78%	100,00%
Alhama de Granada	5.979	88,43%	88,43%	100,00%
Alhendin	9.349	74,88%	74,88%	100,00%
Allariz	6.188	4,31%	68,25%	99,99%
Almacelles	6.791	68,34%	68,34%	99,99%
Almadén	5.312	99,25%	99,25%	100,00%
Almagro	8.896	100,00%	100,00%	100,00%
Almàssera	7.349	87,80%	100,00%	100,00%
Almazán	5.489	98,40%	98,40%	99,90%

RURALSMALL	Habitantes	FTTH (junio 2020)	Cob. 100Mbps (junio 2020)	LTE (junio 2020)
Mean	459	21,72%	21,90%	95,23%
Ababuj	73	0,00%	0,00%	89,92%
Abades	848	100,00%	100,00%	100,00%
Abadia	331	100,00%	100,00%	100,00%
Abáigar	83	9,53%	9,53%	100,00%
Abajas	31	0,00%	0,00%	88,48%
Ábalos	257	15,82%	15,82%	100,00%
Abaltzisketa	333	100,00%	100,00%	100,00%
Abánades	48	0,00%	0,00%	99,50%
Abanto	100	0,00%	0,00%	30,56%
Abarca de Campos	44	0,00%	0,00%	100,00%
Abárzuza/Abartzuza	538	9,67%	9,67%	99,70%
Abaurregaina/Abaurrea Alta	126	10,58%	10,58%	100,00%
Abaurrepea/Abaurrea Baja	32	11,08%	11,08%	100,00%
Abejar	297	0,00%	0,00%	100,00%
Abejuela	48	0,00%	0,00%	9,67%
Abella de la Conca	179	0,00%	0,00%	87,83%
Abengibre	790	100,00%	100,00%	100,00%
Abenójar	1.375	0,00%	0,00%	98,60%
Aberin	359	99,72%	99,72%	100,00%
Abertura	407	100,00%	100,00%	100,00%
Abezames	61	0,00%	0,00%	99,50%
Abia de la Obispalia	65	0,00%	0,00%	82,68%
Abia de las Torres	165	0,00%	0,00%	97,37%
Abiego	248	26,21%	26,21%	94,18%
Abizanda	150	75,25%	75,25%	89,54%
Abla	1.249	93,88%	93,88%	100,00%
Ablanque	59	0,00%	0,00%	98,92%
Abrucena	1.202	89,85%	89,85%	99,98%
Abusejo	183	0,00%	0,00%	100,00%
Acebeda, La	84	0,00%	0,00%	56,23%
Acebedo	187	0,00%	0,00%	98,99%
Acebo	579	0,00%	0,00%	96,96%
Acebrón, El	234	0,00%	0,00%	100,00%
Acedera	807	0,00%	0,00%	100,00%
Acehúche	801	0,00%	0,00%	99,88%
Aceituna	607	0,00%	0,00%	100,00%
Acered	166	41,28%	41,28%	100,00%
Adahuesca	177	100,00%	100,00%	100,00%
Adalia	53	0,00%	0,00%	99,50%
Adanero	196	0,00%	0,00%	100,00%
Ademuz	1.042	0,00%	0,00%	99,96%
Adiós	155	12,06%	12,06%	100,00%
Adobes	29	0,00%	0,00%	4,90%
Ador	1.508	8,11%	8,11%	100,00%
Adrada de Haza	203	0,00%	0,00%	100,00%
Adrada de Pirón	39	0,00%	0,00%	100,00%
Adradas	69	0,00%	0,00%	100,00%
Adrados	126	0,00%	0,00%	100,00%
Aduna	469	100,00%	100,00%	100,00%
Agallas	136	0,00%	0,00%	86,69%
Àger	588	0,00%	0,00%	94,51%
Agón	137	0,00%	0,00%	100,00%
Agoncillo	1.102	99,67%	99,67%	100,00%
Agres	565	75,25%	75,25%	100,00%
Agrón	274	0,00%	0,00%	100,00%
Aguarón	636	100,00%	100,00%	100,00%
Aguas Cándidas	56	0,00%	0,00%	100,00%
Aguasal	19	0,00%	0,00%	100,00%
Aguatón	18	0,00%	0,00%	41,95%
Aguaviva	514	0,00%	0,00%	100,00%
Agudo	1.659	100,00%	100,00%	100,00%
Agüero	129	0,00%	0,00%	98,45%
Aguilafuente	573	100,00%	100,00%	100,00%
Aguilar de Bureba	58	0,00%	0,00%	100,00%
Aguilar de Campos	243	0,00%	0,00%	100,00%
Aguilar de Codés	67	0,00%	0,00%	100,00%
Aguilar de Segarra	288	0,00%	0,00%	97,56%
Aguilar del Alfambra	63	0,00%	0,00%	99,93%
Aguilar del Rio Alhama	460	0,89%	0,89%	99,50%
Aguilón	251	0,00%	0,00%	99,98%
Agullana	831	0,00%	0,00%	99,86%
Agulo	1.096	59,12%	59,12%	94,28%
Ahigal	1.372	100,00%	100,00%	100,00%
Ahigal de los Aceiteros	114	0,00%	0,00%	100,00%
Ahigal de Villarino	31	0,00%	0,00%	12,86%
Ahillones	871	0,00%	0,00%	100,00%
Aibar/Oibar	805	0,00%	0,00%	100,00%
Aielo de Rugat	155	0,00%	0,00%	100,00%
Aiguamúrcia	901	47,99%	47,99%	97,78%
Aiguaviva	756	78,36%	78,36%	100,00%
Aigües	963	100,00%	100,00%	99,86%
Ain	127	100,00%	100,00%	99,94%
Ainzón	1.077	100,00%	100,00%	100,00%
Aisa	320	56,41%	56,41%	98,92%
Aizarnazabal	772	85,59%	85,59%	100,00%
Ajamil de Cameros	66	0,00%	0,00%	80,19%
Ajangiz	477	77,68%	77,68%	100,00%
Alacón	252	0,00%	0,00%	99,50%
Aladrén	52	0,00%	0,00%	44,44%

Atarfe	18.706	91,36%	91,36%	100,00%
Ávila	57.744	94,04%	94,04%	99,96%
Avilés	78.182	98,21%	98,37%	100,00%
Ayamonte	20.946	54,39%	54,39%	100,00%
Azkoitia	11.633	84,02%	96,18%	100,00%
Azpeitia	14.936	84,40%	99,00%	100,00%
Azuqueca de Henar	35.009	98,96%	98,96%	100,00%
Badajoz	150.702	94,01%	94,01%	99,91%
Badalona	220.440	100,00%	100,00%	100,00%
Badia del Valles	13.380	98,45%	98,71%	100,00%
Baena	19.284	90,24%	90,24%	100,00%
Baeza	15.841	48,59%	48,59%	100,00%
Bailén	17.667	100,00%	100,00%	100,00%
Baiona	12.122	32,17%	58,63%	100,00%
Balaguer	17.162	100,00%	100,00%	100,00%
Bañeza, La	10.338	99,05%	99,05%	100,00%
Banyoles	19.826	79,69%	79,69%	100,00%
Barakaldo	100.881	99,98%	99,98%	100,00%
Barañáin/Barañain	20.199	100,00%	100,00%	100,00%
Barbadás	11.037	93,62%	96,39%	100,00%
Barbastro	16.979	92,41%	92,41%	100,00%
Barbate	22.518	86,49%	86,49%	99,89%
Barberà del Valles	33.091	96,64%	96,64%	100,00%
Barcelona	1.636.762	99,51%	99,51%	100,00%
Barco de Valdeorra	13.395	9,46%	93,08%	100,00%
Bargas	10.332	86,65%	86,65%	100,00%
Barrios, Los	23.642	55,49%	65,19%	100,00%
Basauri	40.589	99,39%	100,00%	100,00%
Baza	20.412	79,33%	88,33%	99,99%
Beasain	13.880	93,25%	99,40%	99,95%
Béjar	12.739	65,95%	96,67%	100,00%
Benaguasil	10.988	95,90%	95,90%	100,00%
Benalmádena	68.128	88,89%	88,89%	100,00%
Benavente	17.935	80,70%	100,00%	100,00%
Benetússer	14.799	100,00%	100,00%	100,00%
Benicarló	26.912	72,79%	100,00%	100,00%
Benicasim/Benicàssi	18.192	80,62%	80,62%	100,00%
Benidorm	68.721	99,96%	99,96%	100,00%
Beniel	11.318	91,57%	91,57%	100,00%
Benifaió	11.962	9,12%	100,00%	100,00%
Benissa	11.005	83,34%	83,34%	100,00%
Berga	16.494	95,77%	95,77%	100,00%
Bergara	14.637	89,22%	98,12%	99,76%
Berja	12.415	59,88%	59,88%	99,99%
Bermeo	16.765	97,84%	98,21%	100,00%
Berriozar	10.426	87,26%	98,92%	100,00%
Betanzos	12.959	92,01%	92,01%	100,00%
Bétera	24.272	91,81%	91,81%	100,00%
Bilbao	346.843	100,00%	100,00%	100,00%
Bisbal d'Empordà, L	10.974	99,80%	99,80%	100,00%
Blanes	39.028	71,75%	71,75%	100,00%
Boadilla del Monte	54.570	86,06%	86,06%	100,00%
Boiro	18.838	70,09%	76,24%	100,00%
Bolaños de Calatrav	11.934	100,00%	100,00%	100,00%
Bollullos de la Mita	10.787	100,00%	100,00%	100,00%
Bollullos Par del Coi	14.272	82,00%	82,00%	100,00%
Bormujos	21.972	100,00%	100,00%	100,00%
Borriana/Burriana	34.683	86,85%	99,76%	100,00%
Brenes	12.471	69,47%	69,47%	100,00%
Brunete	10.736	93,25%	93,25%	100,00%
Bueu	12.009	70,47%	73,32%	100,00%
Bullas	11.530	91,41%	91,41%	99,98%
Burgos	175.821	89,24%	97,29%	100,00%
Burjassot	38.024	100,00%	100,00%	100,00%
Burlada/Burlata	19.096	92,74%	98,83%	100,00%
Cabanillas del Camp	10.442	88,63%	88,63%	100,00%
Cabezas de San Jua	16.417	84,80%	84,80%	100,00%
Cabra	20.341	95,44%	95,44%	100,00%
Cáceres	96.126	99,25%	99,25%	100,00%
Cádiz	116.027	82,31%	100,00%	100,00%
Calafell	26.538	27,66%	27,66%	100,00%
Calahorra	24.220	99,92%	99,92%	100,00%
Calasparra	10.178	90,02%	90,02%	100,00%
Calatayud	20.024	88,91%	88,91%	99,99%
Caldes de Montbui	17.554	99,78%	99,78%	100,00%
Calella	19.069	98,55%	98,55%	100,00%
Callosa de Segura	19.038	98,13%	98,13%	100,00%
Calonge i Sant Anto	11.092	42,22%	42,22%	100,00%
Calp	22.725	71,02%	71,02%	100,00%
Calvià	50.559	85,36%	88,56%	99,98%
Camargo	30.260	97,19%	97,19%	100,00%
Camas	27.509	91,55%	91,55%	100,00%
Cambados	13.744	38,67%	67,55%	100,00%
Cambre	24.648	79,94%	82,54%	100,00%
Cambrils	33.898	82,75%	82,75%	100,00%
Campello, el	28.349	80,08%	85,13%	100,00%
Campo de Criptana	13.414	100,00%	100,00%	100,00%
Campos	10.862	65,55%	69,46%	100,00%
Canals	13.587	95,85%	95,85%	100,00%
Candelaria	27.985	88,30%	89,15%	100,00%
Canet de Mar	14.526	100,00%	100,00%	100,00%

Almedinilla	2.391	68,14%	68,14%	98,71%
Almenar	3.398	73,45%	73,45%	100,00%
Almenara	5.998	62,28%	62,28%	100,00%
Almensilla	6.080	98,28%	98,28%	100,00%
Almodóvar del Campo	6.027	88,40%	88,40%	99,62%
Almodóvar del Rio	7.937	77,45%	77,45%	100,00%
Almogia	3.715	35,00%	35,00%	97,51%
Almoines	2.414	100,00%	100,00%	100,00%
Almorox	2.105	83,75%	83,75%	100,00%
Almudévar	2.379	93,83%	93,83%	99,99%
Almunia de Doña Godina, La	7.951	100,00%	100,00%	100,00%
Almussafes	8.967	66,82%	83,43%	100,00%
Alonsotegi	2.907	8,70%	95,89%	99,97%
Alosno	3.923	55,91%	55,91%	100,00%
Alozaina	2.051	81,11%	81,11%	100,00%
Alpera	2.265	100,00%	100,00%	100,00%
Alpicat	6.255	56,31%	56,31%	100,00%
Alqueries, les/Alquerias del I	4.449	100,00%	100,00%	100,00%
Altafulla	5.243	76,04%	76,04%	100,00%
Altsasu/Alsasua	7.443	100,00%	100,00%	100,00%
Altura	3.528	66,62%	66,62%	100,00%
Amer	2.298	42,86%	42,86%	100,00%
Ametlla de Mar, L'	6.787	83,84%	83,84%	100,00%
Ametlla del Valles, L'	8.462	95,15%	95,15%	100,00%
Amoeiro	2.280	10,78%	10,78%	100,00%
Ampolla, L'	3.205	100,00%	100,00%	100,00%
Ampuero	4.288	7,29%	64,94%	100,00%
Andorra	7.472	100,00%	100,00%	100,00%
Andosilla	2.743	91,21%	100,00%	100,00%
Anglès	5.599	96,77%	96,77%	100,00%
Anna	2.628	0,00%	0,00%	100,00%
Anoeta	2.090	86,88%	99,82%	100,00%
Añover de Tajo	5.154	100,00%	100,00%	100,00%
Antas	3.182	74,30%	74,30%	99,99%
Antzuola	2.126	70,18%	90,50%	99,99%
Aoiz/Agoitz	2.695	9,45%	9,45%	100,00%
Aracena	8.107	81,51%	81,51%	99,49%
Arafo	5.551	82,67%	82,67%	100,00%
Arbeca	2.144	10,35%	10,35%	100,00%
Arbo	2.580	19,48%	19,48%	99,46%
Arboç, L'	5.517	99,49%	99,49%	100,00%
Arboleas	4.596	45,27%	45,27%	99,97%
Arbúcies	6.556	49,45%	49,45%	99,98%
Archidona	8.238	95,28%	95,28%	100,00%
Ardales	2.500	100,00%	100,00%	99,99%
Arenas de San Pedro	6.377	88,68%	88,68%	100,00%
Arenys de Munt	8.931	97,60%	97,60%	100,00%
Ares	5.732	44,71%	78,59%	100,00%
Aretxabaleta	7.128	71,28%	96,60%	100,00%
Arévalo	7.986	100,00%	100,00%	100,00%
Argamasilla de Alba	6.838	83,98%	83,98%	100,00%
Argamasilla de Calatrava	5.943	100,00%	100,00%	99,99%
Argés	6.418	93,70%	93,70%	100,00%
Arguedas	2.272	70,67%	85,92%	100,00%
Arico	7.988	70,40%	70,40%	100,00%
Arjona	5.542	100,00%	100,00%	100,00%
Arjonilla	3.575	100,00%	100,00%	100,00%
Arnuero	2.103	9,70%	9,70%	100,00%
Aroche	3.073	0,00%	42,33%	99,21%
Arriate	4.102	25,28%	100,00%	100,00%
Arroyo de la Luz	5.811	100,00%	100,00%	100,00%
Arroyo de San Serván	4.107	100,00%	100,00%	100,00%
Arroyo del Ojanco	2.288	100,00%	100,00%	100,00%
Artà	7.845	90,68%	90,68%	100,00%
Artés	5.698	68,60%	68,60%	100,00%
Artesa de Segre	3.432	58,20%	58,20%	99,98%
Arzúa	6.041	1,42%	47,22%	99,87%
Astigarraga	6.532	61,88%	96,42%	100,00%
Autol	4.512	100,00%	100,00%	100,00%
Avià	2.226	84,11%	84,11%	100,00%
Avinyo	2.275	0,00%	0,00%	100,00%
Ayala/Aiara	2.974	89,53%	89,53%	99,95%
Ayegui/Aiegi	2.366	65,47%	65,47%	100,00%
Ayora	5.312	87,66%	87,66%	99,83%
Azagra	3.843	89,87%	100,00%	100,00%
Aznalcázar	4.586	73,39%	73,39%	100,00%
Aznalcóllar	6.091	0,00%	0,00%	100,00%
Azuaga	7.853	96,49%	96,49%	100,00%
Badolatosa	3.078	98,60%	98,60%	100,00%
Bagà	2.138	58,44%	58,44%	100,00%
Bakio	2.688	87,56%	98,69%	100,00%
Balanegra	3.009	96,70%	96,70%	100,00%
Balazote	2.334	100,00%	100,00%	100,00%
Balenyà	3.821	88,32%	88,32%	100,00%
Balmaseda	7.697	0,88%	98,84%	100,00%
Balsareny	3.159	94,59%	94,59%	100,00%
Baña, A	3.450	4,24%	4,24%	99,32%
Baños de la Encina	2.582	88,30%	88,30%	99,79%
Banyeres de Mariola	7.068	100,00%	100,00%	100,00%
Banyeres del Penedès	3.170	59,78%	59,78%	100,00%
Baralla	2.556	0,00%	0,00%	100,00%

Alaejos	1.369	93,79%	93,79%	100,00%
Alagón del Rio	932	0,00%	0,00%	100,00%
Alájar	756	0,00%	0,00%	99,99%
Alameda de Gardón, La	70	0,00%	0,00%	97,12%
Alameda del Valle	200	100,00%	100,00%	100,00%
Alamedilla	574	88,08%	88,08%	99,97%
Alamedilla, La	126	0,00%	0,00%	99,41%
Alamillo	486	0,00%	0,00%	99,98%
Alaminos	60	0,00%	0,00%	100,00%
Alamús, Els	819	87,33%	87,33%	100,00%
Alange	1.848	100,00%	100,00%	100,00%
Alanis	1.723	100,00%	100,00%	100,00%
Alar del Rey	934	0,00%	0,00%	100,00%
Alaraz	439	0,00%	0,00%	100,00%
Alarba	124	65,65%	65,65%	100,00%
Alarcón	148	0,00%	0,00%	99,30%
Alarilla	163	0,00%	0,00%	78,38%
Alàs i Cerc	329	39,48%	39,48%	99,28%
Alatoz	519	100,00%	100,00%	99,63%
Alba	170	100,00%	100,00%	99,50%
Alba de Cerrato	87	0,00%	0,00%	90,29%
Alba de Yeltes	207	0,00%	0,00%	100,00%
Albagés, L'	369	0,00%	0,00%	99,81%
Albalá	689	0,00%	0,00%	100,00%
Albaladejo	1.158	0,00%	0,00%	100,00%
Albaladejo del Cuende	245	0,00%	0,00%	99,50%
Albalat dels Tarongers	1.232	24,50%	24,50%	100,00%
Albalate de Cinca	1.103	75,64%	75,64%	100,00%
Albalate de las Nogueras	253	0,00%	0,00%	100,00%
Albalate de Zorita	943	0,00%	0,00%	100,00%
Albalate del Arzobispo	1.980	100,00%	100,00%	100,00%
Albalatillo	176	65,81%	65,81%	99,50%
Albanchez	741	63,24%	63,24%	99,81%
Albanchez de Mágina	1.024	0,00%	0,00%	100,00%
Albanyà	157	0,00%	0,00%	93,60%
Albares	513	0,00%	0,00%	99,99%
Albarracin	1.025	95,88%	95,88%	100,00%
Albarreal de Tajo	683	0,00%	0,00%	100,00%
Albatana	692	98,85%	98,85%	100,00%
Albelda	698	71,86%	71,86%	100,00%
Albendea	121	0,00%	0,00%	100,00%
Albendiego	49	0,00%	0,00%	100,00%
Albentosa	276	0,00%	0,00%	99,61%
Alberca de Záncara, La	1.590	100,00%	100,00%	100,00%
Alberca, La	1.081	0,00%	0,00%	100,00%
Albergueria de Argañán, La	112	0,00%	0,00%	99,50%
Alberite de San Juan	69	0,00%	0,00%	100,00%
Albero Alto	117	77,02%	77,02%	100,00%
Albero Bajo	135	100,00%	100,00%	88,29%
Alberuela de Tubo	301	0,00%	0,00%	99,84%
Albesa	1.556	60,77%	60,77%	100,00%
Albeta	133	0,00%	0,00%	100,00%
Albi, L'	764	0,00%	0,00%	100,00%
Albillos	209	0,00%	0,00%	100,00%
Albiol, L'	485	0,00%	0,00%	99,96%
Albiztur	304	83,38%	83,38%	94,12%
Albocàsser	1.241	89,20%	89,20%	99,81%
Alboloduy	616	94,97%	94,97%	100,00%
Albondón	728	12,04%	12,04%	94,34%
Albons	776	0,00%	0,00%	100,00%
Alborache	1.160	94,94%	94,94%	100,00%
Alborea	658	100,00%	100,00%	100,00%
Alborge	107	0,00%	0,00%	100,00%
Albornos	183	0,00%	0,00%	100,00%
Albudeite	1.373	94,62%	94,62%	100,00%
Albuñán	406	100,00%	100,00%	100,00%
Albuñuelas	821	10,96%	10,96%	100,00%
Alcabón	686	10,83%	10,83%	100,00%
Alcadozo	654	0,00%	0,00%	98,31%
Alcaine	59	0,00%	0,00%	42,91%
Alcalá de Ebro	246	0,00%	0,00%	100,00%
Alcalá de Gurrea	248	0,00%	0,00%	92,76%
Alcalá de la Selva	343	67,55%	67,55%	100,00%
Alcalá de la Vega	93	0,00%	0,00%	99,20%
Alcalá de Moncayo	143	0,00%	0,00%	99,27%
Alcalá del Júcar	1.170	7,26%	7,26%	99,92%
Alcalá del Obispo	318	93,73%	93,73%	90,63%
Alcalali	1.278	99,25%	99,25%	100,00%
Alcampell	631	95,61%	95,61%	100,00%
Alcanadre	643	0,00%	0,00%	100,00%
Alcañices	1.076	0,00%	0,00%	96,66%
Alcañizo	274	0,00%	0,00%	100,00%
Alcanó	235	0,00%	0,00%	70,98%
Alcántara	1.468	0,00%	0,00%	100,00%
Alcàntera de Xúquer	1.291	100,00%	100,00%	100,00%
Alcantud	51	0,00%	0,00%	100,00%
Alcaracejos	1.486	100,00%	100,00%	100,00%
Alcaraz	1.351	0,00%	0,00%	99,51%
Alcaudete de la Jara	1.648	45,25%	45,25%	99,81%
Alcázar del Rey	152	0,00%	0,00%	100,00%
Alcazarén	635	100,00%	100,00%	100,00%

Cangas	26.542	68,02%	77,19%	100,00%
Cangas del Narcea	12.347	49,09%	49,09%	99,04%
Canovelles	16.629	89,63%	89,63%	100,00%
Cantillana	10.684	94,08%	94,08%	100,00%
Capdepera	11.868	87,23%	87,23%	99,93%
Caravaca de la Cruz	25.760	87,72%	95,76%	99,99%
Carballiño, O	14.027	7,46%	80,83%	100,00%
Carballo	31.349	83,87%	83,87%	100,00%
Carcaixent	20.358	87,74%	99,73%	100,00%
Cardedeu	18.357	93,18%	93,18%	100,00%
Carlet	15.598	98,26%	98,26%	100,00%
Carlota, La	14.061	80,72%	80,72%	100,00%
Carmona	28.531	18,75%	51,78%	100,00%
Carolina, La	15.261	99,78%	99,78%	100,00%
Carreño	10.337	0,31%	65,09%	99,99%
Cartagena	214.802	80,24%	83,80%	99,98%
Cártama	26.259	80,34%	80,34%	100,00%
Cartaya	19.974	94,10%	94,10%	100,00%
Casar, El	12.062	87,10%	87,10%	99,99%
Cassà de la Selva	10.380	87,67%	87,67%	100,00%
Castalla	10.124	100,00%	100,00%	100,00%
Castell-Platja d'Aro	10.860	88,70%	88,70%	100,00%
Castellar del Valles	24.187	96,64%	96,64%	100,00%
Castellbisbal	12.390	99,15%	99,15%	100,00%
Castelldefels	67.004	84,05%	84,05%	100,00%
Castelló d'Empúries	10.906	20,82%	20,82%	100,00%
Castelló de la Plana	171.728	100,00%	100,00%	100,00%
Castilleja de la Cue	17.418	100,00%	100,00%	100,00%
Castrillón	22.376	53,08%	80,65%	100,00%
Castro-Urdiales	32.069	92,67%	92,67%	100,00%
Catarroja	28.120	100,00%	100,00%	100,00%
Cehegín	14.983	89,78%	89,78%	99,98%
Cerdanyola del Vall	57.403	95,04%	95,04%	100,00%
Ceuta	84.777	92,78%	92,78%	99,88%
Ceutí	11.787	100,00%	100,00%	100,00%
Chiclana de la Fron	84.489	45,11%	47,83%	100,00%
Chipiona	19.123	83,51%	83,51%	100,00%
Chiva	15.123	44,36%	44,36%	100,00%
Churriana de la Veg	15.200	100,00%	100,00%	100,00%
Ciempozuelos	24.592	94,42%	94,42%	100,00%
Cieza	34.988	93,83%	95,30%	99,98%
Ciudad Real	74.746	99,42%	99,42%	100,00%
Ciudad Rodrigo	12.344	58,68%	95,87%	99,72%
Ciutadella de Menc	29.840	82,07%	82,07%	99,97%
Cocentaina	11.511	73,28%	91,18%	100,00%
Coin	22.147	100,00%	100,00%	100,00%
Collado Villalba	63.679	91,11%	91,11%	100,00%
Colmenar Viejo	50.752	86,22%	86,22%	100,00%
Conil de la Fronter	22.529	98,78%	98,78%	100,00%
Corbera de Llobreg	14.822	100,00%	100,00%	100,00%
Córdoba	325.701	94,20%	94,20%	100,00%
Coria	12.478	88,02%	88,02%	100,00%
Coria del Rio	30.777	90,45%	90,45%	100,00%
Cornellà de Llobreg	88.592	99,26%	99,29%	100,00%
Corrales de Buelna,	10.841	82,70%	82,70%	99,99%
Coruña, A	245.711	97,32%	98,75%	100,00%
Corvera de Asturia	15.549	72,13%	87,54%	100,00%
Coslada	81.661	100,00%	100,00%	100,00%
Crevillent	28.952	84,12%	84,80%	100,00%
Cuarte de Huerva	13.303	76,12%	76,12%	100,00%
Cubelles	15.329	81,28%	81,28%	100,00%
Cuenca	54.690	95,82%	99,16%	100,00%
Cuevas del Almanz	14.081	43,59%	43,59%	99,86%
Cullera	22.145	33,82%	89,72%	100,00%
Culleredo	30.402	83,92%	85,45%	100,00%
Cunit	12.952	15,71%	15,71%	100,00%
Daganzo de Arriba	10.205	89,88%	89,88%	100,00%
Daimiel	17.929	53,68%	76,76%	100,00%
Deltebre	11.482	84,93%	84,93%	100,00%
Dénia	42.166	50,17%	50,17%	100,00%
Don Benito	37.151	88,84%	88,84%	100,00%
Donostia/San Seba	187.415	95,82%	95,82%	100,00%
Dos Hermanas	133.968	91,07%	91,07%	100,00%
Durango	29.791	88,72%	100,00%	100,00%
Écija	39.873	81,36%	81,36%	100,00%
Eibar	27.522	96,21%	99,62%	100,00%
Eivissa	49.783	100,00%	100,00%	100,00%
Ejea de los Caballer	16.783	100,00%	100,00%	100,00%
Ejido, El	83.594	71,81%	71,81%	100,00%
Elche/Elx	232.517	85,22%	96,00%	100,00%
Elda	52.618	91,10%	95,99%	100,00%
Elgoibar	11.613	94,96%	97,60%	100,00%
Eliana, l'	18.235	94,81%	94,81%	100,00%
Erandio	24.350	97,00%	98,93%	100,00%
Ermua	15.880	100,00%	100,00%	100,00%
Errenteria	39.471	99,06%	99,77%	100,00%
Escala, L'	10.339	16,39%	16,39%	100,00%
Escorial, El	16.162	89,90%	89,90%	100,00%
Esparreguera	22.251	100,00%	100,00%	100,00%
Espartinas	15.791	96,92%	96,92%	100,00%
Esplugues de Llobre	46.680	98,71%	98,71%	100,00%

Barcarrota	3.510	98,20%	98,20%	100,00%
Bárcena de Cicero	4.246	81,94%	83,24%	99,97%
Barco de Ávila, El	2.312	19,28%	19,28%	100,00%
Barreiros	2.934	6,59%	6,59%	99,99%
Barro	3.680	62,85%	62,85%	100,00%
Baztan	7.777	44,06%	44,06%	99,84%
Beas	4.257	70,28%	70,28%	99,47%
Beas de Segura	5.130	86,68%	86,68%	98,65%
Becerreá	2.818	49,41%	49,41%	99,91%
Becerril de la Sierra	5.714	84,72%	84,72%	100,00%
Bedmar y Garcíez	2.642	99,96%	99,96%	100,00%
Begíjar	3.029	98,12%	98,12%	100,00%
Begonte	3.026	14,96%	14,96%	100,00%
Begues	7.098	95,44%	95,44%	100,00%
Begur	3.925	64,67%	64,67%	100,00%
Belalcázar	3.255	97,08%	97,08%	99,93%
Bell-lloc d'Urgell	2.315	11,84%	11,84%	100,00%
Bellpuig	5.133	78,81%	78,81%	100,00%
Bellreguard	4.608	15,55%	77,42%	100,00%
Bellvei	2.203	60,51%	60,51%	100,00%
Bellvís	2.255	100,00%	100,00%	100,00%
Belmez	2.923	99,66%	99,66%	99,96%
Bembibre	8.705	77,89%	77,89%	99,97%
Benacazón	7.241	92,93%	92,93%	100,00%
Benahadux	4.382	84,83%	84,83%	100,00%
Benahavís	8.085	100,00%	100,00%	100,00%
Benalúa	3.318	93,86%	93,86%	100,00%
Benalup-Casas Viejas	6.929	99,18%	99,18%	100,00%
Benamaurel	2.293	8,34%	8,34%	100,00%
Benamejí	4.966	99,18%	99,18%	100,00%
Benamocarra	3.011	100,00%	100,00%	100,00%
Benasque	2.155	46,03%	46,03%	100,00%
Benavides	2.455	25,94%	25,94%	100,00%
Benejúzar	5.402	88,80%	88,80%	100,00%
Beniarbeig	2.092	87,03%	87,03%	100,00%
Benifairó de les Valls	2.186	100,00%	100,00%	100,00%
Benigànim	5.841	73,62%	73,62%	100,00%
Benijófar	3.322	100,00%	100,00%	100,00%
Benimodo	2.268	69,12%	69,12%	100,00%
Benissanó	2.260	100,00%	100,00%	100,00%
Benitachell/Poble Nou de Be	4.276	100,00%	100,00%	100,00%
Bera	3.736	7,51%	7,51%	100,00%
Berango	7.195	85,34%	88,66%	100,00%
Bergondo	6.633	40,21%	43,38%	100,00%
Beriáin	4.069	100,00%	100,00%	100,00%
Berlanga	2.343	0,00%	0,00%	100,00%
Berrioplano/Berriobeiti	7.256	82,05%	82,05%	100,00%
Berriz	4.623	71,94%	93,28%	100,00%
Besalú	2.492	100,00%	100,00%	100,00%
Bescanó	4.960	84,54%	84,54%	100,00%
Betxí	5.645	91,84%	91,84%	100,00%
Biar	3.671	91,89%	91,89%	100,00%
Bienvenida	2.087	100,00%	100,00%	100,00%
Bigastro	6.733	100,00%	100,00%	100,00%
Bigues i Riells	9.092	98,83%	98,83%	100,00%
Binéfar	9.561	85,52%	85,52%	100,00%
Binissalem	8.567	71,64%	71,64%	100,00%
Bisbal del Penedès, La	3.528	33,44%	33,44%	100,00%
Blanca	6.539	91,08%	91,08%	100,00%
Boalo, El	7.508	98,70%	98,70%	100,00%
Boborás	2.285	51,25%	51,25%	100,00%
Bocairent	4.195	64,06%	64,06%	100,00%
Boecillo	4.206	83,81%	83,81%	100,00%
Bonares	6.058	100,00%	100,00%	100,00%
Bonillo, El	2.779	100,00%	100,00%	100,00%
Bonrepòs i Mirambell	3.691	81,60%	96,02%	100,00%
Boqueixón	4.220	8,90%	8,90%	99,80%
Borges Blanques, Les	6.087	87,26%	87,26%	100,00%
Borges del Camp, Les	2.037	8,25%	8,25%	100,00%
Borja	4.969	56,30%	56,30%	100,00%
Bornos	7.670	100,00%	100,00%	100,00%
Borox	3.825	27,49%	27,49%	99,97%
Borriol	5.360	89,98%	89,98%	100,00%
Bosque, El	2.145	69,94%	69,94%	100,00%
Breda	3.740	34,87%	34,87%	100,00%
Breña Alta	7.204	78,70%	78,70%	100,00%
Breña Baja	5.690	72,06%	72,06%	100,00%
Brihuega	2.410	56,26%	56,26%	97,07%
Brión	7.837	74,48%	76,13%	99,78%
Briviesca	6.595	98,86%	98,86%	99,72%
Bruc, El	2.050	71,05%	71,05%	100,00%
Buenavista del Norte	4.778	96,40%	96,40%	99,71%
Bujalance	7.417	83,98%	83,98%	100,00%
Buñol	9.408	97,59%	97,59%	100,00%
Buñuel	2.219	0,00%	100,00%	100,00%
Bunyola	6.809	89,00%	89,00%	100,00%
Burela	9.588	11,48%	11,48%	100,00%
Burgo de Ebro, El	2.436	88,42%	88,42%	100,00%
Burgo de Osma-Ciudad de Os	4.940	76,67%	76,67%	98,41%
Burguillos	6.716	100,00%	100,00%	100,00%
Burguillos de Toledo	3.172	94,29%	94,29%	100,00%

Alcoba	583	0,00%	0,00%	99,62%
Alcocer	313	0,00%	0,00%	100,00%
Alcocer de Planes	230	52,93%	52,93%	100,00%
Alcocero de Mola	32	0,00%	0,00%	100,00%
Alcohujate	28	0,00%	0,00%	99,50%
Alcolea	825	77,29%	77,29%	100,00%
Alcolea de Calatrava	1.409	39,25%	39,25%	100,00%
Alcolea de Cinca	1.155	74,17%	74,17%	100,00%
Alcolea de las Peñas	13	0,00%	0,00%	99,50%
Alcolea de Tajo	810	0,00%	0,00%	100,00%
Alcolea del Pinar	320	0,00%	0,00%	99,97%
Alcoleja	173	100,00%	100,00%	99,87%
Alcollarín	289	0,00%	0,00%	100,00%
Alconaba	176	0,00%	0,00%	100,00%
Alconada	149	0,00%	0,00%	100,00%
Alconada de Maderuelo	25	0,00%	0,00%	99,62%
Alconchel	1.680	0,00%	0,00%	100,00%
Alconchel de Ariza	62	0,00%	0,00%	100,00%
Alconchel de la Estrella	88	0,00%	0,00%	100,00%
Alconera	744	0,00%	0,00%	100,00%
Alcóntar	505	11,94%	11,94%	99,27%
Alcoroches	126	0,00%	0,00%	37,41%
Alcubierre	360	0,00%	0,00%	100,00%
Alcubilla de Avellaneda	104	0,00%	0,00%	17,26%
Alcubilla de las Peñas	57	0,00%	0,00%	95,25%
Alcubilla de Nogales	117	0,00%	0,00%	63,16%
Alcubillas	477	0,00%	0,00%	100,00%
Alcublas	628	100,00%	100,00%	99,10%
Alcudia de Monteagud	152	0,00%	0,00%	100,00%
Alcudia de Veo	190	0,00%	0,00%	100,00%
Aldea de San Miguel	224	100,00%	100,00%	100,00%
Aldea del Cano	600	0,00%	0,00%	100,00%
Aldea del Obispo	243	0,00%	0,00%	99,57%
Aldea del Obispo, La	303	0,00%	0,00%	100,00%
Aldea del Rey	1.657	100,00%	100,00%	100,00%
Aldea en Cabo	163	0,00%	0,00%	99,50%
Aldea Real	282	0,00%	0,00%	100,00%
Aldeacentenera	578	0,00%	0,00%	100,00%
Aldeacipreste	109	0,00%	0,00%	100,00%
Aldeadávila de la Ribera	1.224	0,00%	0,00%	99,97%
Aldealafuente	92	0,00%	0,00%	100,00%
Aldealcorvo	22	0,00%	0,00%	100,00%
Aldealengua	664	0,00%	0,00%	100,00%
Aldealengua de Pedraza	72	0,00%	0,00%	100,00%
Aldealengua de Santa María	63	0,00%	0,00%	99,48%
Aldealices	36	0,00%	0,00%	100,00%
Aldealpozo	17	0,00%	0,00%	100,00%
Aldealseñor	31	0,00%	0,00%	100,00%
Aldeanueva de Barbarroya	520	0,00%	0,00%	99,54%
Aldeanueva de Figueroa	254	0,00%	0,00%	98,25%
Aldeanueva de Guadalajara	86	0,00%	0,00%	100,00%
Aldeanueva de la Serrezuela	44	0,00%	0,00%	100,00%
Aldeanueva de la Sierra	115	0,00%	0,00%	100,00%
Aldeanueva de San Bartolomé	427	0,00%	0,00%	100,00%
Aldeanueva de Santa Cruz	118	0,00%	0,00%	100,00%
Aldeanueva del Camino	735	100,00%	100,00%	100,00%
Aldeanueva del Codonal	117	0,00%	0,00%	100,00%
Aldeaquemada	481	100,00%	100,00%	100,00%
Aldearrodrigo	143	0,00%	0,00%	99,08%
Aldearrubia	480	0,00%	0,00%	65,24%
Aldeaseca	238	0,00%	0,00%	100,00%
Aldeaseca de Alba	70	0,00%	0,00%	73,91%
Aldeaseca de la Frontera	261	100,00%	100,00%	100,00%
Aldeasoña	56	0,00%	0,00%	99,50%
Aldeavieja de Tormes	104	0,00%	0,00%	100,00%
Aldehorno	53	0,00%	0,00%	99,50%
Aldehuela de Jerte	364	0,00%	0,00%	100,00%
Aldehuela de la Bóveda	275	0,00%	0,00%	99,99%
Aldehuela de Liestos	48	0,00%	0,00%	4,14%
Aldehuela de Periáñez	41	0,00%	0,00%	100,00%
Aldehuela de Yeltes	190	0,00%	0,00%	100,00%
Aldehuela del Codonal	26	0,00%	0,00%	100,00%
Aldehuela, La	162	0,00%	0,00%	96,96%
Aldehuelas, Las	64	0,00%	0,00%	95,50%
Aldeire	615	0,00%	0,00%	100,00%
Aldeonte	55	0,00%	0,00%	100,00%
Aldover	882	70,05%	70,05%	100,00%
Aledo	1.022	97,46%	97,46%	99,92%
Alegia	1.722	93,31%	100,00%	100,00%
Aleixar, L'	873	5,58%	5,58%	100,00%
Alentisque	33	0,00%	0,00%	90,08%
Alerre	199	46,88%	46,88%	100,00%
Alesanco	505	8,77%	8,77%	100,00%
Alesón	99	0,00%	0,00%	100,00%
Alfafara	410	74,63%	74,63%	99,99%
Alfambra	508	100,00%	100,00%	96,58%
Alfamén	1.446	0,00%	0,00%	100,00%
Alfántega	130	0,00%	0,00%	100,00%
Alfara de Carles	377	100,00%	100,00%	100,00%
Alfara de la Baronia	557	100,00%	100,00%	100,00%
Alfaraz de Sayago	129	0,00%	0,00%	98,85%

Estella-Lizarra	13.810	100,00%	100,00%	100,00%
Estepa	12.505	56,07%	56,07%	100,00%
Estepona	68.286	91,22%	91,22%	100,00%
Estrada, A	20.479	51,11%	54,34%	99,98%
Etxebarri	11.563	93,22%	99,45%	100,00%
Felanitx	17.780	72,21%	82,32%	99,99%
Fene	12.944	26,42%	64,62%	100,00%
Ferrol	66.065	64,51%	93,36%	100,00%
Figueres	46.654	98,30%	98,30%	100,00%
Formentera	12.111	67,27%	67,27%	100,00%
Fortuna	10.112	71,27%	71,27%	99,71%
Fraga	15.033	88,01%	88,01%	100,00%
Franqueses del Vall	20.092	91,83%	91,83%	100,00%
Fuengirola	80.309	100,00%	100,00%	100,00%
Fuenlabrada	193.700	100,00%	100,00%	100,00%
Fuensalida	11.370	100,00%	100,00%	100,00%
Fuente Álamo de M	16.583	73,28%	91,07%	100,00%
Gabias, Las	21.115	76,58%	76,58%	100,00%
Galapagar	33.742	95,84%	95,84%	100,00%
Galdakao	29.326	99,35%	100,00%	100,00%
Gáldar	24.242	88,57%	88,57%	99,96%
Gandia	74.562	26,78%	89,76%	100,00%
Garriga, La	16.514	94,07%	94,07%	100,00%
Gavà	46.771	93,00%	93,00%	100,00%
Gelves	10.184	91,18%	91,18%	100,00%
Gernika-Lumo	17.016	98,81%	99,61%	100,00%
Getafe	183.374	93,12%	93,14%	100,00%
Getxo	77.946	97,96%	98,25%	100,00%
Gibraleón	12.607	74,82%	74,82%	100,00%
Gijón	271.780	96,38%	96,73%	100,00%
Gines	13.420	100,00%	100,00%	100,00%
Girona	101.852	98,11%	98,11%	100,00%
Godella	13.088	95,11%	95,11%	100,00%
Gondomar	14.286	11,07%	28,90%	99,99%
Gozón	10.333	0,00%	57,17%	100,00%
Granada	232.462	85,94%	97,18%	100,00%
Granadilla de Abon	50.146	79,02%	79,02%	100,00%
Granollers	61.275	100,00%	100,00%	100,00%
Griñón	10.319	94,03%	94,03%	100,00%
Grove, O	10.650	23,21%	78,76%	100,00%
Guadalajara	85.871	95,23%	95,23%	100,00%
Guadarrama	16.032	96,84%	96,84%	100,00%
Guadix	18.422	75,94%	75,94%	100,00%
Guardamar del Seg	15.348	96,37%	96,37%	100,00%
Guia de Isora	21.368	45,44%	45,44%	100,00%
Guillena	12.788	76,85%	76,85%	100,00%
Güimar	20.190	72,06%	72,06%	99,99%
Haro	11.408	100,00%	100,00%	100,00%
Hellin	30.306	89,84%	92,21%	99,93%
Hernani	20.354	74,37%	91,71%	99,93%
Hondarribia	16.828	84,24%	89,17%	99,94%
Hospitalet de Llobr	264.923	95,93%	95,93%	100,00%
Huelva	143.663	100,00%	100,00%	100,00%
Huércal de Almería	17.651	85,91%	85,91%	100,00%
Huércal-Overa	19.127	67,82%	75,40%	99,86%
Huesca	53.132	99,82%	99,82%	100,00%
Huétor Tájar	10.352	97,39%	97,39%	100,00%
Huétor Vega	12.039	96,50%	96,50%	100,00%
Humanes de Madri	19.743	99,24%	99,24%	100,00%
Ibi	23.489	90,57%	100,00%	100,00%
Icod de los Vinos	23.254	69,68%	69,68%	100,00%
Igualada	39.967	100,00%	100,00%	100,00%
Illescas	28.894	90,74%	90,74%	100,00%
Illora	10.054	43,93%	43,93%	99,90%
Inca	33.319	84,85%	84,85%	100,00%
Ingenio	31.321	85,60%	85,60%	100,00%
Irun	62.401	94,75%	95,20%	100,00%
Isla Cristina	21.264	60,37%	60,37%	100,00%
Jaca	12.988	94,34%	94,34%	99,94%
Jaén	112.999	94,72%	99,13%	99,92%
Jávea/Xàbia	27.604	49,29%	49,29%	100,00%
Jerez de la Fronter	212.749	88,42%	88,42%	99,99%
Jódar	11.667	100,00%	100,00%	100,00%
Jumilla	25.600	51,88%	97,71%	99,98%
Laguna de Duero	22.725	93,29%	93,29%	100,00%
Lalin	20.218	4,92%	57,55%	99,99%
Langreo	39.420	92,73%	92,73%	99,58%
Laracha, A	11.347	0,02%	37,17%	99,98%
Lardero	10.500	82,70%	82,70%	100,00%
Laredo	11.025	68,85%	95,43%	100,00%
Lasarte-Oria	18.380	96,06%	98,53%	100,00%
Laudio/Llodio	18.102	100,00%	100,00%	100,00%
Laviana	12.977	70,03%	70,03%	99,97%
Lebrija	27.524	96,28%	96,28%	100,00%
Leganés	189.861	99,95%	99,95%	100,00%
Leioa	31.795	100,00%	100,00%	100,00%
Lena	10.890	62,68%	62,68%	99,72%
León	124.303	100,00%	100,00%	100,00%
Lepe	27.431	46,53%	46,53%	100,00%
Linares	57.414	70,37%	95,40%	100,00%
Linea de la Concepc	63.147	92,62%	100,00%	100,00%

Burguillos del Cerro	3.057	100,00%	100,00%	100,00%
Busot	2.978	81,07%	81,07%	100,00%
Bustarviejo	2.503	80,76%	80,76%	100,00%
Cabana de Bergantiños	4.248	3,45%	3,45%	99,97%
Cabanas	3.281	16,42%	29,37%	99,88%
Cabanes	2.958	25,04%	25,04%	99,91%
Cabeza del Buey	4.864	98,91%	98,91%	100,00%
Cabezón de la Sal	8.301	12,82%	66,44%	100,00%
Cabezón de Pisuerga	3.713	100,00%	100,00%	100,00%
Cabezuela del Valle	2.194	100,00%	100,00%	100,00%
Cabrera de Mar	4.680	96,68%	96,68%	100,00%
Cabrera, La	2.667	86,73%	86,73%	100,00%
Cabrerizos	4.263	96,38%	96,38%	100,00%
Cabrils	7.439	100,00%	100,00%	100,00%
Cacabelos	5.118	85,74%	85,74%	100,00%
Cadalso de los Vidrios	3.039	34,10%	34,10%	100,00%
Cadaqués	2.712	0,00%	0,00%	100,00%
Cadrete	4.032	84,60%	84,60%	100,00%
Cájar	5.129	95,69%	95,69%	100,00%
Calaf	3.535	100,00%	100,00%	100,00%
Calamocha	4.339	71,57%	71,57%	99,77%
Calamonte	6.162	100,00%	100,00%	100,00%
Calañas	2.791	0,00%	42,33%	100,00%
Calanda	3.748	87,51%	87,51%	100,00%
Calatorao	2.881	100,00%	100,00%	100,00%
Caldas de Reis	9.785	23,75%	67,42%	100,00%
Caldes d'Estrac	2.982	87,13%	87,13%	100,00%
Caldes de Malavella	7.641	81,26%	81,26%	100,00%
Calera y Chozas	4.646	95,66%	95,66%	100,00%
Calldetenes	2.489	96,10%	96,10%	100,00%
Callosa d'en Sarrià	7.373	80,87%	80,87%	99,99%
Callús	2.140	78,58%	78,58%	99,99%
Calzada de Calatrava	3.719	97,69%	97,69%	99,99%
Camarena	3.960	50,12%	50,12%	99,89%
Camariñas	5.272	67,45%	67,45%	99,99%
Camarles	3.224	100,00%	100,00%	100,00%
Camarma de Esteruelas	7.336	84,99%	84,99%	99,96%
Cambil	2.703	99,59%	99,59%	99,99%
Campana, La	5.276	91,83%	91,83%	100,00%
Campanario	4.896	98,69%	98,69%	100,00%
Campanet	2.640	100,00%	100,00%	100,00%
Campdevànol	3.223	95,54%	95,54%	99,59%
Campillo, El	2.023	97,54%	97,54%	100,00%
Campillos	8.444	100,00%	100,00%	100,00%
Campo Real	6.210	98,88%	98,88%	100,00%
Camponaraya	4.096	83,89%	83,89%	100,00%
Campoo de Enmedio	3.714	82,39%	82,39%	100,00%
Campos del Rio	2.028	89,85%	89,85%	100,00%
Camprodon	2.281	82,45%	82,45%	99,56%
Cañada Rosal	3.320	100,00%	100,00%	100,00%
Candeleda	5.018	78,60%	78,60%	100,00%
Canet d'En Berenguer	6.697	52,10%	52,10%	100,00%
Cañete de las Torres	2.933	95,09%	95,09%	100,00%
Cangas de Onis	6.163	0,00%	59,53%	99,97%
Caniles	4.047	88,39%	88,39%	99,57%
Cañiza, A	5.180	0,65%	39,08%	100,00%
Canonja, La	5.893	100,00%	100,00%	100,00%
Cànoves i Samalús	3.117	86,30%	86,30%	99,84%
Cantalejo	3.523	97,81%	97,81%	100,00%
Cantoria	3.204	57,33%	57,33%	99,98%
Canyelles	4.647	70,93%	70,93%	100,00%
Caparroso	2.766	10,06%	99,60%	100,00%
Capellades	5.293	100,00%	100,00%	100,00%
Carabaña	2.010	47,08%	47,08%	100,00%
Carbajosa de la Sagrada	7.116	99,89%	99,89%	100,00%
Carballedo	2.193	17,24%	17,24%	99,98%
Carboneras	8.004	62,95%	62,95%	99,98%
Carbonero el Mayor	2.519	100,00%	100,00%	100,00%
Carcabuey	2.412	96,57%	96,57%	99,79%
Carcastillo	2.495	86,93%	86,93%	100,00%
Cardona	4.636	62,68%	62,68%	100,00%
Cariñena	3.302	99,27%	99,27%	100,00%
Cariño	3.838	55,33%	55,33%	99,94%
Carnota	3.957	31,23%	31,23%	100,00%
Carpio, El	4.383	93,88%	93,88%	100,00%
Carracedelo	3.425	19,29%	19,29%	100,00%
Carral	6.408	10,73%	53,16%	100,00%
Carranque	4.846	57,57%	57,57%	100,00%
Carrión de Calatrava	3.082	75,22%	75,22%	100,00%
Carrión de los Céspedes	2.544	86,05%	86,05%	100,00%
Carrión de los Condes	2.069	96,53%	96,53%	100,00%
Carrizo	2.228	97,91%	97,91%	100,00%
Cartelle	2.642	36,49%	36,49%	100,00%
Cartes	5.747	84,27%	84,27%	100,00%
Casabermeja	3.522	80,53%	80,53%	99,91%
Casar de Cáceres	4.469	90,30%	90,30%	100,00%
Casarabonela	2.502	76,77%	76,77%	100,00%
Casares	6.515	90,33%	90,33%	100,00%
Casariche	5.456	82,86%	97,74%	99,99%
Casarrubios del Monte	5.681	91,85%	91,85%	100,00%
Casarrubuelos	3.778	84,72%	84,72%	100,00%

Alfarnate	1.069	100,00%	100,00%	100,00%
Alfarnatejo	377	0,00%	0,00%	100,00%
Alfarp	1.544	81,77%	81,77%	100,00%
Alfarrasí	1.225	100,00%	100,00%	100,00%
Alfauir	437	100,00%	100,00%	100,00%
Alfés	312	0,00%	0,00%	100,00%
Alfondeguilla	866	96,70%	96,70%	99,99%
Alforja	1.801	6,11%	6,11%	99,82%
Alforque	68	0,00%	0,00%	100,00%
Alfoz	1.688	15,14%	15,14%	100,00%
Alfoz de Bricia	76	0,00%	0,00%	95,37%
Alfoz de Santa Gadea	101	0,00%	0,00%	97,40%
Algadefe	289	0,00%	0,00%	100,00%
Algámitas	1.255	57,31%	57,31%	100,00%
Algar	1.413	0,00%	0,00%	100,00%
Algar de Mesa	55	0,00%	0,00%	100,00%
Algar de Palancia	481	100,00%	100,00%	100,00%
Algarra	26	0,00%	0,00%	93,55%
Algatocín	793	0,00%	0,00%	100,00%
Algerri	386	0,00%	0,00%	90,73%
Algimia d'Alfara	1.011	78,37%	78,37%	100,00%
Algimia de Almonacid	263	100,00%	100,00%	99,50%
Algodre	148	0,00%	0,00%	100,00%
Algora	70	0,00%	0,00%	100,00%
Algueña	1.336	91,89%	91,89%	100,00%
Alhabia	671	95,65%	95,65%	100,00%
Alhama de Aragón	1.020	100,00%	100,00%	100,00%
Alhambra	1.002	67,66%	67,66%	99,99%
Alhóndiga	157	0,00%	0,00%	99,90%
Alia	834	0,00%	0,00%	88,73%
Aliaga	341	0,00%	0,00%	98,56%
Aliaguilla	642	0,00%	0,00%	100,00%
Alicún	206	100,00%	100,00%	100,00%
Alicún de Ortega	480	0,00%	0,00%	100,00%
Alija del Infantado	647	0,00%	0,00%	100,00%
Alins	276	0,00%	0,00%	93,73%
Alió	439	9,31%	9,31%	100,00%
Alique	14	0,00%	0,00%	83,04%
Aliseda	1.835	0,00%	0,00%	100,00%
Aliud	20	0,00%	0,00%	100,00%
Aljucén	264	0,00%	0,00%	100,00%
Alkiza	367	91,07%	91,07%	100,00%
Allande	1.648	25,05%	25,05%	90,29%
Allepuz	125	0,00%	0,00%	89,40%
Allín/Allin	872	0,00%	0,00%	100,00%
Allo	968	9,75%	9,75%	100,00%
Alloza	558	0,00%	0,00%	70,50%
Allueva	26	0,00%	0,00%	90,43%
Almáchar	1.811	94,57%	94,57%	100,00%
Almadén de la Plata	1.355	100,00%	100,00%	100,00%
Almadenejos	415	0,00%	0,00%	99,50%
Almadrones	57	0,00%	0,00%	100,00%
Almajano	187	0,00%	0,00%	100,00%
Almaluez	132	0,00%	0,00%	98,32%
Almanza	574	0,00%	0,00%	94,09%
Almaraz	1.744	0,00%	0,00%	100,00%
Almaraz de Duero	407	0,00%	0,00%	99,50%
Almarcha, La	365	100,00%	100,00%	100,00%
Almargen	1.954	100,00%	100,00%	100,00%
Almarza	591	0,00%	0,00%	100,00%
Almarza de Cameros	36	0,00%	0,00%	55,40%
Almatret	307	0,00%	0,00%	95,55%
Almazul	67	0,00%	0,00%	76,90%
Almedíjar	254	100,00%	100,00%	99,99%
Almedina	516	0,00%	0,00%	100,00%
Almegíjar	365	0,00%	0,00%	100,00%
Almeida de Sayago	452	0,00%	0,00%	97,38%
Almenar de Soria	228	0,00%	0,00%	96,09%
Almenara de Adaja	22	0,00%	0,00%	100,00%
Almenara de Tormes	262	0,00%	0,00%	69,00%
Almendra	146	0,00%	0,00%	99,26%
Almendral	1.232	10,32%	10,32%	100,00%
Almendral de la Cañada	313	0,00%	0,00%	100,00%
Almendro, El	826	0,00%	0,00%	100,00%
Almendros	247	0,00%	0,00%	100,00%
Almiserà	262	100,00%	100,00%	100,00%
Almochuel	25	0,00%	0,00%	83,45%
Almócita	169	82,07%	82,07%	100,00%
Almodóvar del Pinar	390	0,00%	0,00%	100,00%
Almoguera	1.289	0,00%	0,00%	96,78%
Almohaja	16	0,00%	0,00%	99,50%
Almoharín	1.811	82,48%	82,48%	100,00%
Almolda, La	553	0,00%	0,00%	100,00%
Almonacid de la Cuba	243	0,00%	0,00%	100,00%
Almonacid de la Sierra	735	0,00%	0,00%	100,00%
Almonacid de Toledo	790	0,00%	0,00%	100,00%
Almonacid de Zorita	685	0,00%	0,00%	99,99%
Almonacid del Marquesado	425	0,00%	0,00%	99,50%
Almonaster la Real	1.819	51,10%	51,10%	99,99%
Almoster	1.351	6,04%	6,04%	100,00%
Almudaina	113	0,00%	0,00%	100,00%

Llagosta, La	13.480	100,00%	100,00%	100,00%
Llanera	13.702	16,32%	65,06%	100,00%
Llanes	13.568	53,30%	54,48%	99,89%
Llanos de Aridane, l	20.467	49,87%	49,87%	100,00%
Lleida	138.956	97,75%	97,75%	100,00%
Lliçà d'Amunt	15.256	99,63%	99,63%	100,00%
Lliria	23.253	79,18%	79,18%	100,00%
Lloret de Mar	38.373	61,79%	61,79%	100,00%
Llucmajor	36.914	87,12%	94,91%	95,65%
Logroño	151.136	99,97%	99,97%	100,00%
Loja	20.342	92,69%	93,15%	99,99%
Lora del Rio	18.662	95,35%	95,35%	100,00%
Lorca	94.404	69,69%	69,69%	99,89%
Lucena	42.605	91,49%	91,49%	99,99%
Lugo	98.276	92,32%	92,58%	100,00%
Madrid	3.266.126	100,00%	100,00%	100,00%
Madridejos	10.453	100,00%	100,00%	100,00%
Mairena del Alcor	23.550	91,09%	91,09%	100,00%
Mairena del Aljaraf	46.089	93,90%	93,90%	100,00%
Majadahonda	71.826	99,88%	99,88%	100,00%
Málaga	574.654	98,59%	98,59%	99,98%
Malgrat de Mar	18.579	86,32%	86,32%	100,00%
Manacor	43.808	63,26%	79,08%	99,71%
Mancha Real	11.264	97,30%	97,30%	100,00%
Manilva	15.528	100,00%	100,00%	100,00%
Manises	30.919	79,81%	94,50%	100,00%
Manlleu	20.573	97,94%	97,94%	100,00%
Manresa	77.714	95,94%	95,96%	100,00%
Manzanares	17.997	99,94%	99,94%	100,00%
Maó-Mahón	29.040	97,71%	97,71%	100,00%
Maracena	22.116	100,00%	100,00%	100,00%
Marbella	143.386	100,00%	100,00%	100,00%
Marchena	19.457	51,70%	65,48%	100,00%
Marin	24.319	84,41%	84,41%	100,00%
Marratxi	37.193	93,00%	93,00%	100,00%
Martorell	28.189	99,54%	99,54%	100,00%
Martos	24.215	77,28%	77,28%	99,99%
Masnou, El	23.515	98,01%	98,01%	100,00%
Massamagrell	15.952	91,12%	91,12%	100,00%
Mataro	128.265	96,31%	96,31%	100,00%
Mazarrón	32.209	80,78%	80,78%	99,56%
Meco	14.305	90,21%	90,21%	100,00%
Medina del Campo	20.510	75,64%	75,64%	99,99%
Medina Sidonia	11.708	94,46%	94,46%	99,82%
Mejorada del Camp	23.274	89,63%	89,63%	100,00%
Meliana	10.822	93,06%	99,71%	100,00%
Melilla	86.487	100,00%	100,00%	100,00%
Mérida	59.335	98,81%	98,81%	100,00%
Mieres	37.959	77,88%	82,25%	99,84%
Miguelturra	15.368	88,29%	89,88%	100,00%
Mijas	82.742	83,53%	83,53%	100,00%
Miranda de Ebro	35.522	94,93%	95,44%	100,00%
Mislata	43.691	97,93%	100,00%	100,00%
Moaña	19.399	68,71%	77,54%	100,00%
Mogán	20.072	71,30%	71,30%	99,97%
Moguer	22.088	31,89%	31,89%	100,00%
Molina de Segura	71.890	91,93%	91,93%	100,00%
Molins de Rei	25.868	90,50%	90,50%	99,99%
Mollerussa	14.683	100,00%	100,00%	100,00%
Mollet del Valles	51.318	99,90%	99,90%	100,00%
Moncada	21.935	89,29%	95,73%	100,00%
Monforte de Lemos	18.433	7,34%	87,90%	100,00%
Monóvar/Monòver	12.167	87,51%	87,51%	99,88%
Mont-roig del Camp	12.136	9,73%	9,73%	100,00%
Montcada i Reixac	36.239	89,17%	89,17%	100,00%
Montgat	12.041	98,07%	98,07%	100,00%
Montijo	15.457	98,42%	98,42%	100,00%
Montilla	22.859	95,00%	95,00%	99,97%
Montornes del Vall	16.393	82,10%	82,10%	100,00%
Monzón	17.236	98,03%	98,03%	100,00%
Moralzarzal	13.026	91,66%	91,66%	100,00%
Morón de la Fronte	27.627	77,72%	92,27%	100,00%
Mos	15.078	34,49%	34,58%	100,00%
Móstoles	209.184	98,56%	98,56%	100,00%
Motril	58.020	62,53%	62,53%	100,00%
Mula	16.883	90,43%	90,43%	100,00%
Mungia	17.691	90,66%	90,85%	100,00%
Murcia	453.258	90,41%	92,08%	99,98%
Mutxamel	25.352	100,00%	100,00%	100,00%
Narón	39.080	71,04%	71,04%	100,00%
Navalcarnero	29.298	73,66%	73,66%	100,00%
Navalmoral de la M	17.129	100,00%	100,00%	100,00%
Nerja	21.091	96,38%	96,38%	100,00%
Nigrán	17.675	38,72%	56,60%	100,00%
Níjar	30.663	62,22%	62,22%	99,96%
Noia	14.263	17,64%	75,44%	100,00%
Novelda	25.651	85,23%	85,23%	100,00%
Nucia, la	18.603	100,00%	100,00%	100,00%
Nules	13.103	37,65%	90,42%	100,00%
Ocaña	11.597	100,00%	100,00%	100,00%
Ogíjares	14.160	77,20%	77,20%	100,00%
Casas-Ibáñez	4.538	100,00%	100,00%	100,00%
Casasimarro	3.084	96,81%	96,81%	100,00%
Cascante	3.864	0,00%	100,00%	100,00%
Casinos	2.777	100,00%	100,00%	100,00%
Caspe	9.748	90,46%	90,46%	99,83%
Castañeda	2.914	9,72%	9,72%	100,00%
Castejón	4.163	75,95%	75,95%	100,00%
Castell, Es	7.434	100,00%	100,00%	100,00%
Castellanos de Moriscos	2.677	89,89%	89,89%	100,00%
Castellar	3.314	100,00%	100,00%	100,00%
Castellar de la Frontera	3.049	98,63%	98,63%	100,00%
Castellbell i el Vilar	3.647	83,69%	83,69%	99,97%
Castellet i la Gornal	2.292	65,61%	65,61%	100,00%
Castellgalí	2.062	92,09%	92,09%	100,00%
Castelló de Rugat	2.274	92,62%	92,62%	100,00%
Castellterçol	2.463	93,25%	93,25%	100,00%
Castellvell del Camp	2.857	24,86%	24,86%	100,00%
Castilblanco de los Arroyos	4.864	100,00%	100,00%	100,00%
Castilleja de Guzmán	2.821	86,85%	86,85%	100,00%
Castillo de Locubín	4.058	95,28%	95,28%	99,98%
Castril	2.070	69,96%	69,96%	98,71%
Castro de Rei	5.052	23,95%	23,95%	100,00%
Castro del Rio	7.809	89,86%	89,86%	100,00%
Castropol	3.402	31,03%	31,03%	99,33%
Castroverde	2.617	0,00%	0,00%	99,97%
Castuera	5.880	99,85%	99,85%	99,98%
Catadau	2.777	93,63%	93,63%	100,00%
Catllar, El	4.451	84,16%	84,16%	99,99%
Catoira	3.335	53,76%	53,76%	100,00%
Catral	8.639	73,19%	100,00%	100,00%
Caudete	9.963	100,00%	100,00%	100,00%
Cazalla de la Sierra	4.718	96,72%	96,72%	99,71%
Cazorla	7.441	95,06%	95,06%	99,96%
Cebolla	3.235	9,50%	9,50%	100,00%
Cebreros	3.120	98,21%	98,21%	100,00%
Cedeira	6.640	1,81%	66,53%	99,93%
Cedillo del Condado	3.762	80,11%	80,11%	100,00%
Cee	7.546	22,88%	69,29%	99,86%
Celanova	5.649	47,94%	65,35%	100,00%
Cella	2.574	100,00%	100,00%	100,00%
Celrà	5.452	86,41%	86,41%	99,99%
Cenes de la Vega	8.002	100,00%	100,00%	100,00%
Cenicero	2.076	9,34%	9,34%	100,00%
Cenicientos	2.033	52,54%	52,54%	100,00%
Centelles	7.404	0,00%	0,00%	100,00%
Cerceda	5.001	42,83%	42,83%	100,00%
Cercedilla	7.026	88,20%	88,20%	100,00%
Cerdedo-Cotobade	5.699	2,82%	2,82%	99,96%
Cerro de Andévalo, El	2.364	78,71%	78,71%	99,93%
Cervello	9.054	92,77%	92,77%	100,00%
Cervera	9.180	99,13%	99,13%	100,00%
Cervera de Pisuerga	2.333	72,05%	72,05%	96,39%
Cervera del Rio Alhama	2.294	74,46%	74,46%	99,78%
Cervo	4.227	18,55%	66,79%	100,00%
Chantada	8.192	0,00%	55,08%	99,97%
Chapineria	2.328	80,03%	80,03%	100,00%
Chauchina	5.565	89,72%	89,72%	100,00%
Chella	2.435	78,74%	78,74%	100,00%
Cheste	8.494	67,72%	67,72%	100,00%
Chilches/Xilxes	2.679	40,03%	40,03%	100,00%
Chiloeches	3.579	80,39%	80,39%	100,00%
Chinchilla de Monte-Aragón	4.206	85,50%	85,50%	99,80%
Chinchón	5.331	89,32%	89,32%	100,00%
Chozas de Abajo	2.581	0,00%	0,00%	91,38%
Chozas de Canales	3.966	99,62%	99,62%	100,00%
Chucena	2.222	100,00%	100,00%	100,00%
Cigales	5.235	93,84%	93,84%	100,00%
Cijuela	3.322	100,00%	100,00%	100,00%
Cintruénigo	7.903	8,45%	79,57%	100,00%
Cistérniga	9.034	100,00%	100,00%	100,00%
Cistierna	3.135	83,60%	83,60%	97,54%
Cizur	3.888	50,32%	50,32%	100,00%
Coaña	3.315	4,45%	4,45%	99,62%
Cobeja	2.255	100,00%	100,00%	100,00%
Cobeña	7.428	77,14%	77,14%	100,00%
Cobisa	4.310	97,05%	97,05%	100,00%
Codosera, La	2.075	77,93%	77,93%	99,15%
Cogollos de la Vega	2.031	71,89%	71,89%	100,00%
Coles	3.050	18,40%	18,40%	100,00%
Colindres	8.484	83,02%	100,00%	100,00%
Collado Mediano	6.958	87,69%	87,69%	100,00%
Collbato	4.466	86,87%	86,87%	100,00%
Colmenar	3.376	86,05%	86,05%	99,93%
Colmenar de Oreja	8.032	86,54%	86,54%	100,00%
Colmenarejo	9.130	95,74%	95,74%	100,00%
Colunga	3.257	26,96%	57,69%	99,20%
Comillas	2.141	15,70%	15,70%	100,00%
Cómpeta	3.922	0,00%	0,00%	99,99%
Consell	4.053	96,99%	96,99%	100,00%
Constantí	6.540	100,00%	100,00%	100,00%
Constantina	5.896	96,54%	96,54%	99,81%
Almunia de San Juan	658	97,31%	97,31%	99,05%
Almuniente	460	0,00%	0,00%	99,99%
Almuradiel	772	0,00%	0,00%	100,00%
Alobras	64	0,00%	0,00%	99,40%
Alocén	172	0,00%	0,00%	99,28%
Alòs de Balaguer	130	0,00%	0,00%	85,94%
Alp	1.580	0,00%	0,00%	100,00%
Alpandeire	260	38,11%	38,11%	100,00%
Alpanseque	62	0,00%	0,00%	90,60%
Alpartir	555	69,98%	69,98%	100,00%
Alpeñés	22	0,00%	0,00%	0,00%
Alpens	266	0,00%	0,00%	99,93%
Alpuente	633	50,39%	50,39%	93,30%
Alpujarra de la Sierra	989	4,70%	4,70%	100,00%
Alqueria d'Asnar, l'	493	100,00%	100,00%	100,00%
Alqueria de la Comtessa, l'	1.476	8,74%	80,41%	100,00%
Alquézar	303	77,96%	77,96%	100,00%
Alquife	601	0,00%	0,00%	100,00%
Alsodux	125	82,64%	82,64%	100,00%
Alt Àneu	405	0,00%	0,00%	98,35%
Altable	51	0,00%	0,00%	100,00%
Altarejos	190	0,00%	0,00%	99,61%
Altorricón	1.417	0,00%	0,00%	100,00%
Altos, Los	195	0,00%	0,00%	83,52%
Altzaga	183	87,06%	87,06%	100,00%
Altzo	435	72,42%	72,42%	100,00%
Alustante	153	0,00%	0,00%	98,80%
Amavida	132	0,00%	0,00%	100,00%
Amayuelas de Arriba	35	0,00%	0,00%	100,00%
Ambel	254	0,00%	0,00%	100,00%
Ambite	592	88,10%	88,10%	100,00%
Améscoa Baja	724	99,86%	99,86%	100,00%
Ameyugo	107	0,00%	0,00%	100,00%
Amezketa	921	98,17%	98,17%	99,09%
Amieva	661	0,00%	0,00%	95,80%
Amoroto	410	0,00%	0,00%	99,82%
Ampudia	605	0,00%	0,00%	98,45%
Amusco	423	0,00%	0,00%	99,52%
Amusquillo	103	0,00%	0,00%	100,00%
Anadón	28	0,00%	0,00%	76,13%
Añana	156	83,11%	83,11%	99,89%
Anaya	129	0,00%	0,00%	100,00%
Anaya de Alba	201	0,00%	0,00%	100,00%
Anchuelo	1.271	96,24%	96,24%	99,50%
Anchuras	327	5,80%	5,80%	99,51%
Ancin/Antzin	337	9,62%	9,62%	100,00%
Andavias	444	0,00%	0,00%	100,00%
Andilla	319	67,49%	67,49%	96,61%
Añe	77	0,00%	0,00%	99,50%
Anento	106	0,00%	0,00%	15,00%
Anglesola	1.363	7,95%	7,95%	100,00%
Angón	10	0,00%	0,00%	100,00%
Anguciana	433	100,00%	100,00%	100,00%
Angüés	354	93,98%	93,98%	100,00%
Anguiano	497	100,00%	100,00%	97,07%
Anguita	156	0,00%	0,00%	96,31%
Anguix	136	0,00%	0,00%	99,50%
Anievas	267	0,00%	0,00%	100,00%
Aniñón	706	50,94%	50,94%	100,00%
Añón de Moncayo	212	0,00%	0,00%	88,95%
Añora	1.527	100,00%	100,00%	100,00%
Añorbe	581	9,82%	9,82%	100,00%
Añover de Tormes	86	0,00%	0,00%	96,32%
Anquela del Ducado	50	0,00%	0,00%	98,09%
Anquela del Pedregal	24	0,00%	0,00%	99,50%
Ansó	405	75,44%	75,44%	100,00%
Antas de Ulla	1.976	0,00%	0,00%	100,00%
Antella	1.175	100,00%	100,00%	100,00%
Antigua, La	360	0,00%	0,00%	98,98%
Antigüedad	363	0,00%	0,00%	98,68%
Antillón	140	0,00%	0,00%	99,38%
Anue	482	3,02%	3,02%	99,90%
Arabayona de Mógica	357	0,00%	0,00%	68,03%
Aragüés del Puerto	115	0,00%	0,00%	99,99%
Arahuetes	30	0,00%	0,00%	72,99%
Araitz	512	0,00%	0,00%	99,07%
Arakaldo	159	100,00%	100,00%	100,00%
Arakil	933	11,79%	11,79%	100,00%
Arama	200	84,62%	84,62%	100,00%
Aramaio	1.467	71,36%	71,36%	100,00%
Aranarache/Aranaratxe	72	100,00%	100,00%	89,30%
Arancón	88	0,00%	0,00%	97,48%
Aranda de Moncayo	152	0,00%	0,00%	99,34%
Arándiga	302	0,00%	0,00%	100,00%
Arandilla	160	0,00%	0,00%	100,00%
Arandilla del Arroyo	7	0,00%	0,00%	100,00%
Aranga	1.849	10,33%	10,33%	99,97%
Arano	116	0,00%	0,00%	100,00%
Arantza	597	0,00%	0,00%	99,18%
Arantzazu	395	80,50%	80,50%	100,00%
Arañuel	150	86,00%	86,00%	86,00%
Oiartzun	10.293	90,85%	90,85%	100,00%
Oleiros	36.075	74,93%	83,75%	100,00%
Olesa de Montserra	23.904	96,91%	96,91%	100,00%
Oliva	25.101	99,03%	100,00%	100,00%
Oliva, La	26.580	67,16%	67,16%	100,00%
Olivenza	11.963	76,25%	76,25%	99,18%
Olot	35.228	97,01%	97,01%	100,00%
Oñati	11.380	68,36%	95,11%	100,00%
Onda	24.859	85,83%	87,55%	100,00%
Ontinyent	35.347	100,00%	100,00%	100,00%
Ordes	12.674	36,82%	59,37%	100,00%
Ordizia	10.394	90,25%	100,00%	100,00%
Orihuela	77.414	85,98%	87,92%	99,91%
Orotava, La	42.029	79,31%	79,31%	100,00%
Osuna	17.560	98,61%	98,61%	100,00%
Ourense	105.233	97,51%	97,51%	100,00%
Oviedo	219.686	94,30%	96,86%	99,94%
Paiporta	26.088	100,00%	100,00%	100,00%
Pájara	21.093	82,19%	82,19%	99,68%
Palacios y Villafranc	38.354	100,00%	100,00%	100,00%
Palafrugell	22.974	42,05%	42,05%	100,00%
Palamós	17.910	62,74%	62,74%	100,00%
Palau-solità i Plegar	14.771	90,10%	90,10%	100,00%
Palencia	78.412	94,82%	99,98%	100,00%
Pallejà	11.508	94,27%	94,27%	100,00%
Palma	416.065	98,08%	98,08%	100,00%
Palma del Condado,	10.761	90,87%	90,87%	100,00%
Palma del Rio	21.064	97,59%	97,59%	100,00%
Palmas de Gran Car	379.925	96,16%	96,16%	100,00%
Palos de la Fronter	11.289	64,41%	64,41%	100,00%
Pamplona/Iruña	201.653	96,03%	96,03%	100,00%
Paracuellos de Jara	25.269	94,52%	94,52%	100,00%
Parets del Valles	19.082	93,86%	93,86%	100,00%
Parla	130.124	100,00%	100,00%	100,00%
Pasaia	16.156	54,97%	88,92%	100,00%
Paterna	70.195	90,78%	97,84%	100,00%
Pego	10.128	73,60%	73,60%	100,00%
Peligros	11.394	100,00%	100,00%	100,00%
Peñarroya-Pueblonu	10.695	91,20%	91,20%	100,00%
Petrer	34.276	83,67%	83,67%	100,00%
Picanya	11.513	88,72%	92,67%	100,00%
Picassent	20.942	83,99%	83,99%	100,00%
Piélagos	25.559	48,24%	69,35%	100,00%
Piera	15.603	82,21%	82,21%	100,00%
Pilar de la Horadad	21.905	36,51%	83,18%	100,00%
Pilas	13.974	86,67%	86,67%	100,00%
Pineda de Mar	27.272	88,33%	88,33%	100,00%
Pinto	52.526	88,73%	88,73%	100,00%
Plasencia	39.913	85,93%	85,93%	100,00%
Pobla de Vallbona,	24.433	77,92%	84,02%	100,00%
Pobla, Sa	13.475	0,19%	85,75%	100,00%
Poio	17.082	80,25%	81,29%	100,00%
Pollença	16.283	81,18%	81,18%	99,99%
Ponferrada	64.674	91,79%	91,79%	99,90%
Ponteareas	22.877	65,51%	73,74%	100,00%
Pontes de Garcia Rc	10.138	0,03%	85,59%	99,96%
Pontevedra	83.029	90,67%	90,67%	100,00%
Porriño, O	19.848	22,04%	65,71%	100,00%
Portugalete	45.766	100,00%	100,00%	100,00%
Pozoblanco	17.210	97,99%	97,99%	100,00%
Pozuelo de Alarcón	86.422	97,97%	97,97%	100,00%
Prat de Llobregat, E	64.599	93,88%	93,88%	100,00%
Premià de Dalt	10.448	97,73%	97,73%	100,00%
Premià de Mar	28.119	95,83%	95,83%	100,00%
Priego de Córdoba	22.408	87,05%	87,05%	99,64%
Puçol	19.495	93,58%	93,58%	100,00%
Puebla de Cazalla, L	10.979	88,63%	93,73%	100,00%
Puebla del Rio, La	11.868	86,76%	86,76%	100,00%
Puente Genil	30.048	92,88%	92,88%	100,00%
Puerto de la Cruz	30.468	100,00%	100,00%	100,00%
Puerto de Santa Ma	88.405	70,76%	89,95%	100,00%
Puerto del Rosario	40.753	74,71%	74,71%	99,98%
Puerto Lumbreras	15.394	75,87%	75,87%	100,00%
Puerto Real	41.627	96,61%	96,61%	100,00%
Puertollano	47.035	92,11%	92,11%	99,97%
Pulpi	10.055	58,72%	58,72%	100,00%
Punta Umbria	15.242	77,43%	77,43%	100,00%
Quart de Poblet	24.760	96,57%	99,95%	100,00%
Quintanar de la Orc	11.030	100,00%	100,00%	100,00%
Realejos, Los	36.402	82,32%	82,32%	100,00%
Redondela	29.218	52,77%	73,98%	100,00%
Requena	20.254	82,65%	82,65%	99,92%
Reus	104.373	99,88%	99,88%	100,00%
Rianxo	11.033	70,23%	70,23%	100,00%
Riba-roja de Túria	22.264	99,50%	99,50%	100,00%
Ribeira	26.886	10,48%	69,93%	100,00%
Rincón de la Victori	47.179	94,49%	94,49%	100,00%
Rinconada, La	38.628	93,34%	93,34%	100,00%
Ripoll	10.686	95,49%	95,49%	99,99%
Ripollet	38.665	96,95%	96,95%	100,00%
Rivas-Vaciamadrid	88.150	82,31%	83,31%	100,00%
Consuegra	9.998	100,00%	100,00%	100,00%
Corbera	3.100	69,29%	69,29%	100,00%
Corella	7.971	44,58%	92,03%	100,00%
Corgo, O	3.481	9,75%	9,75%	99,99%
Coristanco	6.074	30,51%	30,51%	100,00%
Cornellà del Terri	2.364	77,54%	77,54%	100,00%
Coronada, La	2.162	77,70%	77,70%	100,00%
Coronil, El	4.746	100,00%	100,00%	100,00%
Corral de Almaguer	5.352	73,37%	73,37%	100,00%
Corrales, Los	3.941	100,00%	100,00%	100,00%
Cortegana	4.666	81,89%	81,89%	99,99%
Cortes	3.151	88,59%	88,59%	100,00%
Cortes de la Frontera	3.101	32,58%	32,58%	99,81%
Corvera de Toranzo	2.039	8,69%	8,69%	99,91%
Cospeito	4.484	10,27%	10,27%	100,00%
Covelo	2.396	17,07%	17,07%	99,83%
Cox	7.297	100,00%	100,00%	100,00%
Crecente	2.012	0,00%	0,00%	100,00%
Creixell	3.642	0,00%	0,00%	100,00%
Cuadros	2.001	58,89%	58,89%	100,00%
Cubas de la Sagra	6.413	85,57%	85,57%	100,00%
Cudillero	4.987	8,80%	36,77%	99,71%
Cuéllar	9.583	86,98%	86,98%	100,00%
Cuervo de Sevilla, El	8.610	0,00%	0,00%	100,00%
Cuevas de San Marcos	3.648	100,00%	100,00%	100,00%
Cúllar	4.129	7,05%	7,05%	99,90%
Cúllar Vega	7.429	98,40%	98,40%	100,00%
Cuntis	4.677	34,47%	34,47%	99,99%
Curtis	3.983	45,97%	45,97%	100,00%
Daimús	3.117	68,90%	68,90%	100,00%
Dalias	4.006	43,30%	43,30%	100,00%
Deba	5.459	7,37%	88,37%	99,88%
Deifontes	2.627	48,83%	48,83%	100,00%
Derio	6.631	90,74%	97,38%	100,00%
Dilar	2.054	38,00%	38,00%	100,00%
Dodro	2.768	55,00%	55,00%	100,00%
Dolores	7.470	94,95%	94,95%	100,00%
Doña Mencia	4.638	100,00%	100,00%	100,00%
Doñinos de Salamanca	2.097	80,17%	80,17%	100,00%
Dos Torres	2.411	89,51%	89,51%	100,00%
Dosbarrios	2.223	100,00%	100,00%	100,00%
Dosrius	5.481	44,90%	44,90%	100,00%
Dueñas	2.612	96,12%	96,12%	99,90%
Dumbria	2.983	8,21%	8,21%	100,00%
Dúrcal	7.015	0,00%	0,00%	100,00%
Elche de la Sierra	3.585	91,38%	91,38%	99,70%
Elorrio	7.372	0,32%	70,97%	100,00%
Encinas Reales	2.254	0,00%	0,00%	100,00%
Enguera	4.752	100,00%	100,00%	99,60%
Entrambasaguas	5.163	90,62%	92,25%	100,00%
Épila	4.386	91,59%	91,59%	100,00%
Escacena del Campo	2.284	99,74%	99,74%	100,00%
Escalona	3.241	3,80%	3,80%	100,00%
Eskoriatza	4.065	82,98%	95,08%	100,00%
Espejo	3.329	67,02%	67,02%	100,00%
Espera	3.860	100,00%	100,00%	100,00%
Espiel	2.397	67,27%	67,27%	100,00%
Espinar, El	8.986	81,61%	81,61%	100,00%
Espluga de Francolí, L'	3.755	99,59%	99,59%	100,00%
Esporles	5.062	84,60%	84,60%	99,99%
Esquirol, L'	2.181	87,04%	87,04%	99,98%
Esquivias	5.549	98,88%	98,88%	100,00%
Esteribar	2.702	39,78%	39,78%	99,84%
Etxarri Aranatz	2.483	100,00%	100,00%	100,00%
Ezcaray	2.024	0,00%	0,00%	99,78%
Fabero	4.493	95,68%	95,68%	98,56%
Falces	2.315	84,14%	100,00%	100,00%
Falset	2.834	100,00%	100,00%	100,00%
Fasnia	2.786	56,03%	56,03%	99,99%
Faura	3.538	100,00%	100,00%	100,00%
Favara	2.518	100,00%	100,00%	100,00%
Fernán-Núñez	9.663	100,00%	100,00%	100,00%
Ferreries	4.777	98,95%	98,95%	100,00%
Fines	2.079	0,00%	0,00%	100,00%
Finestrat	6.715	100,00%	100,00%	100,00%
Firgas	7.455	93,13%	93,13%	100,00%
Fisterra	4.708	21,26%	36,78%	100,00%
Fitero	2.011	0,00%	100,00%	100,00%
Flix	3.408	70,82%	70,82%	100,00%
Foios	7.367	85,59%	85,59%	100,00%
Folgueroles	2.267	100,00%	100,00%	100,00%
Fondó de les Neus, el/Hondó	2.544	17,14%	17,14%	98,13%
Fonsagrada, A	3.465	0,00%	0,00%	99,46%
Font d'En Carròs, la	3.794	92,71%	92,71%	100,00%
Font de la Figuera, la	2.038	76,88%	76,88%	100,00%
Fontanar	2.370	100,00%	100,00%	100,00%
Forcarei	3.388	23,40%	23,40%	99,97%
Formentera del Segura	4.191	94,45%	100,00%	100,00%
Fornells de la Selva	2.650	98,20%	98,20%	100,00%
Foz	9.980	28,01%	73,58%	100,00%
Frades	2.339	11,38%	11,38%	99,99%
Aranzueque	380	0,00%	0,00%	100,00%
Arapiles	660	0,00%	0,00%	100,00%
Aras	153	0,00%	0,00%	100,00%
Aras de los Olmos	381	87,66%	87,66%	99,96%
Arauzo de Miel	306	0,00%	0,00%	84,91%
Arauzo de Salce	58	0,00%	0,00%	99,50%
Arauzo de Torre	71	0,00%	0,00%	99,50%
Arbancón	150	0,00%	0,00%	100,00%
Arbeteta	22	0,00%	0,00%	99,50%
Arbizu	1.104	100,00%	100,00%	100,00%
Arboli	137	0,00%	0,00%	45,18%
Arcas	1.716	84,97%	84,97%	100,00%
Arce/Artzi	262	0,00%	0,00%	78,23%
Arcediano	107	0,00%	0,00%	100,00%
Arcenillas	420	0,00%	0,00%	100,00%
Árchez	385	47,15%	47,15%	100,00%
Aricóllar	883	0,00%	0,00%	97,45%
Arco, El	86	0,00%	0,00%	99,59%
Arconada	41	0,00%	0,00%	99,50%
Arcones	166	0,00%	0,00%	100,00%
Arcos	1.734	0,00%	0,00%	100,00%
Arcos de Jalón	1.469	25,10%	25,10%	98,36%
Arcos de la Polvorosa	221	0,00%	0,00%	100,00%
Arcos de la Sierra	83	0,00%	0,00%	99,50%
Arcos de las Salinas	119	0,00%	0,00%	99,35%
Arcos, Los	1.134	9,26%	9,26%	100,00%
Ardisa	70	0,00%	0,00%	94,82%
Ardón	560	0,00%	0,00%	96,76%
Areatza	1.201	0,00%	97,67%	100,00%
Arellano	157	0,00%	0,00%	100,00%
Arén	313	77,56%	77,56%	98,78%
Arenal, El	973	0,00%	0,00%	100,00%
Arenales de San Gregorio	589	96,23%	96,23%	100,00%
Arenas	1.156	95,69%	95,69%	100,00%
Arenas de Iguña	1.679	9,25%	9,25%	98,42%
Arenas de San Juan	1.011	0,00%	0,00%	100,00%
Arenas del Rey	666	0,00%	0,00%	100,00%
Arenillas	21	0,00%	0,00%	89,19%
Arenillas de Riopisuerga	180	0,00%	0,00%	80,55%
Arens de Lledó	211	86,55%	86,55%	100,00%
Arenzana de Abajo	230	97,74%	97,74%	100,00%
Arenzana de Arriba	29	0,00%	0,00%	100,00%
Ares del Maestrat	186	61,83%	61,83%	96,98%
Areso	279	2,76%	2,76%	100,00%
Arevalillo	73	0,00%	0,00%	15,04%
Arevalillo de Cega	20	0,00%	0,00%	99,50%
Arévalo de la Sierra	78	0,00%	0,00%	96,50%
Argañin	80	0,00%	0,00%	95,35%
Arganza	816	78,67%	78,67%	86,55%
Argavieso	95	100,00%	100,00%	84,88%
Argecilla	64	0,00%	0,00%	98,85%
Argelaguer	397	84,49%	84,49%	100,00%
Argelita	118	0,00%	0,00%	100,00%
Argençola	217	11,05%	11,05%	98,62%
Argente	195	0,00%	0,00%	99,29%
Argentera, L'	124	0,00%	0,00%	91,61%
Argoños	1.748	62,03%	62,03%	100,00%
Arguis	127	40,64%	40,64%	98,20%
Arguisuelas	136	0,00%	0,00%	100,00%
Argujillo	242	0,00%	0,00%	100,00%
Aria	51	0,00%	0,00%	100,00%
Ariany	868	100,00%	100,00%	100,00%
Aribe	33	16,21%	16,21%	99,50%
Arija	129	0,00%	0,00%	100,00%
Ariño	724	100,00%	100,00%	100,00%
Ariza	1.115	99,67%	99,67%	100,00%
Arlanzón	400	0,00%	0,00%	100,00%
Armallones	59	0,00%	0,00%	96,39%
Armañanzas	53	0,00%	0,00%	100,00%
Armentera, L'	930	0,00%	0,00%	100,00%
Armenteros	198	0,00%	0,00%	99,97%
Armiñón	227	91,83%	91,83%	100,00%
Armuña	219	0,00%	0,00%	93,27%
Armuña de Almanzora	302	0,00%	0,00%	100,00%
Armuña de Tajuña	246	0,00%	0,00%	100,00%
Arnedillo	419	85,92%	85,92%	100,00%
Arnes	455	0,00%	0,00%	99,06%
Arnoia, A	1.000	0,00%	0,00%	99,99%
Arquillinos	117	0,00%	0,00%	99,97%
Arquillos	1.734	100,00%	100,00%	100,00%
Arrabalde	216	0,00%	0,00%	52,55%
Arraia-Maeztu	726	79,17%	79,17%	99,94%
Arrancacepas	25	0,00%	0,00%	31,26%
Arrankudiaga	968	84,09%	84,09%	100,00%
Arratzu	418	81,94%	81,94%	100,00%
Arratzua-Ubarrundia	980	96,82%	96,82%	100,00%
Arraya de Oca	49	0,00%	0,00%	99,50%
Arredondo	452	0,00%	0,00%	96,03%
Arres	65	0,00%	0,00%	100,00%
Arrieta	586	0,00%	0,00%	100,00%
Arroba de los Montes	446	0,00%	0,00%	99,88%

Roca del Valles, La	10.650	99,32%	99,32%	100,00%
Roda, La	15.476	99,94%	99,94%	100,00%
Rojales	16.963	100,00%	100,00%	100,00%
Ronda	33.877	94,77%	100,00%	99,99%
Roquetas de Mar	96.800	76,44%	76,44%	100,00%
Rosario, El	17.370	86,97%	86,97%	100,00%
Roses	19.550	44,31%	44,31%	100,00%
Rota	29.109	69,15%	96,95%	100,00%
Rozas de Madrid, La	95.814	99,47%	99,47%	100,00%
Rubi	77.464	98,08%	98,08%	100,00%
Sabadell	213.644	95,61%	95,68%	100,00%
Sada	15.841	19,45%	71,61%	100,00%
Sagunto/Sagunt	66.140	90,65%	92,08%	100,00%
Salamanca	144.228	100,00%	100,00%	100,00%
Salobreña	12.381	68,95%	68,95%	100,00%
Salou	27.476	51,90%	51,90%	100,00%
Salt	31.362	99,43%	99,43%	100,00%
San Agustin del Gua	13.379	97,68%	97,68%	100,00%
San Andrés del Rab	30.615	98,70%	100,00%	100,00%
San Bartolomé	18.816	85,09%	85,09%	100,00%
San Bartolomé de T	53.443	77,77%	77,77%	99,62%
San Cristóbal de La	157.503	91,75%	92,41%	99,98%
San Fernando	94.979	97,59%	99,98%	100,00%
San Fernando de He	39.432	99,89%	99,89%	100,00%
San Javier	32.489	54,26%	54,26%	100,00%
San Juan de Aznalfa	21.416	88,53%	88,53%	100,00%
San Lorenzo de El E	18.369	97,56%	97,56%	100,00%
San Martin de la Ve	19.170	98,03%	98,03%	99,97%
San Martin del Rey	16.074	80,22%	80,22%	99,96%
San Miguel de Abo	20.886	74,36%	74,36%	100,00%
San Pedro del Pinat	25.476	82,72%	82,72%	100,00%
San Roque	31.218	84,49%	86,53%	100,00%
San Sebastián de lo	89.276	99,01%	99,01%	100,00%
San Vicente del Ras	58.385	92,94%	95,53%	100,00%
Sanlúcar de Barram	68.684	81,24%	83,97%	100,00%
Sanlúcar la Mayor	13.808	90,99%	90,99%	100,00%
Sant Adrià de Besòs	37.097	97,13%	97,13%	100,00%
Sant Andreu de la B	27.558	100,00%	100,00%	100,00%
Sant Andreu de Llav	10.968	92,54%	92,54%	100,00%
Sant Antoni de Port	26.306	82,67%	82,67%	100,00%
Sant Boi de Llobreg	83.605	97,81%	97,81%	100,00%
Sant Carles de la Rà	14.789	100,00%	100,00%	100,00%
Sant Celoni	17.904	95,69%	95,69%	100,00%
Sant Cugat del Vall	91.006	97,54%	97,54%	100,00%
Sant Feliu de Guixo	21.925	99,96%	99,96%	100,00%
Sant Feliu de Llobre	44.860	96,46%	96,46%	100,00%
Sant Joan d'Alacant	23.915	98,68%	98,68%	100,00%
Sant Joan de Vilato	10.936	98,09%	98,09%	100,00%
Sant Joan Despi	34.123	95,15%	95,15%	100,00%
Sant Josep de sa Ta	27.413	81,34%	81,34%	99,96%
Sant Just Desvern	17.805	77,52%	77,52%	100,00%
Sant Pere de Ribes	30.719	93,32%	93,32%	100,00%
Sant Quirze del Val	20.141	92,45%	92,45%	100,00%
Sant Sadurni d'Ano	12.887	98,37%	98,37%	100,00%
Sant Vicenç dels Ho	28.117	88,99%	88,99%	100,00%
Santa Brigida	18.263	92,48%	92,48%	100,00%
Santa Coloma de Fa	13.143	87,45%	87,45%	100,00%
Santa Coloma de Gr	119.215	100,00%	100,00%	100,00%
Santa Cruz de Bezar	13.095	91,41%	92,70%	100,00%
Santa Cruz de la Pa	15.716	93,34%	93,34%	99,95%
Santa Cruz de Tene	207.312	96,24%	96,49%	99,97%
Santa Eulària des R	38.015	80,85%	80,85%	100,00%
Santa Fe	15.157	100,00%	100,00%	100,00%
Santa Lucia de Tiraj	73.328	96,44%	96,44%	100,00%
Santa Margalida	12.485	75,38%	84,38%	100,00%
Santa Maria de Gui	13.850	66,26%	66,26%	99,99%
Santa Marta de Tor	14.805	100,00%	100,00%	100,00%
Santa Perpetua de	25.799	98,34%	98,34%	100,00%
Santa Pola	32.306	99,35%	99,35%	99,95%
Santa Úrsula	14.679	81,36%	81,36%	100,00%
Santander	172.539	96,01%	96,01%	100,00%
Santanyi	12.237	79,57%	79,57%	99,97%
Santiago de Compo	97.260	90,93%	91,33%	100,00%
Santiago del Teide	11.111	78,73%	78,73%	99,97%
Santomera	16.206	82,80%	89,88%	100,00%
Santoña	11.024	11,16%	98,05%	100,00%
Santurtzi	45.853	99,83%	99,83%	100,00%
Sanxenxo	17.347	27,10%	51,23%	100,00%
Sarria	13.330	2,49%	71,29%	100,00%
Sedavi	10.333	70,19%	100,00%	100,00%
Segovia	51.674	95,93%	95,93%	100,00%
Seseña	25.835	57,75%	57,75%	100,00%
Sestao	27.296	94,27%	100,00%	100,00%
Seu d'Urgell, La	12.089	99,29%	99,29%	100,00%
Sevilla	688.592	100,00%	100,00%	100,00%
Siero	51.667	58,33%	72,52%	100,00%
Silla	18.771	8,12%	92,97%	100,00%
Sitges	29.307	96,64%	96,64%	100,00%
Socuéllamos	12.139	100,00%	100,00%	100,00%
Solana, La	15.479	98,17%	98,17%	100,00%
Sóller	13.705	100,00%	100,00%	100,00%

Franco, El	3.796	36,88%	36,88%	99,46%
Fregenal de la Sierra	4.847	97,21%	97,21%	100,00%
Fresno de Torote	2.221	86,68%	86,68%	99,99%
Frigiliana	3.009	95,63%	95,63%	100,00%
Friol	3.744	15,40%	15,40%	99,44%
Frontera	4.093	68,21%	68,21%	100,00%
Fuenmayor	3.134	100,00%	100,00%	100,00%
Fuensanta de Martos	3.074	82,95%	82,95%	99,47%
Fuente de Cantos	4.721	100,00%	100,00%	100,00%
Fuente de Piedra	2.596	100,00%	100,00%	100,00%
Fuente del Maestre	6.743	96,53%	96,53%	100,00%
Fuente el Fresno	3.220	0,00%	0,00%	98,94%
Fuente el Saz de Jarama	6.696	85,53%	85,53%	100,00%
Fuente Obejuna	4.604	96,45%	96,45%	99,96%
Fuente Palmera	9.783	65,69%	65,69%	98,63%
Fuente Vaqueros	4.406	100,00%	100,00%	100,00%
Fuente-Álamo	2.489	100,00%	100,00%	100,00%
Fuentes de Andalucia	7.111	100,00%	100,00%	100,00%
Fuentes de Ebro	4.504	77,47%	77,47%	100,00%
Fuentes de León	2.302	98,52%	98,52%	100,00%
Fuentidueña de Tajo	2.053	79,55%	79,55%	100,00%
Funes	2.440	0,08%	100,00%	100,00%
Fustiñana	2.490	0,00%	93,04%	100,00%
Gádor	3.012	66,21%	66,21%	100,00%
Galápagos	2.403	92,50%	92,50%	100,00%
Galar	2.273	33,76%	33,76%	100,00%
Gallardos, Los	2.794	4,31%	4,31%	100,00%
Gallur	2.596	0,00%	0,00%	100,00%
Gálvez	3.016	100,00%	100,00%	100,00%
Gandesa	3.064	100,00%	100,00%	100,00%
Garachico	4.871	84,16%	84,16%	100,00%
Garrovilla, La	2.346	100,00%	100,00%	100,00%
Garrovillas de Alconétar	2.034	100,00%	100,00%	100,00%
Garrucha	9.212	100,00%	100,00%	100,00%
Gata de Gorgos	6.049	60,96%	60,96%	100,00%
Gelida	7.533	99,73%	99,73%	100,00%
Genovés, el	2.842	79,82%	79,82%	100,00%
Gerena	7.585	100,00%	100,00%	100,00%
Gerindote	2.300	99,48%	99,48%	100,00%
Getaria	2.821	2,38%	90,74%	100,00%
Gilena	3.727	0,00%	0,00%	100,00%
Gilet	3.324	65,66%	65,66%	87,39%
Gineta, La	2.512	100,00%	100,00%	100,00%
Gironella	4.826	9,78%	9,78%	100,00%
Godelleta	3.533	69,08%	69,08%	100,00%
Gójar	5.795	100,00%	100,00%	100,00%
Golmayo	2.626	57,63%	57,63%	99,67%
Gorliz	5.785	69,16%	98,24%	100,00%
Grado	9.784	0,47%	70,08%	99,16%
Granada, La	2.157	84,38%	84,38%	100,00%
Granja de Rocamora	2.580	95,08%	95,08%	100,00%
Granja de Torrehermosa	2.014	0,00%	0,00%	100,00%
Graus	3.395	91,67%	91,67%	99,53%
Grazalema	2.027	64,31%	64,31%	99,75%
Grijota	2.319	30,83%	30,83%	100,00%
Guadalcanal	2.627	100,00%	100,00%	100,00%
Guadalix de la Sierra	6.214	100,00%	100,00%	100,00%
Guadassuar	5.893	20,26%	80,59%	100,00%
Guadiana del Caudillo	2.485	71,54%	71,54%	100,00%
Gualchos	5.193	50,41%	50,41%	100,00%
Guancha, La	5.520	97,31%	97,31%	100,00%
Guarda, A	9.977	34,40%	68,18%	100,00%
Guardia de Jaén, La	5.011	39,63%	39,63%	100,00%
Guardia, La	2.246	12,44%	12,44%	100,00%
Guardo	5.995	97,31%	97,31%	99,99%
Guareña	6.964	99,97%	99,97%	100,00%
Guaro	2.260	100,00%	100,00%	99,99%
Guarromán	2.724	95,93%	95,93%	100,00%
Güéjar Sierra	2.820	6,89%	6,89%	100,00%
Güeñes	6.734	98,58%	100,00%	100,00%
Güevéjar	2.595	98,64%	98,64%	100,00%
Guijuelo	5.633	93,43%	93,43%	100,00%
Guissona	7.136	99,43%	99,43%	100,00%
Guitiriz	5.484	39,04%	39,04%	99,99%
Guntin	2.690	14,27%	14,27%	99,99%
Gurb	2.681	92,43%	92,43%	99,98%
Guriezo	2.354	0,00%	0,00%	100,00%
Haria	5.123	73,66%	73,66%	99,80%
Herencia	8.390	100,00%	100,00%	100,00%
Herrera	6.461	84,36%	84,36%	100,00%
Herrera del Duque	3.482	94,03%	94,03%	100,00%
Hervás	3.976	100,00%	100,00%	100,00%
Higuera la Real	2.253	100,00%	100,00%	100,00%
Hinojos	3.976	83,38%	83,38%	100,00%
Hinojosa del Duque	6.788	100,00%	100,00%	100,00%
Horcajo de Santiago	3.493	79,47%	79,47%	100,00%
Horche	2.535	97,06%	97,06%	99,99%
Hornachos	3.595	0,00%	0,00%	100,00%
Hornachuelos	4.497	42,75%	42,75%	99,28%
Hostalets de Pierola, Els	2.973	73,80%	73,80%	99,94%
Hostalric	4.221	48,08%	48,08%	100,00%

Arróniz	1.051	9,53%	9,53%	100,00%
Arroyo de las Fraguas	22	0,00%	0,00%	99,50%
Arroyomolinos	797	0,00%	0,00%	100,00%
Arroyomolinos de la Vera	443	100,00%	100,00%	99,49%
Arroyomolinos de León	953	100,00%	100,00%	100,00%
Arruazu	110	0,00%	0,00%	100,00%
Arrúbal	506	100,00%	100,00%	100,00%
Arsèguel	84	0,00%	0,00%	100,00%
Artajona	1.675	80,64%	80,64%	100,00%
Artana	1.947	100,00%	100,00%	100,00%
Artazu	116	0,00%	0,00%	100,00%
Artea	736	0,00%	53,14%	99,86%
Artenara	1.069	71,10%	71,10%	97,02%
Artesa de Lleida	1.504	0,00%	0,00%	100,00%
Artieda	80	0,00%	0,00%	100,00%
Artzentales	721	47,42%	47,42%	99,88%
Artziniega	1.821	86,62%	86,62%	100,00%
Ascó	1.660	0,00%	0,00%	100,00%
Asin	110	0,00%	0,00%	51,22%
Aspa	224	0,00%	0,00%	99,33%
Aspariegos	247	0,00%	0,00%	100,00%
Asparrena	1.614	89,12%	89,12%	100,00%
Asteasu	1.551	87,85%	87,85%	99,45%
Astudillo	995	0,00%	0,00%	98,12%
Asturianos	271	0,00%	0,00%	100,00%
Atajate	168	42,03%	42,03%	100,00%
Atalaya	301	0,00%	0,00%	100,00%
Atalaya del Cañavate	112	100,00%	100,00%	100,00%
Atalaya, La	114	0,00%	0,00%	97,90%
Atanzón	100	0,00%	0,00%	100,00%
Atapuerca	162	0,00%	0,00%	99,66%
Ataquines	583	0,00%	0,00%	100,00%
Ataun	1.693	69,52%	69,52%	96,91%
Atazar, El	89	0,00%	0,00%	92,05%
Atea	151	0,00%	0,00%	100,00%
Ateca	1.762	100,00%	100,00%	100,00%
Atez/Atetz	215	0,00%	0,00%	99,89%
Atienza	405	0,35%	0,35%	99,02%
Atxondo	1.366	0,17%	71,20%	100,00%
Atzeneta d'Albaida	1.165	100,00%	100,00%	100,00%
Atzeneta del Maestrat	1.276	0,00%	0,00%	99,75%
Atzúbia, l'	632	61,80%	61,80%	99,86%
Aulesti	654	60,85%	60,85%	99,92%
Auñón	142	0,00%	0,00%	100,00%
Auritz/Burguete	231	9,84%	9,84%	100,00%
Ausejo	780	100,00%	100,00%	100,00%
Ausejo de la Sierra	89	0,00%	0,00%	100,00%
Ausines, Los	133	0,00%	0,00%	100,00%
Autilla del Pino	222	0,00%	0,00%	99,93%
Autillo de Campos	128	0,00%	0,00%	100,00%
Aveinte	86	0,00%	0,00%	100,00%
Avellaneda	24	0,00%	0,00%	100,00%
Avellanes i Santa Linya, Les	449	0,00%	0,00%	91,71%
Avellanosa de Muñó	108	0,00%	0,00%	79,48%
Avinyonet de Puigventós	1.610	99,44%	99,44%	100,00%
Avinyonet del Penedes	1.701	70,87%	70,87%	99,94%
Avión	1.795	26,37%	26,37%	99,87%
Ayerbe	1.009	98,74%	98,74%	99,98%
Ayllón	1.196	59,51%	59,51%	97,73%
Ayna	616	71,10%	71,10%	98,74%
Ayódar	159	100,00%	100,00%	100,00%
Ayoó de Vidriales	308	0,00%	0,00%	99,55%
Ayuela	52	0,00%	0,00%	99,09%
Azaila	90	0,00%	0,00%	99,96%
Azanuy-Alins	168	0,00%	0,00%	99,10%
Azara	171	100,00%	100,00%	100,00%
Azlor	143	100,00%	100,00%	99,90%
Azofra	215	10,52%	10,52%	100,00%
Azuara	540	0,00%	0,00%	100,00%
Azuébar	315	100,00%	100,00%	100,00%
Azuelo	31	0,00%	0,00%	100,00%
Azután	288	0,00%	0,00%	100,00%
Babilafuente	885	0,00%	0,00%	100,00%
Bacares	246	82,83%	82,83%	100,00%
Badarán	482	100,00%	100,00%	100,00%
Bádenas	19	0,00%	0,00%	52,92%
Badules	85	0,00%	0,00%	100,00%
Baélls	104	95,19%	95,19%	99,92%
Báguena	287	100,00%	100,00%	45,80%
Bagüés	17	0,00%	0,00%	20,00%
Bahabón	108	0,00%	0,00%	99,90%
Bahabón de Esgueva	81	0,00%	0,00%	100,00%
Baides	56	0,00%	0,00%	99,54%
Bailo	267	88,78%	88,78%	100,00%
Baix Pallars	335	0,00%	0,00%	84,84%
Bakaiku	362	88,17%	88,17%	100,00%
Balbases, Los	324	0,00%	0,00%	50,69%
Balboa	290	0,00%	0,00%	95,07%
Balconchán	16	0,00%	0,00%	69,57%
Baldellou	76	100,00%	100,00%	99,85%
Baleira	1.241	12,41%	12,41%	98,71%

Son Servera	11.568	82,62%	82,62%	100,00%
Sonseca	11.067	99,86%	99,86%	100,00%
Sopela	13.878	99,80%	99,80%	100,00%
Soria	39.398	99,64%	99,64%	99,96%
Sueca	27.479	59,76%	98,70%	100,00%
Tacoronte	24.134	82,65%	82,65%	100,00%
Tafalla	10.595	100,00%	100,00%	100,00%
Talavera de la Rein	83.417	92,35%	98,57%	100,00%
Tarancón	15.271	100,00%	100,00%	100,00%
Tarazona	10.533	95,64%	95,64%	100,00%
Tarifa	18.162	65,91%	65,91%	99,69%
Tarragona	134.515	93,28%	93,28%	100,00%
Tàrrega	17.098	90,91%	90,91%	100,00%
Tavernes de la Vall	17.201	52,77%	100,00%	100,00%
Tegueste	11.294	95,46%	95,46%	99,88%
Teguise	22.342	65,83%	65,83%	99,72%
Telde	102.647	80,89%	86,04%	100,00%
Teo	18.579	47,14%	56,98%	100,00%
Teror	12.519	59,42%	59,42%	100,00%
Terrassa	220.556	93,26%	93,26%	100,00%
Teruel	35.890	92,49%	92,49%	99,99%
Teulada	11.112	100,00%	100,00%	100,00%
Tias	20.170	71,84%	71,84%	99,91%
Toledo	84.873	84,64%	84,64%	100,00%
Tolosa	19.667	88,43%	97,84%	99,95%
Tomares	25.359	92,55%	92,55%	100,00%
Tomelloso	35.873	100,00%	100,00%	100,00%
Tomiño	13.499	29,32%	29,32%	99,99%
Tordera	17.216	84,28%	84,28%	100,00%
Torello	14.347	100,00%	100,00%	100,00%
Torre-Pacheco	35.676	53,80%	53,80%	100,00%
Torredelcampo	14.247	99,89%	99,89%	100,00%
Torredembarra	16.184	100,00%	100,00%	100,00%
Torredonjimeno	13.696	99,93%	99,93%	100,00%
Torrejón de Ardoz	131.376	92,10%	92,10%	100,00%
Torrelavega	51.494	92,21%	93,02%	100,00%
Torrelodones	23.717	91,49%	91,49%	100,00%
Torremolinos	68.661	100,00%	100,00%	100,00%
Torrent	82.208	85,95%	94,68%	100,00%
Torres de Cotillas, L	21.471	92,61%	92,61%	100,00%
Torrevieja	83.337	91,30%	91,30%	100,00%
Torrijos	13.466	100,00%	100,00%	100,00%
Torroella de Montg	11.645	62,17%	62,17%	100,00%
Torrox	17.234	99,01%	99,01%	100,00%
Tortosa	33.372	90,95%	90,95%	100,00%
Totana	32.008	90,44%	90,44%	99,87%
Tres Cantos	47.722	92,17%	92,17%	100,00%
Tudela	36.258	87,51%	87,51%	100,00%
Tui	16.701	10,76%	19,83%	100,00%
Tuineje	15.241	50,27%	50,27%	100,00%
Úbeda	34.345	97,99%	97,99%	100,00%
Ubrique	16.597	93,02%	93,02%	100,00%
Unión, La	20.225	80,20%	99,47%	100,00%
Utebo	18.691	97,63%	97,63%	100,00%
Utiel	11.531	99,68%	99,68%	100,00%
Utrera	50.728	65,79%	65,79%	100,00%
Valdemorillo	12.518	88,73%	88,73%	100,00%
Valdemoro	75.983	95,64%	95,64%	100,00%
Valdepeñas	30.077	91,23%	91,23%	100,00%
Valdés	11.504	45,57%	45,57%	99,65%
València	794.288	97,00%	99,62%	100,00%
Vall d'Uixó, la	31.660	97,46%	97,46%	100,00%
Valladolid	298.412	99,77%	99,77%	100,00%
Valle de Egüés/Egu	21.128	81,03%	81,03%	100,00%
Valle de Trápaga-Tr	11.985	90,94%	99,43%	100,00%
Vallirana	15.006	93,65%	93,65%	100,00%
Valls	24.359	99,17%	99,17%	100,00%
Valverde del Camin	12.820	79,33%	79,33%	100,00%
Vegas del Genil	11.166	92,16%	92,16%	100,00%
Vejer de la Fronter	12.624	78,68%	78,68%	99,96%
Vélez-Málaga	81.643	75,69%	94,00%	100,00%
Velilla de San Anto	12.236	100,00%	100,00%	100,00%
Vendrell, El	37.606	39,20%	39,20%	100,00%
Vera	16.452	68,87%	68,87%	100,00%
Verin	13.723	16,94%	79,50%	100,00%
Vic	46.214	95,31%	95,31%	100,00%
Vicar	26.028	67,82%	67,82%	100,00%
Vigo	295.364	94,19%	96,91%	100,00%
Vila-real	50.893	89,19%	98,46%	100,00%
Vila-seca	22.187	19,48%	19,48%	100,00%
Viladecans	66.611	91,05%	91,05%	100,00%
Vilafranca del Pene	39.746	97,47%	97,47%	100,00%
Vilagarcia de Arous	37.456	85,17%	87,64%	100,00%
Vilalba	14.072	23,24%	44,64%	99,94%
Vilanova de Arousa	10.302	62,78%	63,63%	100,00%
Vilanova del Cami	12.458	100,00%	100,00%	100,00%
Vilanova i la Geltrú	67.086	98,66%	98,66%	100,00%
Vilassar de Mar	20.837	98,01%	98,01%	100,00%
Villacarrillo	10.726	98,88%	98,88%	99,69%
Villafranca de los Ba	12.835	100,00%	100,00%	100,00%
Villajoyosa/Vila Joi	34.673	88,45%	90,87%	100,00%

Hoyo de Manzanares	8.434	77,14%	77,14%	100,00%
Hoyo de Pinares, El	2.131	60,61%	60,61%	100,00%
Huarte/Uharte	7.101	83,97%	94,96%	100,00%
Huelma	5.776	85,91%	85,91%	100,00%
Huesa	2.489	98,86%	98,86%	99,85%
Huéscar	7.253	90,38%	90,38%	98,95%
Huévar del Aljarafe	3.015	73,31%	73,31%	100,00%
Humilladero	3.286	100,00%	100,00%	100,00%
Ibarra	4.199	98,15%	100,00%	100,00%
Ibros	2.832	93,95%	93,95%	100,00%
Idiazabal	2.312	97,10%	97,10%	99,99%
Igorre	4.284	4,82%	88,58%	100,00%
Illa de Arousa, A	4.926	63,55%	63,55%	100,00%
Illueca	2.924	100,00%	100,00%	100,00%
Iniesta	4.305	90,89%	90,89%	99,99%
Iruña Oka/Iruña de Oca	3.411	77,58%	77,58%	100,00%
Irurtzun	2.233	11,85%	11,85%	100,00%
iscar	6.344	100,00%	100,00%	100,00%
Isla Mayor	5.839	100,00%	100,00%	100,00%
Iurreta	3.662	84,74%	87,80%	100,00%
Iznájar	4.261	22,10%	22,10%	99,97%
Iznalloz	5.134	59,87%	59,87%	100,00%
Jabalquinto	2.039	100,00%	100,00%	100,00%
Jabugo	2.250	73,67%	73,67%	100,00%
Jacarilla	2.022	91,27%	91,27%	100,00%
Jamilena	3.293	95,13%	95,13%	100,00%
Jaraiz de la Vera	6.478	93,54%	93,54%	100,00%
Jarandilla de la Vera	2.828	0,00%	0,00%	100,00%
Jerez de los Caballeros	9.303	89,20%	89,20%	99,99%
Jijona/Xixona	6.865	96,11%	96,11%	100,00%
Jimena de la Frontera	6.951	93,36%	93,36%	100,00%
Jonquera, La	3.290	9,74%	9,74%	100,00%
Jun	3.833	100,00%	100,00%	100,00%
Juneda	3.475	77,01%	77,01%	100,00%
Karrantza Harana/Valle de C	2.778	86,02%	86,02%	99,95%
Láchar	3.471	93,39%	93,39%	100,00%
Lama, A	2.445	7,59%	7,59%	99,83%
Láncara	2.605	27,60%	27,60%	99,90%
Lanjarón	3.507	100,00%	100,00%	100,00%
Lantejuela	3.814	95,29%	95,29%	100,00%
Larrabetzu	2.033	72,34%	72,34%	99,94%
Larraga	2.075	77,73%	77,73%	100,00%
Lastrilla, La	3.891	92,73%	92,73%	100,00%
Laxe	3.016	65,65%	65,65%	99,99%
Lazkao	5.742	91,08%	97,93%	99,95%
Lecrin	2.134	100,00%	100,00%	100,00%
Legazpi	8.371	100,00%	100,00%	100,00%
Leitza	2.913	7,93%	7,93%	99,92%
Lekeitio	7.307	0,00%	100,00%	100,00%
Lemoa	3.486	69,75%	69,75%	100,00%
Lerma	2.529	93,71%	93,71%	99,72%
Lesaka	2.741	7,19%	7,19%	99,95%
Lezama	2.412	99,98%	99,98%	100,00%
Lezo	6.122	98,54%	98,54%	100,00%
Librilla	5.305	80,70%	80,70%	100,00%
Liérganes	2.379	100,00%	100,00%	98,66%
Lillo	2.577	12,34%	12,34%	99,99%
Linyola	2.700	100,00%	100,00%	100,00%
Llagostera	8.453	42,04%	42,04%	100,00%
Llançà	4.836	22,85%	22,85%	100,00%
Llerena	5.804	15,80%	15,80%	100,00%
Lliçà de Vall	6.542	89,87%	89,87%	100,00%
Llinars del Valles	9.938	96,99%	96,99%	100,00%
Llombai	2.685	100,00%	100,00%	100,00%
Llorenç del Penedès	2.393	39,11%	39,11%	100,00%
Llosa de Ranes, la	3.575	100,00%	100,00%	100,00%
Lloseta	5.988	99,26%	99,26%	100,00%
Llubi	2.273	83,29%	83,29%	100,00%
Llutxent	2.345	0,00%	0,00%	100,00%
Lobón	2.746	81,28%	81,28%	100,00%
Lodosa	4.816	3,26%	100,00%	100,00%
Loeches	8.791	91,03%	91,03%	100,00%
Loiu	2.433	77,69%	77,69%	100,00%
Lominchar	2.387	97,03%	97,03%	100,00%
Lopera	3.665	99,95%	99,95%	100,00%
Loriguilla	2.025	99,83%	99,83%	100,00%
Lorqui	7.141	96,18%	96,18%	100,00%
Losar de la Vera	2.699	0,00%	0,00%	100,00%
Lourenzá	2.140	27,31%	27,31%	100,00%
Lousame	3.338	21,28%	21,28%	99,66%
Lucena del Puerto	3.371	0,00%	0,00%	100,00%
Luisiana, La	4.576	100,00%	100,00%	100,00%
Luque	2.994	97,82%	97,82%	99,98%
Macael	5.482	99,87%	99,87%	100,00%
Maçanet de la Selva	7.006	7,99%	7,99%	100,00%
Maceda	2.872	60,78%	60,78%	100,00%
Madrigueras	4.652	100,00%	100,00%	100,00%
Madroñera	2.533	98,85%	98,85%	100,00%
Magán	3.544	80,74%	80,74%	100,00%
Malagón	7.998	93,59%	93,59%	99,90%
Mallén	3.035	78,50%	78,50%	100,00%

Baliarrain	138	76,29%	76,29%	88,67%
Ballestero, El	405	0,00%	0,00%	98,39%
Ballesteros de Calatrava	373	0,00%	0,00%	100,00%
Ballobar	812	93,79%	93,79%	100,00%
Balones	131	100,00%	100,00%	100,00%
Balsa de Ves	158	64,19%	64,19%	99,00%
Baltanás	1.191	95,13%	95,13%	95,51%
Baltar	962	33,80%	33,80%	97,56%
Bañares	241	0,00%	0,00%	100,00%
Banastás	295	0,00%	0,00%	100,00%
Bande	1.528	39,40%	39,40%	100,00%
Bañobárez	305	0,00%	0,00%	100,00%
Bañón	144	0,00%	0,00%	100,00%
Baños de Ebro/Mañueta	291	88,98%	88,98%	100,00%
Baños de Molgas	1.519	0,00%	0,00%	100,00%
Baños de Montemayor	759	100,00%	100,00%	100,00%
Baños de Rio Tobia	1.579	100,00%	100,00%	100,00%
Baños de Rioja	91	0,00%	0,00%	100,00%
Baños de Tajo	19	0,00%	0,00%	99,50%
Baños de Valdearados	324	0,00%	0,00%	100,00%
Bañuelos	14	0,00%	0,00%	99,50%
Bañuelos de Bureba	37	0,00%	0,00%	8,32%
Banyalbufar	515	84,43%	84,43%	100,00%
Baquerin de Campos	30	0,00%	0,00%	100,00%
Barajas de Melo	932	0,00%	0,00%	100,00%
Baraona	135	0,00%	0,00%	85,27%
Barásoain	621	9,11%	9,11%	100,00%
Barbadillo	402	0,00%	0,00%	100,00%
Barbadillo de Herreros	107	0,00%	0,00%	94,80%
Barbadillo del Mercado	142	0,00%	0,00%	100,00%
Barbadillo del Pez	68	0,00%	0,00%	99,50%
Barbalos	73	0,00%	0,00%	100,00%
Barbarin	55	15,31%	15,31%	100,00%
Barbens	878	9,64%	9,64%	100,00%
Barberà de la Conca	473	100,00%	100,00%	100,00%
Bárboles	293	72,92%	72,92%	100,00%
Barbolla	158	0,00%	0,00%	100,00%
Barbués	78	100,00%	100,00%	100,00%
Barbuñales	96	99,86%	99,86%	100,00%
Barca	98	0,00%	0,00%	91,42%
Bárcabo	103	37,20%	37,20%	83,69%
Bárcena de Campos	59	0,00%	0,00%	99,50%
Bárcena de Pie de Concha	678	10,50%	10,50%	100,00%
Barceo	46	0,00%	0,00%	67,79%
Barchin del Hoyo	89	0,00%	0,00%	100,00%
Barcial de la Loma	92	0,00%	0,00%	92,14%
Barcial del Barco	249	0,00%	0,00%	87,12%
Barcience	872	100,00%	100,00%	100,00%
Barcones	22	0,00%	0,00%	32,44%
Bardallur	254	89,87%	89,87%	99,00%
Bareyo	1.950	13,05%	13,05%	100,00%
Bargota	257	0,00%	0,00%	100,00%
Barillas	214	0,00%	0,00%	100,00%
Barjas	190	0,00%	0,00%	97,17%
Barlovento	1.876	51,75%	51,75%	100,00%
Baronia de Rialb, La	237	0,00%	0,00%	82,57%
Barracas	162	100,00%	100,00%	100,00%
Barrachina	112	0,00%	0,00%	82,79%
Barraco, El	1.861	51,09%	51,09%	99,90%
Barrado	401	0,00%	0,00%	99,97%
Barrax	1.833	100,00%	100,00%	100,00%
Barrika	1.529	82,46%	82,46%	100,00%
Barrio de Muñó	33	0,00%	0,00%	100,00%
Barriopedro	15	0,00%	0,00%	99,50%
Barrios de Bureba, Los	198	0,00%	0,00%	100,00%
Barrios de Colina	56	0,00%	0,00%	100,00%
Barrios de Luna, Los	314	0,00%	0,00%	90,45%
Barromán	185	0,00%	0,00%	67,46%
Barruecopardo	450	0,00%	0,00%	100,00%
Barruelo de Santullán	1.186	9,41%	9,41%	99,28%
Barruelo del Valle	52	0,00%	0,00%	100,00%
Barrundia	883	61,90%	61,90%	100,00%
Barx	1.277	0,00%	0,00%	100,00%
Barxeta	1.601	93,77%	93,77%	100,00%
Basaburua	834	0,00%	0,00%	99,85%
Basardilla	153	0,00%	0,00%	100,00%
Bàscara	1.004	0,00%	0,00%	100,00%
Basconcillos del Tozo	293	0,00%	0,00%	87,61%
Báscones de Ojeda	143	0,00%	0,00%	99,50%
Bascuñana	24	0,00%	0,00%	100,00%
Bascuñana de San Pedro	18	0,00%	0,00%	0,00%
Bassella	224	0,00%	0,00%	99,96%
Bastida, La	28	0,00%	0,00%	100,00%
Batea	1.890	100,00%	100,00%	100,00%
Baterno	283	0,00%	0,00%	99,50%
Batres	1.684	75,12%	75,12%	100,00%
Bausen	58	0,00%	0,00%	100,00%
Bayárcal	317	0,00%	0,00%	99,99%
Bayarque	215	0,00%	0,00%	100,00%
Bayubas de Abajo	142	0,00%	0,00%	98,72%
Bayubas de Arriba	57	0,00%	0,00%	99,61%

Villalbilla	13.878	60,67%	60,67%	100,00%
Villamartin	12.150	98,04%	98,04%	99,95%
Villanueva de la Ca	21.445	82,89%	82,89%	100,00%
Villanueva de la Se	25.667	90,76%	90,76%	100,00%
Villanueva del Parc	17.180	98,14%	98,14%	100,00%
Villaquilambre	18.638	96,32%	96,32%	100,00%
Villarrobledo	25.184	99,96%	99,96%	99,99%
Villava/Atarrabia	10.204	100,00%	100,00%	100,00%
Villaviciosa	14.439	5,18%	49,82%	99,94%
Villaviciosa de Odó	27.835	86,82%	86,82%	100,00%
Villena	33.964	82,04%	98,46%	99,97%
Vinaròs	28.682	53,14%	90,63%	100,00%
Viso del Alcor, El	19.266	90,11%	90,11%	100,00%
Vitoria-Gasteiz	251.774	93,10%	93,82%	100,00%
Viveiro	15.466	10,69%	79,79%	100,00%
Xàtiva	29.231	99,08%	99,08%	100,00%
Xirivella	29.623	100,00%	100,00%	100,00%
Yaiza	16.571	57,08%	57,08%	100,00%
Yecla	34.432	98,00%	98,00%	99,32%
Yuncos	11.222	86,54%	86,54%	100,00%
Zafra	16.797	99,23%	99,23%	100,00%
Zamora	61.406	96,86%	99,81%	100,00%
Zaragoza	674.997	99,69%	99,69%	100,00%
Zarautz	23.323	90,99%	99,52%	100,00%
Zizur Mayor/Zizur N	14.894	92,51%	96,59%	100,00%
Zubia, La	19.155	100,00%	100,00%	100,00%
Zumaia	10.098	0,00%	96,13%	100,00%

Malpartida de Cáceres	4.122	89,81%	89,81%	100,00%
Malpartida de Plasencia	4.602	99,19%	99,19%	100,00%
Malpica de Bergantiños	5.391	24,46%	60,81%	100,00%
Manuel	2.428	0,61%	0,61%	100,00%
Manzanares el Real	8.840	83,03%	83,03%	100,00%
Manzanilla	2.135	24,90%	24,90%	100,00%
Marchamalo	7.474	83,95%	83,95%	100,00%
Marcilla	2.858	61,00%	99,20%	100,00%
Maria de Huerva	5.812	99,54%	99,54%	99,98%
Maria de la Salut	2.227	81,35%	81,35%	100,00%
Marina de Cudeyo	5.125	47,23%	47,23%	100,00%
Marinaleda	2.627	95,74%	95,74%	100,00%
Markina-Xemein	5.006	1,93%	73,01%	99,70%
Marmolejo	6.812	98,38%	98,38%	100,00%
Martin de la Jara	2.704	99,98%	100,00%	100,00%
Martorelles	4.801	93,57%	93,57%	100,00%
Maside	2.705	26,78%	26,78%	100,00%
Masies de Voltregà, Les	3.141	78,53%	78,53%	100,00%
Masquefa	9.211	95,65%	95,65%	100,00%
Massalfassar	2.469	100,00%	100,00%	100,00%
Massanassa	9.667	98,35%	98,35%	100,00%
Matadepera	9.326	96,04%	96,04%	100,00%
Matanza de Acentejo, La	9.061	82,76%	82,76%	100,00%
Mazaricos	3.885	22,17%	22,17%	99,76%
Mazcuerras	2.105	32,95%	32,95%	100,00%
Meaño	5.272	44,05%	44,05%	100,00%
Medellin	2.263	0,00%	0,00%	100,00%

Bea	31	0,00%	0,00%	70,37%
Beade	397	0,00%	0,00%	100,00%
Beamud	37	0,00%	0,00%	99,50%
Beariz	971	59,27%	59,27%	100,00%
Beas de Granada	977	100,00%	100,00%	100,00%
Beas de Guadix	329	100,00%	100,00%	100,00%
Becedas	196	0,00%	0,00%	99,44%
Becedillas	84	0,00%	0,00%	95,70%
Beceite	541	0,00%	0,00%	100,00%
Becerril de Campos	727	0,00%	0,00%	100,00%
Becilla de Valderaduey	238	0,00%	0,00%	100,00%
Bédar	971	39,47%	39,47%	100,00%
Bedia	1.067	46,62%	56,31%	100,00%
Beintza-Labaien	220	0,00%	0,00%	100,00%
Beire	286	0,00%	0,00%	100,00%
Beires	110	79,01%	79,01%	100,00%
Beizama	143	100,00%	100,00%	100,00%
Bejis	380	86,00%	86,00%	96,41%
Belascoáin	122	0,00%	0,00%	99,50%
Belauntza	241	100,00%	100,00%	100,00%
Belbimbre	61	0,00%	0,00%	100,00%
Belchite	1.505	0,00%	0,00%	100,00%
Beleña	256	0,00%	0,00%	100,00%
Bèlgida	673	97,67%	97,67%	100,00%
Belianes	525	8,30%	8,30%	100,00%
Belinchón	334	0,00%	0,00%	100,00%
Bellaguarda	287	0,00%	0,00%	76,40%