

## NOTES

# Rural development through remote working in regions rich in rural tourism resources -2-.

The case of Ávila and Segovia rural areas in (post) pandemic Spain.

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## 1. The depopulation problem:

### - The emptied Castilla y León region.

The population of Spain has almost doubled since 1950 when, at the peak of rural population, a little over 28 million inhabited it. Then, close to half the population, 13.5 million, lived in the rural parts of the country (Delgado U., J. M., 2018). By 2020, the inhabitants of the rural part of Spain, 7.5 million, were only 15.9% of the total population (Ministerio de Agricultura, Pesca y Alimentación, 2021). If we take into consideration that in the same year more than 47 million people lived in Spain, the magnitude of the depopulation of the rural parts of the country becomes clear. The rural emigration to the provincial capitals and to the more economically and socially dynamic parts of the country (Madrid, Euskadi, and Cataluña regions, mainly) that started in 1950 was especially acute in the regions of what is known as inner Spain.

Castilla y León is one of the regions of inner Spain where rural depopulation has been more acute. The others are Castilla la Mancha, Extremadura, and Aragón. In all the provinces of Castilla y León the rural population

halved until the second half of the eighties. The population stabilized during the nineties and then, in the first decade of this century, increased slightly in some regions thanks to, specially, foreign born population attracted to the economic possibilities of an expanding Spanish economy. The global crisis of 2008 stopped that recovery in population. The second half of the 2010s saw a slight recovery in population, especially foreign born, in some regions. The COVID19 pandemic stopped that recovery. There is one exception to this regional trend though, the region of the Local Action Group SEGOVIA SUR reached its population peak in 2010 (Trigueros, M.A., 2021).

## **2. Rural development and rural tourism in Castilla y León.**

Spain stopped having a significant percentage of the population engaged in the agrarian part of the rural economy more than half a century ago (Collantes, G., F., 2007-A; Colino, C. et al., 2019). This is also true for Castilla y León. According to the data of the National Statistics Institute, as of 2023, of the nine provinces of Castilla y León, none has more than 15% of its population engaged in agricultural activities. The province of Zamora, with 14.6% in the first quarter of 2023, has the highest percentage. This economic sector, whose activities cannot contribute significantly to revert the rural depopulation crisis that affects advanced economies (Collantes, G., F., 2007-B), and with far lower impact in the GDP of the region than the secondary or, specially, the service sector, has been the main recipient of the funds allocated to try to alleviate the rural depopulation problem (Swinnen, F.M., 2009).

The vitality of the non-agrarian part of the rural economy is one of the key factors to alleviate and, potentially, revert the rural migratory movements. The LEADER programs that started in 1991 have as its main objective the revitalization of the non-agrarian part of the rural economy using a regional bottom-up approach focused on the creation of Local Action Groups (LAGs). In the case of Castilla y León, as happened in the rest of Spain, the LEADER programs helped immensely the newly created rural tourism sector. At least 23% of the funds allocated via LEADER programs

between 1991 and 2020 were used to create and improve the rural tourism sector (Trigueros, M. A., 2021). The number of people that stayed in rural tourism establishments of Castilla y León increased from a total of 29,284 in august of 2000 (no prior data available from the Castilla y León government), to 162,147 in august of 2023 (Conserjería de Cultura y Turismo, 2000; 2023). This sector has matured enough not to depend on public funding to keep its upward trend.

### **3. The case of Ávila and Segovia rural areas in (post) pandemic Spain (2023).**

Ávila and Segovia are the two provinces of Castilla y León closest to Madrid, the main market for rural tourism. Madrid, the great attractor, is also the preferred destination for the university educated population. Castilla y León is the region of Spain that most suffer from brain drain (emigration of young university educated population), and inside Castilla y León, Ávila is the province where this problem is more acute, with Segovia being the second (González-Leonardo, M., & López Gay, A., 2019). The proximity to Madrid is a mixed blessing. On the one hand, during the peak seasons of rural tourism the population of many villages more than double, sometimes even increasing more than tenfold. The consumer habits of this floating population allow several small businesses to be profitable enough to keep serving the local population once the tourists go back home. On the other hand, this floating population, that resides mainly in Madrid and has higher purchasing power than the local population, drives upward the prices of the real estate making purchasing a home more difficult for the younger generation and, as a secondary result, making them more amenable to emigration (Trigueros, M. A., 2021).

Because of the excellent infrastructure that connects both regions with the center, Madrid is, sometimes, nearer in commuting time than intra province commuting. This is one of the reasons why, even though the non-agrarian economic sector, especially the rural tourism and its related

economic activities, has grown without interruption since the nineties, the rural population loss continues. It is difficult to recruit new personnel at all levels and, the higher the qualifications needed for a job, the higher the possibility that the staff recruited will commute from Madrid or from one of the provincial capitals (Grupo Mundo Rural, 2020).

Digitalization and remote work as a possible tool to alleviate the loss of population and attract new dwellers was debated and proposed nationally by the Rural National Network (Red Rural Nacional) even before the pandemic (Rico, J., 2020). Although the pandemic accelerated the implementation of digitalization and remote work projects in the rural areas, the infrastructure needed has lagged behind. In 2018, the minimum connection speed needed for businesses activities, 100 Mbps, reached 90% of the cities, but only 4% of the municipalities under 500 people and 5.8% of the municipalities between 501 and 1000. Those numbers increased to 37.3% and 57.8% in 2022, but the problem of peak demand connection speed remained. During peak demand periods, of the municipalities that already have access to 100 Mbps speed connection, the speed connection can only be maintained in 48.6% of the municipalities under 500 inhabitants, and in 65.1% of those between 501 and 1000 people (Esparcia Pérez, J., 2023).

### 3.1.1 Local Action Groups (LAGs) targeted.

The Local Action Groups targeted are ADERAVI (*Asociación para el desarrollo integral de Ávila*), ADRIMO (*Asociación para el desarrollo integral de la montaña*), and CEDER TIETAR (*Centro de desarrollo rural Valle del Tiétar*), in Ávila<sup>(1)</sup>, and CODINSE (*Asociación coordinadora para el desarrollo integral del nordeste de Segovia*), AIDESCOM (*Asociación intermunicipal para el desarrollo local en la comarca de Santa María la Real de Nieva*), SEGOVIA SUR (*Asociación para el desarrollo rural Segovia Sur*), and HONORSE (*Asociación Honorse – Tierra de pinares*), in Segovia<sup>(2)</sup>. Unavoidable logistic problems (cancellation of a flight because of fuel tank leakage) prevented field-work in ASIDER<sup>(3)</sup> (*Asociación intermunicipal para el desarrollo rural de la*

*comarca Barco-Piedrahíta-Gredos*) region; fieldwork in all the other LAGs proceeded as planned.

### **3.1.2 Research methodology**

As previously (López Jara, S., 2023), the methodology adopted here is similar to that used in other studies of rural areas of Spain (Arévalo, A.B., 2012; Esparcia, J., Escribano, J. & Buciega, A., 2015; Esparcia, J., Escribano, J. & Serrano, J., 2015). First, the so-called “*grey literature*” published by the LAGs was reviewed and used to improve the quality of the planned fieldwork. Second, fieldwork and interviews on-site were conducted in November of 2022 to allow a meaningful qualitative analysis. The questions relevant to this research are the same. First, whether there has been a change, be it positive or negative, in the remote work situation of the targeted LAGs during and after the pandemic; second, whether the changes in the remote work situation had any influence on the allocation of funds by said LAGs, be it positive or negative.

## **3.2 Local Action Group 1. ADERAVI (*Asociación para el desarrollo rural de Ávila*). Characteristics and main problems.**

Of the 87 municipalities<sup>(4)</sup> that are part of this mountainous LAG, only seven<sup>(5)</sup> have increased its population since the 1996 census. The population of this region, over 38000 inhabitants in 1996, has decreased to 33000 in 2021. The distance to the provincial capital, Ávila, varies from less than 10 km (Mingorria) to close to 90 km (Navarrillos del Álamo). The usage of public transportation for commuting is extremely difficult (one or two buses a day), even impossible from many municipalities. Access to many public services also has to be done by private means of transportation.

The population density, already as low as 12.3 people per square kilometer in 1996, is 10.5 people per square kilometer in 2021. Except two municipalities (El Tiemblo and Las Navas del Marqués), this region suffers from an increasing older population, masculinization<sup>(6)</sup>, emigration of young

people (specially women), lack of working opportunities, and is lagging behind in commercial usage of information and communication technologies (ICT), even in the service sector.

This mountainous region, strategically located close to the provincial capital, Ávila, and near enough to Madrid, is quite popular as a rural tourism destination because of its landscape and protected areas like the Iruelas Valley Natural Reserve, which has one of the highest concentrations of cinereous vulture in Europe. Although the population during peak vacation periods, especially in summer, more than double, this region is struggling to find a specific rural tourism niche. The sudden increase in floating population during peak periods causes problems mainly for the waste disposal system and the telecommunications networks.

### **3.2.1. Remote work in ADERAVI region.**

The strategic plan of ADERAVI for the 2014-2020 LEADER program included as one of the main initiatives the improvement of the commercial usage of ICT on the region. Despite this fact, no project related to remote work received funding. As of November of 2023, the village of Navatalgordo was planning to open a remote work space run by the municipality.

### **3.3 Local Action Group 2. ADRIMO (*Asociación para el desarrollo rural integral de la montaña*). Characteristics and main problems.**

Of the 72 municipalities<sup>(7)</sup> that are part of this LAG, only one<sup>(8)</sup> has increased its population since 1996. The population of this region, 28841 inhabitants in 1996, has decreased to 22212 in 2021. The distance to the provincial capital, Ávila, varies from 21 km (Monsalúpe) to close to 83 km (Blasconuño de Matababras). The usage of public transportation for commuting is not as difficult as in the ADERAVI region but is still very cumbersome because of the extremely low frequencies of the buses. Arévalo is the only town in the region with a functioning train station. This train station is also a regional cargo hub.

The population density, 17.4 people per square kilometer in 1996, is only 13.4 people per square kilometer in 2021. With the exception of Arévalo, virtually a city of more than ten thousand people if the population living there but registered in other municipalities is considered, this region suffers from population loss, ageing, masculinization<sup>(9)</sup>, emigration of young people, and is lagging behind in commercial usage of ICT. As in so many popular rural tourism destinations, housing is a problem for the local population. On the one hand, the floating population seeking to buy a second house in the region put an upward pressure on the price of houses, on the other hand, many owners of old, crumbling, abandoned traditional houses, do not feel the pressure to sell them at a price according to the purchasing power of the local population. As a result, the landscape is one of new houses at the outskirts of the municipalities, inhabited only during vacations and weekends, and of an old center with quite a few abandoned, crumbling old traditional houses. The local population is “sandwiched” in the middle.

This region is, firstly, a gastronomic tourism and, secondly, a cultural tourism destination. The main market is Madrid, and the peak periods are weekends and holidays. The strategic plan of ADRIMO for the 2014-2020 LEADER program stated that most of the potential of the region as a cultural tourism destination has not been tapped yet, and that a coordinated action is needed to augment the number of rural tourism accommodations.

### **3.3.1. Remote work in ADRIMO region.**

Before the pandemic, one project related to ICT (project number 05/01/020079) received funding. During the lockdowns, second residences were used to work remotely by floating population, mainly from Madrid. Once the pandemic receded and the lockdowns were cancelled, the overwhelming majority of that floating population went back to Madrid. Nevertheless, some remote work for enterprises from outside the region (mainly from Madrid) is still being done in the region. The internet connection speed has improved since the end of the pandemic to the point that is

not a problem anymore.

### **3.4 Local Action Group 3. CEDER TIETAR (*Centro de desarrollo rural Valle del Tiétar*). Characteristics and main problems.**

Of the 29 municipalities<sup>(10)</sup> that are part of this LAG, only three<sup>(11)</sup> have increased its population since 1996. The population of this mountainous region, 33171 inhabitants in 1996, has decreased slightly to 31595 in 2021. The distance to the provincial capital, Ávila, varies from 67 km (Sotillo de la Adrada) to close to 102 km (Candeleda). The *sierra de Gredos* mountain range, located between this region and the provincial capital, Ávila, makes commuting difficult. The usage of public transportation, when existing, is extremely cumbersome and cannot be rely upon to do intra-regional commuting. Private means of transportation are essential.

The population density has remained somewhat stable. The 27.6 per square km in 1996 is almost the same as the 26.3 per square km in 2021. This region suffers mainly from lack of working opportunities and is lagging behind in commercial usage of ICT. Most of the businesses are small in scale and family own, with a limited capacity for employing anyone from outside the family. Housing, as in the previous LAGs, is a problem for the local population. This region shares a border with the south of Madrid, whose population, with a higher purchasing power than the locals, is the main buyer of new housing. This region, with several nature reserves, swimmable rivers and hiking courses, is a popular nature tourism destination during vacation periods. During weekends and holidays this region is a gastronomic tourist destination. Nevertheless, the latest strategic plan states that a unified regional strategy to coordinate all the natural, gastronomic, and cultural resources is needed. As of November of 2023, internet connection is slow and cannot be relied upon for business, particularly during peak rural tourism season when the increase of floating population stresses the network to the point that even the banks and ATMs stop working during long periods. The sudden increase in floating population during peak periods also causes prob-



lems for the waste disposal system.

### **3.4.1 Remote work in CEDER-TIETAR region.**

During the pandemic, second houses were used by floating population (from Madrid, mainly) to work remotely. Once the lockdowns ended, most of the remote working floating population went back to their primary homes, but some remained, teleworking several days a week for enterprises located in Madrid. No project related to ICT received funding before or after the pandemic.

### **3.5 Local Action Group 4. CODINSE (*Asociación coordinadora para el desarrollo integral del nordeste de Segovia*). Characteristics and main problems.**

Of all the municipalities<sup>(12)</sup> that are part of this LAG, only four<sup>(13)</sup> have increased its population since 1996. The population of this region, 11870 in 1996, is 10043 in 2021. The distance to the provincial capital, Segovia, varies from 48 km (Prádena) to 107 km (Montejo de la Vega de la Serrezuela). Commuting by public transportation is cumbersome because of the low frequency of the buses. Although the road network is very good, with a highway (A1) that traverses this region from south to north, commuting and access to services are time consuming activities due to the distances involved (*“it’s at least 100 km to do anything”* is a common complaint in the region).

The population density, extremely low already in 1996 (6.4 people per square Km), has reached a low point of 5.5 people per square kilometer in 2021. This region suffers mainly from masculinization<sup>(14)</sup>, emigration of young people, a working age population with a low level of qualifications, negativity, lack of motivation to change, closeness of the agrarian land market (land won’t be sold to non-family members, even when not in use), and lack of affordable housing (same reasons as in other popular rural tourism destinations). This region, that shares a border with the north of Madrid, is a popular nature tourism destination because of its varied landscape (*sierra Central*

mountain range in the south, plains in the north, river gorges in the middle), its nature reserves (two National Parks: *Hoces del Duratón* and *Hoces del Riaza*) and hiking courses. The internet connection has improved to the point that it is no longer a problem.

### 3.5.1 Remote work in CODINSE region.

Before the pandemic there were non-productive (non-profit) projects related to ICT that received funding. During the pandemic, several families that have a second house in the region worked remotely from there. Once the lockdowns ended, some of those families chose to stay, and even had their new kids born in the region when a hybrid system of remote work (two to three days a week) was introduced.

Several LAGs of Castilla y León saw the pandemic as a golden opportunity and reacted quickly (Trigueros, M. A., 2021). During the pandemic, a non-productive (non-profit) cooperative project (7 LAGs of Castilla y León working together) focused on rural remote work (COWOCYL, *Red de espacios de coworking rurales de Castilla y León*) started. In the CODINSE region, the first coworking space of this project opened in 2019 in Boceguillas (with a kindergarten next to it), followed by one in Campo de San Pedro (2020), one in Fresno de Cantespino (2021), and one in Riaza. More than 90% of the users of this coworking spaces are highly qualified women.

## 3.6 Local Action Group 5. AIDESCOM (*Asociación intermunicipal para el desarrollo local en la comarca de Santa María la Real de Nieva*). Characteristics and main problems.

Of the 45 municipalities<sup>(15)</sup> that are part of this LAG, all but nine<sup>(16)</sup> have lost population since 1996. The distance to Segovia, the provincial capital, varies from 12 km (Valverde del Majano) to 64 km (Donhierro). The usage of public transportation for commuting is somewhat cumbersome because of the low frequencies of the buses. If done by private means of transportation, commuting and access to services don't require an excessive amount of time.

The population density, 11.6 per square kilometer in 2021, has not changed much since 1996, when it was 12.1 per square kilometer. This region suffers mainly from masculinization<sup>(17)</sup>. The rural tourism in this region, popular for its pine forests, clear night skies, and architectural heritage, has been one of the economic sectors that has grown the most since the start of the LEADER programs.

### **3.6.1 Remote work in AIDESCO region.**

As in other LAGs, during the lockdowns periods some second residence owners worked remotely from their houses in the region, but once the situation went back to normal almost all of them went back to their primary homes. Nevertheless, this LAG has been promoting and giving courses about how to improve the local economy using ICT since, at least, the 2000-2006 LEADER program. The non-productive cooperative project *Conect@dos* (6 LAGs of Castilla y León working together) started, with AIDESCO as the main coordinator of the project, before the lockdowns, but the new normality of the pandemic boosted its significance and importance in the region. The main objective of this project, the concept of *smart village*, is not to improve the remote work situation on the region (almost non-existent, as of November of 2023) but to improve the productivity and accessibility (for the possible customers) of the already established enterprises. The internet connection has improved to the point that is no longer a problem.

### **3.7 Local Action Group 6. SEGOVIA SUR (*Asociación para el desarrollo rural Segovia sur*). Characteristics and main problems.**

This LAG is one of the few that have increased its population since the 1996 census (24273 in 1996, 34983 in 2021). Nevertheless, of the 50 municipalities<sup>(18)</sup> that are part of this LAG, only 22 have increased its population<sup>(19)</sup>. The distance to the provincial capital, Segovia, varies from 5 kilometers (San Cristobal de Segovia) to 58 kilometers (Villanueva de Sepúlveda). As in the AIDESCO region, commuting is slightly difficult if done by public transpor-

tation, but easy and not excessively time consuming if done by car.

The population density has risen from 15.2 per square kilometer in 1996 to 21.9 per square kilometer in 2021. This region suffers mainly from masculinization<sup>(20)</sup>, lack of affordable housing (same reasons as in other popular rural tourism destinations), and closeness of the agrarian land market (it is very difficult to get access to agricultural land if one is not a member of a family that already owns land in the region). The rural tourism sector in this region, famous for its nature, hiking courses, cultural and gastronomic heritage, is one of the most successful stories of all the regions close to Madrid. In 1999 there were less than 100 beds for rural tourism inside the region. In 2023 there are several thousands.

### **3.7.1 Remote work in SEGOVIA SUR.**

This LAG has been promoting the usage of ICT in the region since, at least, 1999. During the pandemic, virtually all the second residences in the region were used by their owners, mainly from Madrid, to work remotely from there. During the lockdown periods the demand for places to work remotely from the region expanded to the point that even rural tourism establishments were offered, and used, as remote working spaces. Once the lockdowns ended and a hybrid system of remote work started, almost all of the second residence owners went back to their primary homes (in Madrid, mainly).

This LAG reacted quickly to the sudden demand of remote working spaces and, in 2023, with the collaboration of several municipalities of the region (Arcones, Navafria, Espirido, El Espinar, and Real Sitio de San Idelfonso), funded the non-productive project *Red de Espacios de Coworking Rurales en la sierra de Guadarrama*, with coworking spaces in Valsain, Arcones, El Espinar, Navafria, and Tizneros.

### **3.8 Local Action Group 7. HONORSE (*Asociación Honorse - Tierra de Pinares*). Characteristics and main problems.**

Of the fifty<sup>(21)</sup> municipalities that are part of this LAG, only four<sup>(22)</sup> have increased its population since 1996. The distance to the provincial capital, Segovia, varies from 27 kilometers (Carbonero el Mayor) to 86 kilometers (Cuevas de Provanco). As in the AIDESCOM region, commuting is slightly difficult if done by public transportation, but easy and not excessively time consuming if done by car.

The population density, 19 per square kilometer in 1996, is 16.8 per square kilometer in 2021. This region suffers mainly from masculinization<sup>(23)</sup>, negativity (*"leave this place, there is nothing to do here"* is a common advice from of the older generation to the new one), and lack of affordable housing. As a rural tourism destination, this region is famous for its forests of pine trees.

### **3.8 Remote work in HONORSE region.**

The impact of the pandemic on the remote work situation in the region was negligible. Nevertheless, one coworking space, run by the municipality of Cuéllar and still active, opened during the pandemic.

## **4. Closing remarks.**

In this research notes, first, I have succinctly presented the rural depopulation problem in the Castilla y León region and the policies taken to try to alleviate and revert it. Then I have presented the main problems facing the rural parts of the two provinces targeted, Ávila and Segovia. Thirdly, I have presented the main problems and characteristics of the targeted LAGs and the remote work situation before and after the pandemic. Here I will present the closing remarks.

#### 4.1 Rural development through remote working in regions rich in rural tourism resources -2- The case of Ávila and Segovia rural regions-

The rural depopulation that started in 1950 depleted the rural parts of Castilla y León. Even then, and up until the 2010s, the provincial capitals and provincial urban cities were a popular secondary destination for the migrant population. The second half of the 2010s, just before the pandemic, saw a change in the direction of the never-ending rural depopulation. The provincial capitals and provincial urban cities stopped being attractive to the emigrees and Madrid, the digital, professional, scientific, and financial sector center of the country, emerged as the most popular destination (González-Leonardo, M. et al., 2019). Ávila and Segovia are the two provinces of Castilla y León, actually of the whole country, that most suffer from brain drain. Nevertheless, as regard to remote work, not all the LAGs of these two regions fared equally during and after the pandemic. Three patterns emerged: barely any changes, some changes, and dramatic changes.

As regard to the remote work situation, the region of *CEDER TIETAR* (*Centro de desarrollo rural Valle del Tiétar*) barely registered any change at all. The internet connection problems during peak demand periods remained and, before, during, and after the lockdown periods, the remote work situation, almost non-existent and without any coworking space related project, remained the same.

The regions of ADERAVI (*Asociación para el desarrollo rural de Ávila*), ADRIMO (*Asociación para el desarrollo rural de la montaña*), and HONORSE (*Asociación Honorse-Tierra de Pinares*) registered a sudden increase of remote work during the lockdown periods and improved the remote work and the coworking spaces situation (one in ADRIMO, one in HONORSE) after them.

The regions of AIDESCOM (*Asociación inermunicipal para el desarrollo*

*local en la comarca de Santa María la Real de Nieva*), CODINSE (*Asociación coordinadora para el desarrollo integral del nordeste de Segovia*), and SEGOVIA SUR (*Asociación para el desarrollo rural Segovia sur*) not only registered a dramatic and sudden increase in the remote work situation during the lockdowns periods, but also saw the new situation created as a golden opportunity and devoted funds and efforts to improve and adapt the ICT usage in the region to the new normality (*Conect@dos* project), and to improve the remote working environment to face the increasing local demand for it (COWOCYL project and *Red de Espacios de Coworking Rurales en la sierra de Guadarrama* project).

## 4.2 Next step

The research notes presented here are part of a multiyear research endeavor that started in 2022 (López Jara, S., 2023) made possible thanks to the support granted by the Japan Society for the Promotion of Science (JSPS KAKENHI 22K12611). In the next step the LAGs of the three provinces closest to Madrid from the east (Guadalajara), southeast (Cuenca) and south (Toledo) will be targeted.

## Notes

(1) ADERAVI



## ADRIMO



## CEDER TIETAR



## (2) CODINSE





## AIDESCOM



## SEGOVIA SUR



## HONORSE



## (3) ASIDER



(4) Arevalillo, Berrocalejo de Aragona, Blascomillán, Brabos, Bularros, Burgohondo, El Barranco, Cabezas del Villar, Cardenosa, Casasola, Cebreros, Chamartín, Chillán, La colilla, Diego del Carpio, El Fresno, Gallegos de Altamiro, Grandes y San Martín, Gemuño, Herradón de Pinares, Herreros de Suso, La Hija de Dios, El Hoyo de Pinares, Hoyocaseo, Hurtumpascual, Mancera de Arriba, Manjabálago, Marlin, Martiherrero, Martínez, Mediana de Voltoya, Mingorria, Mironcillo, Mirueña de los Infanzones, Muñana, Muñico, Muñogrande, Narrillos del Rebollar, Narrillos del Álamo, Muñogalindo, Muñopepe, Narros del Puerto, Navalacruz, Navalmoral de la Sierra, Navalosa, Navalperal de Pinares, Navaluenga, Navaquesera, Navarredondilla, Navarrevisca, Las Navas del Marqués, Navatalgordo, Niharra, Ojos-Albos, Padielrnos, El Parral, Pascualcobo, Peguerinos, Riofrío, Salobral, San Bartolomé de Pinares, Santa Cruz de Pinares, San Esteban de los Patos, San García de Ingelmos, San Juan del Olmo, Santa María del Cubillo, San Miguel de Serrezuela, Sanchorreja, San Juan de la Nava, San Juan del Molinillo, La Serrada, Serranillos, Sigeres, Solana de Rioalmar, Solosancho, Sotalbo, El Tiemblo, Tolbaños, Tornadizos de Ávila, La Torre, Valdecasa, Villaflor, Villanueva de Ávila, Vita, Zapardiel de la Cañada.

(5) Martiherrero (208 in 1996, 336 in 2021), Mediana de Voltoya (111 in 1996, 119 in 2021), Las Navas del Marqués (4346 in 1996, 5231 in 2021), Navaluenga (2034 in 1996, 2135 in 2021), Padiernos (260 in 1996, 280 in 2021), El Tiemblo (3797 in 1996, 4414 in 2021) and Tornadizos de Ávila (361 in 1996, 429 in 2021). Data taken from the periodical surveys implemented by INE (National Statistics Institute).

(6) In 2021, more than half the population, 52.6%, was male. The national average of male population for the same period was below fifty per cent (49%). The average for Castilla y León region for the same period was also below fifty per cent (49.2%). Data taken from the periodical surveys implemented by INE (National Statistics Institute).

(7) Adanero, Albornos, Aldeaseca, Arévalo, Aveinte, Barromán, Bercial de Zapardiel, Berlanas (Las), Bernuy-Zapardiel, Blasconuño de Matababras, Blascosancho, Bohodón (El), Cabezas de

Alambre, Cabezas del Pozo, Cabizuela, Canales, Cantiveros, Castellanos de Zapardiel, Cisla, Colado de Contreras, Constanza, Crespos, Donjimeno, Donvidas, Espinosa de los Caballeros, Flores de Ávila, Fontiveros, Fuente el Saúz, Fuentes de Año, Gimialcón, Gotarrendura, Gutierrez-Muñoz, Hernansancho, Horcajo de las Torres, Langa, Madrigal de las Altas Torres, Maello, Mamblas, Monsalupe, Moraleja de Matacabras, Muñomer del Peco, Muñosancho, Narros de Saldueña, Narros del Castillo, Nava de Arévalo, Orbita, Oso (El), Pajares de Adaja, Palacios de Goda, Papatrigo, Pedro-Rodríguez, Peñalba de Ávila, Pozanco, Rasueros, Riocabado, Rivilla de Barajas, Salvadiós, San Esteban de Zapardiel, San Juan de la Encinilla, San pascual, San Pedro del Arrollo, San Vicente de Arévalo, Sanchidrián, Santo Domingo de las Posadas, Santo Tomé de Zabarcos, Sinlabajos, Tiñosillos, Vega de Santa María, Velayos, Villanueva de Gómez, Villanueva del Aceral, Viñegra de Moraña.

- (8) Arévalo (7359 inhabitants in 1996, 7881 in 2021). Data taken from the periodical surveys implemented by INE (National Statistics Institute). According to the interviews done during fieldwork, this population figure is not reliable because many people that live in Arévalo are registered, for sentimental reasons and/or tax reasons, as living in small villages close to Arévalo; the population is, *de facto*, above ten thousand people, the line that divides urban cities from rural municipalities. Certainly, the secondary sector is strong in Arévalo (Mars pet care, Harinera Villafranquina and Plastic Omnium being the big three companies in the city) and the city functions as a regional center for work and social activities.
- (9) In 2021, more than half the population, 51.4%, was male. The national average of male population for the same period was below fifty per cent (49%). The average for Castilla y León region for the same period was also below fifty per cent (49.2%). Data taken from the periodical surveys implemented by INE (National Statistics Institute).
- (10) Arenas de San Pedro, Candeleda, Casavieja, Casillas, Cuevas del Valle, El Arenal, El Hornillo, EL Raso, Fresnedilla, Gavilanes, Guisando, Higuera de las Dueñas, Hontanares, La Adrada, La Higuera, Lanzahita, La Parra, Mijares, Mombeltrán, Navahondilla, Pedro Bernardo, Piedralaves, Poyales del Hoyo, Ramacastañas, San Esteban del Valle, Santa Cruz del Valle, Santa María del Tiétar, Sotillo de la Adrada, Villarejo del Valle.
- (11) La Adrada (2003 in 1996, 2757 in 2021), Santa María del Tiétar (378 in 1996, 484 in 2021), and Sotillo de la Andrada (3507 in 1996, 4721 in 2021). Data taken from the periodical surveys implemented by INE (National Statistics Institute).
- (12) Alconada de Maderuelo, Alconadilla, Aldelázaro, Aldealcorbo, Aldealengua de Santa María, Aldeanueva de la Serrezuela, Aldeanueva del Campanario, Aldeanueva del Monte, Aldehorno, Aldehuelas, Aldeonte, Alquité, Ayllón, Barahona de Fresno, Barbolla, Barrio de Arriba, Becerril, Bercimuel, Boceguillas, Burgomillodo, Campo de San Pedro, Carabías, Carrascal de Tío, Casas Altas, Cascajares, Casla, Castillejo de Mesleón, Castiltierra, Castrillo de Sepúlveda, Castro de Fuentidueña, Castrojimeno, Castroserna de Abajo, Castroserna de Arriba, Castroserracín, Cedillo de la Torre, Cerezo de Abajo, Cerezo de Arriba, Cilleruelo de San Mamés, Cincovillas,

Ciruelos, Consuegra de Murera, Corral de Ayllón, Covachuelas, Duratón, Duruelo, El Muyo, El Negrodo, El Olmillo, El Olmo, Encinas, Estebanvela, Francos, Fresno de Cantespino, Fresno de la Fuente, Gomeznarro, Grado del Pico, Grajera, Hinojosas del Cerro, Honrubia de la Cuesta, La Fresneda de Sepúlveda, La Nava, La Pinilla, La Serna del Duratón, Languilla, Las Rades del Puerto, Los Cortos, Maderuelo, Madriguera, Mansilla, Martín Muñoz de Ayllón, Mazagatos, Montejo de la Vega de la Serrezuela, Moral de Hornuez, Navares de Ayuso, Navares de En medio, Navares de las Cuevas, Pajareros, Pajares de Fresno, Perorrubio, Pradales, Prádena, Prado Pinilla, Rebollar, Riaguas de San Bartolomé, Riahelas, Riaza, Rosuero, Saldaña de Ayllón, San Pedro de Gaillos, Santa María de Riaza, Santa María del Cerro, Santibáñez de Ayllón, Sebúcor, Sepúlveda, Sequera de Fresno, Serracín, Siguero, Siguero, Sotillo, Sotos de Sepúlveda, Tanarro, Tejadilla, Torrecilla, Turrubuelo, Uruñes, Valdezas, Valdevacas de Montejo, Valdevarnés, Valle del Tabladillo, Valvieja, Velloso, Ventosilla, Villacorta, Villafranca, Villavilla de Montejo, Villar de Sobrepeña, Villarejo, Villaseca, Villaverde de Montejo.

- (13) Duruelo (155 in 1996, 190 in 2021), Grajera (96 in 1996, 245 in 2021), Riaza (1673 in 1996, 2135 in 2021), and Ribota (41 in 1996, 45 in 2021). Data taken from the periodical surveys implemented by INE (National Statistics Institute).
- (14) Masculinization is very extreme even when compared with other regions that suffer from the same problem. In 2021 54.2% of the population was male. For the same period, the national average was 49%, and the average for Castilla y León region was 49.2%. Data taken from the periodical surveys implemented by INE (National Statistics Institute).
- (15) Abades, Aldea Real, Aldeanueva del Codonal, Aldehuela del Codonal, Anaya, Añe, Armuña, Bercial, Bernardos, Coca, Codorniz, Domingo García, Donhierro, Encinillas, Escalona del Prado, Escarabajosa de Cabezas, Fuente de Santa Cruz, Garcillán, Hontanares de Eresma, Juarros de Riomoros, Juarros de Voltoya, Labajos, Lastras del Pozo, Los Huertos, Marazoleja, Marazuela, Martín Miguel, Martín Muñoz de la Dehesa, Martín Muñoz de las Posadas, Marugán, Melque de Cercos, Migueláñez, Mozoncillo, Montejo de Arévalo, Monterrubio, Muñozpedro, Nava de la Asunción, Navas de Oro, Nieva, Ortigosa de Pestaño, Rapariegos, Roda de Eresma, San Cristóbal de la Vega, Santa María la Real de Nieva.
- (16) Encinillas (82 in 1996, 319 in 2021), Hontanares de Eresma (158 in 1996, 1502 in 2021), Los Huertos (169 in 1996, 171 in 2021), Martín Miguel (210 in 1996, 230 in 2021), Martín Muñoz de la Dehesa (192 in 1996, 244 in 2021), Marugán (337 in 1996, 714 in 2021), Nava de la Asunción (2692 in 1996, 2748 in 2021), Roda de Eresma (106 in 1996, 201 in 2021), and Valverde del Majano (485 in 1996, 1112 in 2021). Data taken from the periodical surveys implemented by INE (National Statistics Institute).
- (17) In 2021 52.6% of the population was male. For the same period, the national average was 49%, and the average for Castilla y León region was 49.2%. Data taken from the periodical surveys implemented by INE (National Statistics Institute).

- (18) Adrada de Pirón, Aldealengua de Pedraza, Arahuetes, Arcones, Arevalillo de Cega, Basardilla, Benuy de Porreros, Brieua, Caballar, Caballas de Polendos, Cantimpalos, Collado Hermoso, Cubillo, Escobar de Polendos, El Espinar, Espirido, Gallegos, Ituero y Lama, La Losa, Matabuena, La Matilla, Muñoveros, Navafría, Navas de Riofrio, Navas de San Antonio, Orejana, Ortigosa del Monte, Palazuelos de Eresma, Pedraza, Pelayos del Arroyo, Puebla de Pedraza, Rebollo, San Cristóbal de Segovia, San Ildefonso o la Granja, Santiuste de Pedraza, Santo Domingo de Pirón, Sotosalbos, Torre Val de San Pedro, Torrecaballeros, Torreiglesias, Trescasas, Valdeprados, Valdevacas y Guijar, Valleruela de Pedraza, Valleruela de Sepúlveda, Valseca, Vegas de Matute, Villacastín, Zarzuela del Monte.
- (19) Basardilla (91 in 1996, 168 in 2021), Bernuy de Porreros (336 in 1996, 788 in 2021), Brieua (72 in 1996, 94 in 2021), Cabañas de Polendos (119 in 1996, 184 in 2021), Cantimpalos (1306 in 1996, 1346 in 2021), Cubillo (66 in 1996, 76 in 2021), Espirido (220 in 1996, 1452 in 2021), El Espinar (5854 in 1996, 9746 in 2021), La Granja de San Ildefonso (5110 in 1996, 5237 in 2021), Ituero y Lama (74 in 1996, 397 in 2021), La Losa (362 in 1996, 521 in 2021), Navas de Riofrio (262 in 1996, 367 in 2021), Navas de San Antonio (297 in 1996, 366 in 2021), Ortigosa del Monte (294 in 1996, 580 in 2021), Otero de Herreros (812 in 1996, 957 in 2021), Palazuelos de Eresma (2466 in 1996, 5597 in 2021), Santo Domingo de Pirón (56 in 1996, 59 in 2021), Sotosalbos (114 in 1996, 137 in 2021), Torrecaballeros (443 in 1996, 1389 in 2021), Trescasas (234 in 1996, 521 in 2021), Valdeprados (56 in 1996, 70 in 2021), and Vegas de Matute (249 in 1996, 313 in 2021). Data taken from the periodical surveys implemented by INE (National Statistics Institute).
- (20) In 2021, 51.45% of the population is male. For the same period, the national average was 49%, and the average for Castilla y León region was 49.2%. Data taken from the periodical surveys implemented by INE (National Statistics Institute).
- (21) Adrados, Aguila Fuente, Aldeasoña, Cabezuela, Calabazas de Fuentidueña, Cantalejo, Carbonero el Mayor, Chañe, Cobos de Fuentidueña, Cozuelos de Fuentidueña, Cuellar, Cuevas de Provanco, Fresneda de Cuellar, Frumales, Fuente el Olmo de Fuentidueña, Fuente el Olmo de Íscar, Fuentepelayo, Fuentepiñel, Fuenterrebollo, Fuentesauco de Fuentidueña, Fuentesoto, Fuentidueña, Gomezserracin, Hontalbilla, Laguna de Contreras, Lastras de Cuellar, Mata de Cuellar, Membibre de la Hoz, Navalilla, Navalmanzano, Olombrada, Perosillo, Pinarejos, Pinarnegrillo, Remondo, Sacramenia, Samboal, Sanchonuño, San Cristóbal de Cuellar, San Martín y Mudrián, San Miguel de Bernuy, Sauquillo de Cabezas, Torrecilla del Pinar, Turégano, Valledado, Valtiendas, Veganzones, Villaverde de Íscar, Zarzuela del Pinar.
- (22) Cantalejo (3521 in 1996, 3522 in 2021), Carbonero el Mayor (2349 in 1996, 2502 in 2021), Cuellar (9118 in 1996, 9620 in 2021), and Sanchonuño (756 in 1996, 980 in 2021). Data taken from the periodical surveys implemented by INE (National Statistics Institute).
- (23) In 2021, more than half the population, 51.4%, was male. The national average of male population for the same period was below fifty per cent (49%). The average for Castilla y León region for the same period was also below fifty per cent (49.2%). Data taken from the periodical sur-

veys implemented by INE (National Statistics Institute).

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