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# The Role of the Sharing Economy for a Sustainable and Innovative Development of Rural Areas: A Case Study in Sardinia (Italy)

Silvia Battino 1,\* and Salvatore Lampreu 2

- Department of Economics and Business, University of Sassari, 07100 Sassari, Italy
- Department of History, Human Sciences and Education, University of Sassari, 07100 Sassari, Italy; slampreu@uniss.it
- \* Correspondence: sbattino@uniss.it; Tel.: +39-079-213001

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Abstract: Depopulation is a problem felt in many regions of the European Union, mainly affecting inland and rural areas. In many cases, these areas are characterized by economic, social, and infrastructural marginalization. Their rehabilitation is desirable in view of a better balance of social and infrastructural management. This said, there are no proven solutions for depopulation that can be applied to all territories in the same way. On the contrary, if we examine progress in the fields of ITC and digitization, we can gather interesting suggestions on how to deal with this issue. This essay intends to analyze these aspects and to examine ways to strengthen, through programs and instruments of the sharing economy, the competitiveness and potential attraction of geographical areas considered marginal and that risk demographic collapse.

**Keywords:** marginal and internal areas; depopulation; sharing economy; smart tourism; Sardinia; smart villages; smart communities

### 1. Introduction

Nowadays, depopulation, low birth rates, and an aging population are undoubtedly three of the major issues affecting large areas of the European continent; in some cases, their gradual increase has become of such central importance within certain local development policies to be considered of extreme urgency [1–8].

Most affected by such demographic downturns are, of course, those regions characterized by a more prominent socio-economic and geographical marginality which, in turn, usually also reflects a general political and infrastructural fragility. These areas, however—especially in the last few decades—have, on many occasions, been the focus of a large number of reinforcement and stabilization initiatives promoted by the European Union, which has often cooperated with the governments of the same Member States where these problems are most acute. These particular demographic and social dynamics depict the complexity of the European territory that today, more than ever, seems to be characterized, on the one hand, by the inability of marginal areas to attract people, business activities, and capital investments and, on the other hand, by the constant growth [9] (p. XV) of major urban centers [10] where demographic density and economic power increase [11–13]. Among the incentives and measures considered strategic in various political agendas for the revitalization of marginal areas affected by depopulation, those related to tourism and technology hold an important place. The progress that has been observed in the whole sectors of technology and of data digitization has influenced and expanded the concept of smartness in almost all economic and social organizations [14,15]. This has brought an improvement in performance, in economic terms, and in the quality of life in general. A more efficient use of resources and a decrease in pollution has

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initially given rise to the paradigm of Smart City, subsequently to that of Smart Village, and finally to those of Smart Tourism [16] and of Smart Tourism Destinations [17].

If, in the first case, reference is to a smartness closely linked and applied to the urban dimension of cities; in the case of smart villages, the reference territorial area goes beyond the urban border to embrace those rural zones populated by small villages and little towns. When territories, including rural ones, become tourist destinations based on an innovative use of technologies, then we can call them Smart Tourism Destinations.

Information and Communication Technologies (ICTs), a main component of the smartness concept, can often offer backward rural areas that lack services a chance at diversifying their economies by activating synergies and vitalizing markets.

The fusion of these ICTs with the realities of the tourism industry can offer a positive outcome regarding the use of services, goods, and land by the different sectors of society that are directly involved in their utilization [18]. The speed with which information is exchanged, including feedback and economic transactions, is an example of advantages provided by these technologies. For these reasons, smartness cannot be confined to cities already privileged by early digitization, but must be extended to rural and internal areas. In these areas, smartness can represent an opportunity for development in a competing marketplace, while maintaining, developing, and supporting local identities. As we can see from the analysis of numerous interventions in favor of rural areas promoted by the European Union over the years—an example of which is the Leader method—the theme of preserving local identity has always been at the center of the action of protection and enhancement of marginal territories that could certainly find new vigor and development from the exploitation of the opportunities offered by ICTs. This is a concept also expressed by the European Network for Rural Development (ENRD), a reference department in the European Union for those entities involved in rural development. In fact, the recent project entitled "Smart and competitive rural areas" [19] shows six key issues for the effective progress of rural areas: (1) The rural broadband; (2) the access to the digital market; (3) the modernization of agricultural practices and businesses; (4) the development of new products and penetration into new markets; (5) the diversification of activities; and (6) the promotion of sustainable and collaborative communities.

These are all aspects that in rural areas could find breeding ground and trigger synergies and new dynamism, because these areas are sometimes characterized by backwardness in production processes and the lack of services able to favour a real diversification of the offers, also in terms of tourism. These results could be better achieved and appreciated capitalizing on local identity, experience, and good practices gained over the years, making intelligent use of the support provided by ICT and acting in a cohesive and inclusive way.

In this regard, the challenge of the future society—passing from Web 4.0 to merge with the so-called Society 5.0—is to put individuals and local communities at the center of a system where digital spaces blend with physical ones [20,21].

The prospect of a sustainable development must be based on the promotion of local resources; lifestyle and cultural heritage, including food and wine culture (typical of rural areas), are generally perceived as genuine and therefore as unique and desirable [22]. Such a prospect is not a static one, but on the contrary, it is based on the vitality and the fluidity of the modern age, which is shaped by new technologies and its remarkable interconnections [23,24]. More and more, the territorial authenticity of these areas is a strategic element in promoting tourism, particularly in light of the process of globalization [24–27]. Thanks to the development of Web today, the tourist 4.0 enjoys a myriad of options: The birth of open source data platforms and information sharing, of portals specifically dedicated to accommodation booking, of public transportation and other services, and of social networks, blogs and apps for smartphones. These also allow the tourist operators a vast selection of options in an autonomous and independent way [28]. It is therefore essential that destination points are able to use these new, innovative, flexible, and dedicated channels for promoting their unique, desirable qualities.

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Interesting news can be found in the original implementation of sharing economy practices for the development of tourism in rural areas, especially when these practices offer solutions and alternatives to the classic models of hospitality that are often absent in marginal areas. Also, in this case, the technologies are fundamental because they facilitate the formation of networks and allow tourists to get in touch with host communities in a light way. Moreover, thanks to digitization, open source platforms, and specific apps, rural communities can develop new skills and can interface with a tourist market that is more and more informed online and buys holidays and experiences on the web. It is thanks to the web that in recent years, we have attended the emergence of numerous sharing economy platforms concerning the exchange or sharing of food. Among these, a privileged position is certainly covered by those channels marked by the so-called sharing food that has allowed the development of experiences and initiatives related to social eating. The latter, developed mainly in urban contexts, thanks to ICTs and specific web portals, have proved useful in breaking down those barriers that sometimes exist between tourists and host communities. There are, instead, few social eating experiences carried out through modern online platforms in rural contexts, probably due to a lower diffusion of networks and internet connections in these territories and a low propensity to experiment with these new modalities of tourist hospitality [29].

# 2. Objectives and Methodology

The objective of this work was to briefly analyze the depopulation of rural and internal areas in Europe to examine, finally, possible strategies adopted by weak territories to stop the phenomenon.

The depopulation is, in fact, a problem that afflicts several European regions. The analysis, starting from a global view of the question, focused on the specific case of Sardinia which, as noted by various studies and researches [30,31], presents conditions of absolute fragility. Among the most recent studies commissioned by the Sardinian Region, there is one in particular that, through some projections based on specific indicators and past trends, suggests the disappearance of 31 small municipalities within the current century [30].

Among these municipalities, there is also that of Nughedu Santa Vittoria where, at that moment, there are not even 500 inhabitants—but which, among all, is the only one that has activated to respond to these challenges in an innovative way through an experimental project called Nughedu Welcome (NW), based on widespread hospitality and the exploitation of a sharing economy platform, with the support of other channels such as websites and social networks. We will therefore try to understand if this model could be improved and strengthened in some way to favor endogenous development processes with future repeatability prospects, and to ensure that a rural area unknown to the tourist market, although rich in resources, could during the time evolving towards a structured tourist destination or, even better, towards a smart tourism destination capable of attracting people from outside and strengthening the social and economic structure of its inhabitants. This possible response to depopulation, combined with other development policies, could be able to positively affect the conditions of attractiveness and relaunch of marginal territories. The selected case study will initially be addressed through desk analysis, and subsequently through data and qualitative and quantitative information deriving from field surveys and structured questionnaires to local policy makers, NW members and people from the local community. In particular, with regard to qualitative information, semi-structured interviews were conducted on 35 people, of which five were public administrators, five were NW members, and 25 were resident in the village. This methodology was chosen because it was considered the most appropriate to investigate the phenomenon through the detection of the opinions of the subjects directly involved, all having a different background. The semi-structured interview, conducted on site by the authors, was composed of 25 open-ended questions aimed at investigating the different organizational and methodological aspects underlying the formation of NW, as well as investigating the perception of the phenomenon by the local community. Being a semi-structured interview, the interviewer used a predetermined trace reserving the possibility of modulating the different questions on the basis of the interlocutor. The objective was to complete and enrich the cognitive framework that emerged from the

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desk analysis, to better frame the phenomenon and to understand whether it could actually generate positive impacts in the future capable of counteracting the depopulation of a small municipality at risk of extinction. However, this is the reason why NW was born. The results of the interviews were merged in the analysis of the case study, in paragraph 5, and were useful to provide the necessary indications to improve the model with the prospect of strengthening it, and perhaps extending it to other situations affected by problems similar to those found at Nughedu Santa Vittoria.

A goal of the work was, therefore, to study the structural characteristics of NW, the marketing and branding actions adopted, and the approach followed to identify its strengths but also its criticalities. Therefore the objective was, on the one hand, to investigate the possible progress made by NW over time, in terms of stimulating the local economy, of increasing the skill of the people involved, and of greater ability to open up to other development perspectives such as those linked to tourism and widespread hospitality; and, on the other hand, to observe whether such a model, still in an experimental phase, can in some way contribute to combating the depopulation of small municipalities by making them attractive, thanks to new jobs and residence opportunities.

Moreover, in this case it would be a question of potential jobs born from an initiative that started from the bottom and focused on the exploitation of new channels and ICTs, according to an original variation of the sharing economy tools and, with a light infrastructure, able to foster greater appreciation of the local enogastronomic, cultural, and environmental resources present in an internal area of Sardinia, with methods that could also be replicated in other places with similar characteristics. This study aimed to highlight the potential of NW, which was born with the objective of finding innovative solutions to the problem of depopulation, based on ICTs and the development of empowerment and new skills in notoriously weak areas in terms of digitization and informatization. Therefore, the work analyzed the phenomenon of depopulation, starting from a global scale up to the regional scale, to focus on a small local reality and on a specific development model.

## 3. The Conceptual Framework

Depopulation is a hard subject to study if we do it with the aim of figuring out what its causes are, as each territory presents its own peculiar conditions.

While the investigation of the phenomenon of depopulation adopted different geographical methods—resorting to the analysis and processing of data, indices, and statistics, and to the presentation of the main evidences using cartography—the case study was deepened through the analysis of the path that led to its formation, the website and the profiles on social networks, together with direct interviews to the members of the NW team.

From the observation of general trends, we can see that an increasing number of people today are being attracted by urban centers like Europe's major cities, which seem to be diversified and developed according to specific economic schemes and to be performing old and new tasks alike.

Despite such apparent efficiency, however, big cities often seem to fail to satisfy the needs expressed by large parts of population, which, as a consequence, feel discriminated or excluded by those development prospects that had once attracted them. This particular phenomenon has been named urban paradox [32] (p. 34).

A high reduction in social exclusion and citizenship rights, together with weaker economic performances, are all distinctive characteristics of both urban degraded areas and rural regions, where, in different ways, people feel excluded even from services of primary importance—such as education, healthcare, and transports [33–37]. Over time, the diversification of these territories (from a morphological point of view, as well) has influenced the terminology by which they are defined compared to the past; thus, what once were simply called "mountain areas" or "farming areas" tend now to be defined rather as "disadvantaged areas" [38] or, in other cases, as "rural areas", of which an exact or unanimously-shared meaning does not even exist yet, possibly due to the fact that the methodological approaches to analyze and recognize them as such vary a lot [39]. Another recent definition [40] is that of "inner area", which finds its first use in a policy document entitled "Methods"

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and objectives for an effective use of the 2014–2020 community funds", a definition also supported by further researches in which precise sets of indicators are used to better estimate disproportion and distress conditions between such areas and major urban centers, where public services and facilities are gathered and seemingly guaranteed to people [41].

As a result, classification criteria and operative methodologies have, in the meantime, also changed according to the geographical—as well as the economical—boundaries of these areas, in order to stimulate a trend reversal and wishing that an actual socio-economical growth would be achieved; to mention only some of them: Disadvantage reduction measures, relaunch actions, encouragement procedures towards new business activities, diversification and multi-functionality promotion, and so on. It has to be pointed out, however, that the terms "rural", "mountain", and "internal areas" are not always equivalent. In the European territory in general, and in the Italian one in particular, there are in fact many cases in which such definitions overlap and such areas share many similar characteristics. Furthermore, their being categorized as "rural/internal areas" or "mountain areas" does not automatically imply that they should be considered as "disadvantaged". "Rural" or "internal", in fact, are not necessarily synonyms for "weak" or "fragile" [42].

In this regard, a recent report of the Council of Europe [43] (p. 2), entitled "A Better Future for our Rural Areas", has shown how different and heterogeneous such areas can be: "Each of them can be identified and distinguished by their own environmental features and their own economic performances. Some of them, in fact, achieve excellent socio-economic results (sometimes even better than those achieved by certain bordering urban centers) and stand out for their ability to ensure people a relatively good living standard. Others, on the contrary, need to face well-known phenomena as the already-mentioned depopulation issue, demographic ageing, high poverty rate, land abandonment, strong dependence on small-scale agriculture, lack of public services and severe infrastructural problems" [44].

Taken together, such areas represent, in all their diversity, a very large part of the European Continent [45]; as shown by Eurostat data on the urban-rural typology at the NUTS3 administration level, we are able to spot an evident prevalence of partially or predominately rural regions over mainly urban ones [46] (p. 2) (Figure 1).

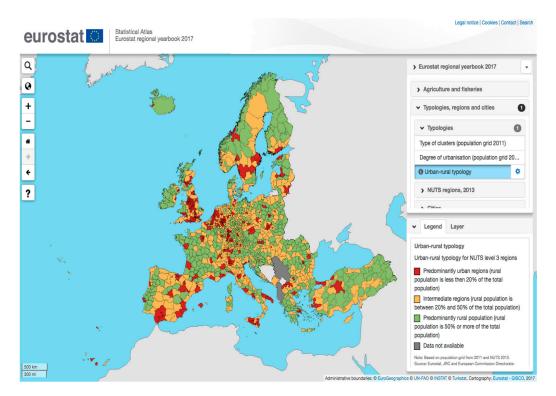


Figure 1. Urban-rural partition of the European Union (EU).

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Rural areas (especially those affected by structurally disadvantaged conditions) present problems that can also be found in many internal areas. As shown by a recent study conducted by the Bundesinstitut für Bau-, Stadt- und Raumforschung [47], the areas that suffered the most from demographic decline in the years between 2001 and 2011 have been individuated in inland and southern Italy, in Portugal, in Spain and in Eastern Europe (Figure 2).

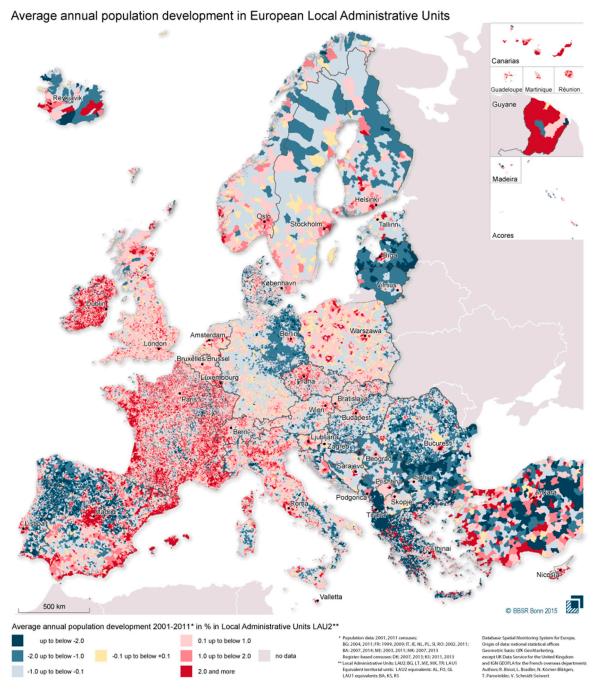


Figure 2. Demographic trends in Europe, 2001–2011.

If we take into consideration the Crude Rate of Total Population Change index [48], as processed by Eurostat for the year 2015, it is possible to note that the depopulation trend is more acute and steady precisely in those regions that we have mentioned above [49]. Areas with highest demographic deficiency are individuated in those NUTS 2 regions having worst economic performances [50].

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The region of Sardinia—according to Eurostat data and what was reported in the seventh report on economic, social, and territorial cohesion—occupies a greatly deficient ranking position regarding GDP per capita in relation to the indicators of institutional system quality and of job market efficiency. This region has to face, in addition to its several structural deficiencies, an old condition by now become chronic—i.e., that of internal areas depopulation.

In Sardinia, there are several policy documents, such as the Regional Operative Program (POR) of the European Regional Development Fund (ERDF) and the POR of the European Social Fund (ESF), designated by the Autonomous Region, which confirm the urgent need to combat depopulation and to find new development opportunities in new technologies and tourism. Also, the Intelligent Specialization Strategy (S3) of the Region put marginal territories at the center of numerous interventions that aim to enhance the tourism sector, the environmental and cultural heritage, and, at the same time, to a better and wiser exploitation of ICTs [42,51]. Depopulation of the internal areas of Sardinia has taken, in the last years, increasing relevance in all regional development strategies. These are mainly based on strengthening the competitiveness of such territories, which, in many aspects, are not particularly attractive and continue to suffer from considerable population declines. If we look at the demographic trends of the Island, we can see that since 1861 (date of the first official census since the Italian Unification) to the present (Figure 3), population has shown (despite some small declines) an increasing trend, like that observed in the decade 1991–2001.

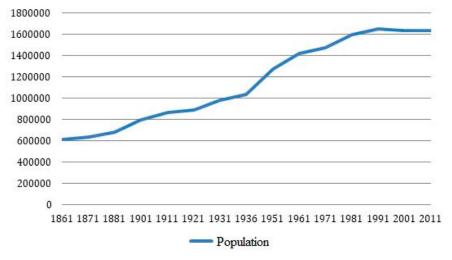


Figure 3. Population trends in Sardinia, years 1861–2011; source: Our processing on ISTAT data.

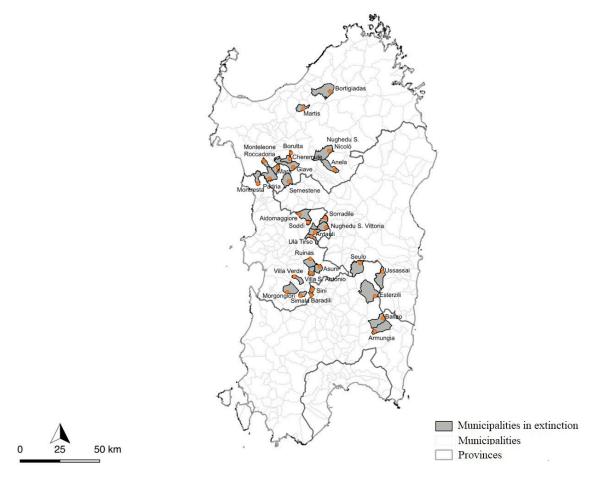
It was in 1936 that a census survey showed for the first time a figure higher than one million inhabitants in Sardinia. But the real demographic hike only took place starting from post-Second World War, a period of economic boom characterized by the birth of many industrial plants placed mainly along the coasts (e.g., Porto Torres) and in some central areas (e.g., Ottana); by the launch and development of the tourism industry (especially seaside-tourism); and, last but not least, by the uprooting of malaria (1946–1950), a delicate operation that enabled more people to inhabit coastal areas.

Between the 1950s and the 1960s in Sardinia, as well as in other Italian regions, there has been an abandonment of agriculture, a substantial increase of the tertiary (tourism), and, consequently, a population movement towards focal economic points where more services and better equipped infrastructures were expected, or towards the few coastal areas able to offer seasonal job opportunities [52]. The 1971 Census showed that residents in non-coastal areas amounted to 72%. After 40 years, there is a completely different demographic distribution with 52% of the population in the 2011 Census residing in coastal municipalities [41].

According to a recent study conducted by the Region of Sardinia (2013) [30], there are at least 31 municipalities that, within the next decades, might risk total extinction (see Figure 4). As to their geographic position, four are on a mountainside, 26 on internal hills, and one on a coastal hill—whereas,

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demographically speaking, none of them exceeds 1000 inhabitants and 13 do not even reach 500 units [31].



**Figure 4.** Municipalities facing extinction; source: Our data processing with software QGIS on Region of Sardinia *opendata*.

The problem of depopulation in rural areas is intertwined with precarious economic conditions and situations of social exclusion. This reveals an extreme complexity given by numerous demands and instances of improvement expressed by the local communities, which cannot always be answered in the same way given the specificities of the territories in difficulty. It follows that solutions to such complex problems must be found in light of the important changes that affect contemporary society, deeply permeated and influenced by technological development.

Among the changes connected to the digitization development, there are those related to the so-called sharing economy or collaborative economy. Their roots are traced to 1978 in the text of Felson e Spaeth "Community Structure and Collaborative Consumption: A routine activity approach" [53]. More recently, the European Commission (2016) [54], in its notice titled "Programme for collaborative economy", called for a business model where activities are facilitated by platforms that cooperate in an open market for temporary goods and services often provided by private citizens, according to a process which involves three categories of subjects: Services providers, users, and mediators (who provide virtual platforms for transactions).

However, it is difficult to find a definition of sharing economy that everyone agrees on. There are many facets of this concept, including partnerships, solidarity initiatives, and reuse and recycling, but also encompassing earning, savings, and making profit. Van Welsum (2016) [55], for instance, in his preparatory study for the World Development Report 2016 Digital Dividends, wonders "what exactly is being shared, and is it really sharing if we pay to 'share' or is it just a form of renting ... or paying for

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a service?". On the contrary, a recent preparatory study on collaborative economy organized by NESTA (2016) [56] for the DG Growth of sustainability UE, entitled "More than profit: a collaborative economy with a social purpose", underlines that in the case of a sharing economy, referring to a previous 2015 study (International Special Report on the Sharing Economy) performed by ING [57], users are pushed to take part in it by social motivations (to contribute to social inclusion, environmental sustainability, and community development). This subject is hotly argued and is the center of several analyses and lectures performed by academics and international organizations: According to Sundararajan (2016) [58], the sharing economy is simply a new form of "capitalism based on the multitudes", allowing a large number of people to transform themselves into businessmen. The European Commission (2016) [54] estimates for 2015, in total gross revenue, that sharing economy activities amounted to 28 billion euros, attributable mainly to the sectors of transport and accommodation. The European Parliament (2016) estimates 572 billion euros in revenue could be achieved through a more efficient management of sharing economy activities in the territories of the Union. Collaborative economy is a global phenomenon that has literally exploded in recent years. Its growth can be attributable to the effects of the economic crisis of 2008 [59,60]. It has affected many different sectors, but transport, accommodation, and food service have been particularly impacted [29]. It also highlights typologies like home sharing, based on the commonality of residence and accommodation supply (among best representatives there are platforms like Airbnb, Homestay, and Couchsurfing) and food sharing, a term that indicates various forms of food communion in light of both opposition to food wastefulness and the emergence of home restaurants [61]. This model is well suited to rural contexts, where lodging availability (hotel type and even extra-hotel) can be minimal or completely absent, as can be food service as well.

In this way, the sharing economy could be an important ally in the planning of the development of rural and inland areas, by obviating a lack of essential services, not only for the hiker, but for the tourist in general. While it is true that these areas can be considered as cultural and environmental heritages, on which touristic and territorial marketing strategies can be based, it is also true that these qualities alone are not enough to guarantee tourism. In order to create opportunities where local characteristics can become the protagonists in a competitive scenario, a modern digital program is essential. In addition, it is necessary to ensure the ability to provide for the indispensable needs of tourists, such as accommodation and food service. Food itself (being the symbol of the cultural identity of a region), considering the low costs of investment in sharing economy activities and the importance of food sharing, can become a particularly important player in social networking. Food has already become an important attractive factor in numerous initiatives in Italy [62]. There are several ventures, for instance, which in an original manner use the aggregating force of food, together with social networks, to promote sharing values. These experiences are not a prerogative exclusive to the cities, where home restaurants offering themed events and exotic cooking are widespread, but can expand to inland and rural areas. By allowing tourists to fully immerse themselves in the local community and by offering them a new perspective on the uniqueness of its foods and the warmth of its hospitality, the sharing economy presents activities that can represent solutions to the difficult problem—as, for example, depopulation—that marginal areas are facing.

### 4. The Territorial Context of the Case Study: Nughedu Santa Vittoria Village

Along the Italian peninsula, there have been, so far, many undertakings originating from below that were able altogether to enhance both commitment to the environment and civil responsibility among the citizens. In many cases, such efforts have gradually led to more sensitive behaviors of people towards the different problems of their territory, often coming up with innovative and revolutionary solutions. The totality of these experiences defines a (quite labile) frame of practices that Legambiente (League for the Environment) refers to as "green society". This concept, as vague as it may be, has, however, the merit of highlighting the tight link existing between general human dimension activity and the role of single local communities in managing common goods.

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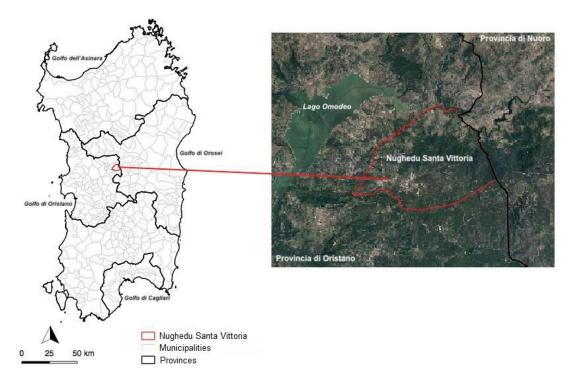
The actions deriving from the adoption of such a perspective have revealed themselves to be essential in making substantial progresses in the fields of Green Economy and Circular Economy. As we can read in the introduction of the volume Discovering Green Society, this perspective can be described as "a complex of socially respectful behaviors, unanimously shared by groups of communities whose aim is to evolve into a different socio-environmental set, based on much lower energy consumption rates, less material and smaller distances" [63] (p. 15); [64–66].

Among the cases collected by Legambiente in their volume, there is also that of Nughedu Welcome (NW), defined as a sustainable and innovative "bottom-up type" project of widespread hospitality, born in a small municipality of the internal area of Sardinia as an answer to the severe demographic crisis going on for several decades.

If it is true that NW is a "best practice" according to green society criteria—thanks to its ability to establish strong relationships between identities, communities, and sustainability—it is equally true that, through a more original application of modern technologies, this could represent a first step towards the establishment of a smart tourist destination.

As of today, NW represents a totally unique reality in the island scenario, a uniqueness that has earned this community the reputation of first social eating village of Italy.

Nughedu Santa Vittoria is a hill village located at 533 meters above sea level., belonging to the Oristano province, in the center of the Island. It extends on a surface of 28.58 square kilometers (Figure 5). It is part of the historical and geographic region of Barigadu [67] and, under the administrative profile, is a member of the Communities Union of Barigadu, consisting of another eight bordering municipalities. Together with the adjacent Communities Union of Guilcer (nine municipalities), they constitute the "Barigadu-Guilcer Local Action Group (GAL) for rural development promotion" [68].

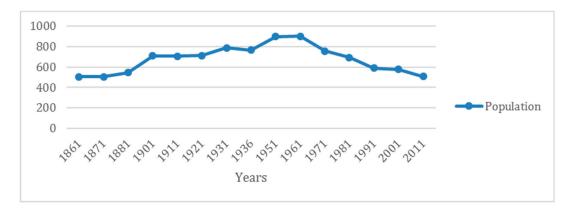


**Figure 5.** Territorial framework of the municipality of Nughedu Santa Vittoria; source: Our data processing with software QGIS.

After many years of demographic decline (Figure 6), as at January 1st 2017 the municipality of Nughedu Santa Vittoria has a population of 483 inhabitants, a quite bad density level of 16.90 per sq.km. (Table 1) [69], which is particularly negative if compared with other similar regional realities. Due to such conditions, in fact, Nughedu Santa Vittoria appears among the aforementioned 31 communities at risk of extinction. Its demographic desertification, unless significant changes occur, is expected

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approximately for 2080. In particular, the Composite indicator of Demographic Disquiet Condition (DDC) consists of two parts: "the first one takes into account the depopulation episodes weighed by amount of inhabitants loss, while the second one refers to four precise features of population expressing its structure and its natural movement (deaths and births), providing reliable indications on the health status of a population" [30] (p. 10).



**Figure 6.** Demographic trend of Nughedu Santa Vittoria between 1861–2011; source: Our processing on ISTAT data.

<b>Table 1.</b> Demographic index of various territorial levels as at January 1st, 2017; source: Our processing
on ISTAT data.

Territory	Index of Age	Index of Structural Dependence	Index of Change of Active Population	Index of Framework of Active Population
Nughedu Santa Vittoria	441.1	62.1	148.0	173.4
Province of Oristano	242.6	55.7	166.9	144.7
Sardinia	195.5	52.1	161.2	145.0

For a community at risk of disappearance, like that of Nughedu, the problem of depopulation is obviously of utmost urgency; it automatically tends to assume the aspect of a real vicious circle, depopulation being tightly linked with several phenomena such as, among others, lack of public services, high unemployment rate, and low incomes—all decisive elements for any territory willing to remain attractive for both residents and new population.

As far as the unemployment rate is concerned, the most recent official data provided by ISTAT on the "8milaCensus" portal (2011) [70] indicate that it was around 19%; yet, young unemployment rate was 71.4%, an extremely high figure if compared with the corresponding regional one (48.5%) and national one (34.7%). If we consider that since then, the insular labor market has not shown any noteworthy change, the situation today has most likely remained unvaried.

On the income front, then, considering the data of the Ministry of Economy and Finance related to taxable incomes on physical persons (2015), the average income value declared turns out to be 12,226 euros, which in turn means 8,251 euros per inhabitant.

Nughedu community's economy is prevalently of agro-pastoral, whereas the tourism industry still appears seriously underestimated, as there are apparently neither catering nor accommodation facilities officially registered. According to the data provided by the agriculture census of 2010, the total agricultural surface of Nughedu amounts to 1056 ha, of which only 742.53 is actually being used, divided into arable land (216.67), vineyards (12.72), other tree and agrarian cultivations (37.62), private vegetable gardens (0.24), permanent meadows and pastures (477.28). Woods annexed to farms extended to 292.54 ha, and the agricultural unused surface was of 21.74 ha. According to the same

census, in 2010 the municipality of Nughedu had 49 farms, of which 48 directly run by the farmers themselves and one with a different system of management. Proximity to lake Omodeo (among the largest artificial lakes in Europe, obtained in 1924 by blockading the river Tirso by means of the Santa Chiara dam) does not seem to be satisfactorily used under an economic point of view; even the lake itself, although it incisively typifies the landscape, seems to be left out of the tourism development strategies of the area.

As far as essential public services are concerned, instead, the municipality of Nughedu offers today only one pharmacy and one post office, while medical aid, bank, and school facilities are totally absent.

The only positive feature of this area seems to be the road system, as it is well connected by different regional, provincial, and agricultural roads. The village is 56.2 km from the administrative center of Oristano—a bigger town that offers a hospital, several schools, and other general services—and is easily reachable by car in 50 min. Besides, it is also not too far away from Cagliari (148 km, 1 h and 40 min by car), the regional capital city that possesses both port and airport, from Alghero and its small airport (147 km, 1 h and 45 min by car), or from Olbia, another important northern city also equipped with a port and an airport (152 km, 1 h and 46 min by car).

According to the Regional Internal Area Strategy method, Nughedu Santa Vittoria has been classified as a municipality of internal area and defined as a "rural community with severe development problems" by the 2014–2020 Rural Development Program of Sardinia. Nevertheless, it is a reality with a great number of environmental, archeological, and historical resources, in which ancient peasant and pastoral traditions still survive and where some interesting interventions for the urban decorum have been recently carried out to tackle the so-called non-finito sardo ("Sardinian unfinished") phenomenon. Sardinian unfinished is an ironic term made up to indicate the habit of not finishing houses, missing some final operations such as plastering or windows/doors setting, a habit spread in many communities of central Sardinia; the resulting effect is a neglected and degraded cityscape which does not express the real identity and local architectural traditions. The City Council of Nughedu Santa Vittoria has issued an announcement (the only case in Sardinia) expressly dedicated to tackle such "unfinishedness". In the above-mentioned announcement we can read: "It's important to understand, today, the reasons why decorum and esthetic beauty have been so long missing in this community, and to help each other, with humble determination, to reconquer them: piece by piece, neighborhood by neighborhood, block by block. Today it's fundamental to declare war to ugliness and chaos. It's necessary to activate positive, corrective actions through a real revolution which must primarily be cultural, in order to acquire a better awareness of the importance of producing and spreading beauty and, consequently, attract job and business opportunities under the new, bright light of our villages and communities".

Possible solutions to stop such a depopulation tendency may actually come through actions of this sort, but could also be found in the capability of grasping the inputs deriving from a better diffusion and awareness of the digital instruments available today. Local communities should therefore learn how to use these so as to preserve their own identity heritage and promote their own qualities. NW seems to be responding to these needs and to have accepted the challenge.

# 5. Nughedu Welcome: The Project

The project of NW was born in 2014 from an intuition of the young mayor of the village who, in cooperation with "Nabui" [71], a company long since engaged in innovative development processes in rural areas, decided to adopt urgent measures against the ongoing phenomenon of depopulation of his community, marked out by a strongly aged component.

NW is a development project based on social eating, driven forward by a group of resident people who, in 2015, gathered together in a cultural association and underwent a hard training process for one year. It took almost two years for the whole enterprise of the small village of Barigadu to be ready; finally, after a public launch event held in 2016, the press enthusiastically baptized it as the "first social eating village of Italy" [72].

NW consists of eight cooks and seven further staff members: Fifteen people, who, in order to create a professionally structured offer, had to face many organizational, promotional, and communication difficulties. Nevertheless, NW today has a Facebook page [73] and its own website [74] through which it shares all its initiatives, experiences, and its mission. Its members define themselves as "keepers" of the biodiversity of the land, for their effort to preserve their productions from homogenization and standardization: "We are watchmen of ancient moments, that relive every day in our gestures and in the meek wisdom of our work practices. In our own small way we feel heroes: we struggle every day against depopulation and we strongly believe in innovation and in the possibility to create new opportunities. We act through the magic of this territory, which donates rare fruits of unknown and unique flavor. We are part of an ancient history. Nughedu Welcome is our way of sharing it and of saying, even to you, that everybody is warmly welcome in our community" [74].

NW has today become a territorial brand and a peculiar example of sharing economy; the choice of accompanying the village name with the English expression "welcome" clearly expresses in an immediate way the spirit of the project and seems to have proved strategic and effective. Its symbol is a yellow plate on which the logotype stands out, lifted by two wooden crisscrossed spoons, a tool commonly used in kitchen; a symbol that easily recalls food, the core element of the project. As already said, in fact, the social eating idea is at the core of NW that, to function better, is supported by the well-known food platform of "Gnammo" [75] (Figure 7).



Figure 7. Nughedu Welcome webpage on Gnammo; source: [76].

The whole process follows a precise order, described here only briefly: Display of lunch or dinner meals, all genuinely homemade and prepared by the members themselves with typical local products and at "0 km"; menu/price proposal; and, after being posted on Gnammo, the product/service can finally be purchased online. At the end of the transaction, people receive a coupon that they will need to personally enjoy the experience on site. This all then gets posted on the website and on Facebook, to ensure maximum visibility.

The social eating events realized by the association usually take place in the center of the village, and some of them host a hundred people, but some of them can also take place in other small rural areas nearby or inside the private houses of the residents. In these latter cases only about 8–10 guests at a time are hosted.

At the end of the experience, visitors can leave a review on the Gnammo platform or on other social network sites. Thanks to an agreement with a Berlin tour operator company, German tourists are the most frequent presence among the foreign visitors of the village. The average age of these people is normally around 50, all people that seem to be quite expert in using modern technologies and that are, at the same time, interested in tasting good food. They are also very eager to meet members of the community and understand their reality, to find out local traditions and customs to know how to prepare certain typical with foods, and to experience what it feels like to live in the slow and peaceful way of rural communities, far away from the usual rat race of their cities. What people actually gain is, therefore, not just a warm meal, but rather a full immersion experience. NW members are not only cooking for their guests, but are also playing the role of ambassadors of their territory, presenting it in its most natural everyday life, in full respect of ancient traditions and of modern regulations. Particularly demanding tourists seem to be appreciating such kinds of experiences more and more today, moved by the desire of feeling part of different types of communities and of apprehending the spirit of exotic realities [77,78]. Since its opening, there have been about 20 events and each time, everything was sold out.

The reason why so few events have taken place so far might be ascribed to the fact that NW is a relatively new phenomenon, still in the course of experimentation and conducted without any real business expertise; it certainly seems to have produced, however, very positive effects on many people that were, until then, completely resigned to oblivion and monotony. Regarding the relationship between the NW team and the rest of the community, however, not all the residents of Nughedu Santa Vittoria seem to have fully understood the spirit of the project, unfortunately. This is what emerged from the interviews given to the policy makers of the municipality, to the members of NW, and to a sample of citizens interviewed. The reasons for reluctance on the part of some members of the local community could be related to different views on the political level (the project was born from the initiative of the current municipal administration), from not having managed to involve everyone in the initiative, from the fact that they are not used to conceiving the reception and hospitality as a possible source of income. On the contrary, the neighboring municipalities, which live the same problems as NW, observe the phenomenon with curiosity, almost as if it were a model expandable to their communities.

It is, anyway, ascertained that a further project to make NW a sort of "brand chain" in other areas of the Region is, for the moment, not possible to implement. Moreover, there are still some important aspects to improve as far as the current state of the Association is concerned: Basically, NW provides only food services, while accommodation facilities are still totally lacking. Giving people the possibility to stay overnight, or simply to rest, is indeed an essential prerequisite to attract real tourist flows rather than just "random hikers" (Figure 8).

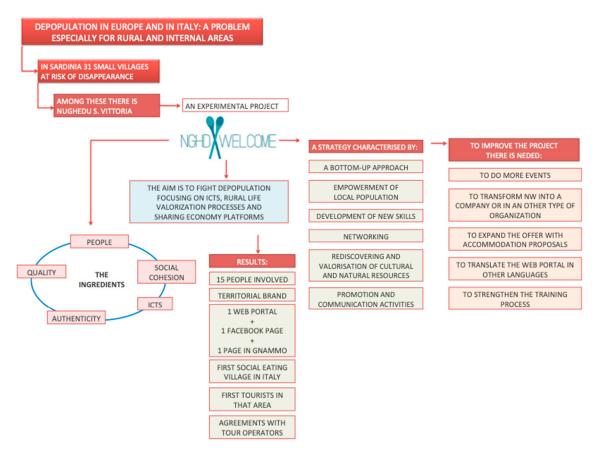


Figure 8. The attributes and strategies of Nughedu Welcome project; source: Own elaboration.

### 6. Conclusions

Depopulation is a long-standing issue that does not only afflict Italy and some of its areas, but also entire regions of the European Continent. It is a phenomenon hard to analyze, and even harder to tackle. Many studies on the matter—and several practical measures carried out with different strategies and approaches—have proven that there can be no single, absolute recipe to fight it, or that can be applied in the same way everywhere. As previously mentioned in this article, in fact, each territory has its own peculiar features, its own strong and weak points. Furthermore, depopulation is not only a matter of numbers and figures, of tiny villages at risk of extinction, or of people moving elsewhere. It is primarily a worrisome symptom of a larger phenomenon that puts in danger our own identity heritage, the eco-political stability of entire geographic areas, and the richness of our biodiversity; thereby, the already fragile relationships between urban and rural centers are only at risk of worsening.

It seems, therefore, to be extremely urgent to take action by reinterpreting the logics and the functions that are at the core of internal and rural areas, so that these may achieve stronger and better balanced relations with cities. That means, among other things, that rural areas have to no longer be considered as just alternative locations for relaxation or recreational purposes, or as vacation destinations for food or nature tourism, but rather as new places of active life and productivity, where it becomes possible to imagine and design a more inclusive and sustainable future.

A way to achieve this goal might be putting internal and rural areas in the condition of reinterpreting the new needs of our contemporary society, a very fast and demanding one, in which people are generally well-informed, constantly connected, and very anxious in their pursuit of efficiency. A valid resource to make a significant quality leap in this respect does exist, and is undoubtedly represented by new technology infrastructures and digital instruments, by now highly spread among people and within everyone's reach, even though their use does not always seem to be appropriate. Digitization in all its facets, therefore, constitutes an important incentive that should not be ignored.

The Europe Strategy 2020 aims, in fact, to create sustainability, inclusivity, and smart growth of the European territory through a concrete sense of innovation and renewal; the concept of smart city itself, which is very well-founded in this regard, refers to such a kind of smartness that should not be isolated only to cities, but that must also be extended to all territories—including rural and internal ones. Thus, it will be necessary, as well, to talk of smart destinations and, if specialized in tourism, of smart tourist destinations.

Tourism therefore—yet far from being a panacea to all problems—appears, for sure, among those sectors from which to expect great contributions as to strengthen marginal areas and tackle the depopulation phenomenon. It should certainly not be, however, unplanned mass tourism, but rather a type of tourism based on quality, coordinated with all the other productive sectors, structured in an inclusive way and promoted also by the local communities.

Among the difficulties encountered that are generally considered real obstacles to any growth in tourism development of marginal areas, the most evident ones are surely lack of infrastructures, poor and inadequate connections, and shortage of accommodation facilities; it is precisely in this regard that a properly supported digitization process can prove to be particularly decisive and fruitful.

The experiences gathered so far from the already existing sharing economy platforms (like those of food sharing) have, indeed, revealed very interesting and precious insights: They have demonstrated that it is possible to respond to people's needs with new supply forms and according to original modes.

The case of Nughedu Welcome has highlighted how, thanks to the digital resources available today, an endangered population group of a marginal rural area has been able to turn the situation in their favor, resulting in a radical, positive change in their existence.

Nughedu Welcome has allowed the informal training of 15 professional figures, which could result in real jobs if the project continues in a more structured way. The training followed by the people involved in the activity has allowed them to acquire different skills especially related to ICTs. In terms of tourist attractiveness, NW allowed a small village to leave its anonymity and become part of the rural and sustainable tourism circuit in an innovative way. The NW initiative has proved to be an important opportunity to bring the local community closer to new development perspectives linked mainly to the smart tourist experience. The project, at this moment, is in a purely experimental phase, but could propose itself as an expandable model that can be replicated in other similar realities, albeit with appropriate adaptations.

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- 68. Communities Unions are local authorities with regulatory, organizational and financial autonomy that have statutory and regulatory powers. According to Regional Law 4th, February 2016, no. 2, "reorganization of the Local Autonomies's system", all Sardinian Communities are obliged to affiliate themselves in Communities Unions and to implement the functions attributed by the Law and by affiliated Communities. The Communities Union of Barigadu consists of the municipalities of Ardauli, Bidonì, Busachi, Fordongianus, Neoneli, Nughedu Santa Vittoria, Samugheo, Sorradile and Ulà Tirso; that of Guilcer consists of the communities of Abbasanta, Aidomaggiore, Boroneddu, Ghilarza, Norbello, Paulitano, Sedilo, Soddì, Tadasuni. These 18 communities adhere to GAL and have a total population of 22,017 inhabitants (at January 1st 2017).
- 69. Indexes taken into consideration are: index of age, that indicates the level of population aging, given by the relation between over 65 and young people (0–14 years old); index of structural dependence, that shows the social and economic load of inactive population over the active one, given by the relation between young people (0–14 years old) plus over 65 and population between 15 and 64 years; index of change of active population, that shows the relation between people who are supposed to retire (60–64 years old) and people which should enter labor market (15–19 years old); index of framework of active population, that shows the aging level of active population, given by the relation between active mature population (40–64 years old) and active young population (15–39 years old).
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