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Creative capacity for sustainable development: A comparative analysis of European and Turkish rural regions[1]

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Abstract

Creative capacity in the field of regional sciences means the capability of any region to generate knowledge and thus to achieve innovation and the diffusion of the output of the innovative activity while obtaining the viability and sustainability of this process. Although creative capacity studies mainly focus on urban regions, the late rural studies and empirical evidences showed that rural region has a great potential capacity in terms of its five components viz. knowledge; innovation; entrepreneurship; creativity; and networks. But, these opportunities have shown by a rural specific approach rather than an urban approach. On this basis, by taking into consideration these discussions in the literature, we assume that the rural creative capacity can be evaluated by the recent changes in rural regions that show the capability of rural regions to exploit its knowledge as an output. On this purpose, in this study, we aim to evaluate which component is relatively important to identify the level of rural creative capacity. Therefore, the study focuses on 60 villages from Europe and 17 villages from Turkey by deploying the data obtained from the in-depth questionnaires. This study is a first attempt at settlement level with an optimistic approach to measure the opportunities lying at the heart of rural regions. The results of the study showed that creativity in terms of traditions is the most important component in both cases while European villages have more opportunities and do not have the latent rural problems while Turkish villages are still suffering from the well-known rural problems that their capacity exists but it is very limited.

1 Creative Capacity in the Field of Regional Science

Creative capacity studies have a long and outstanding history in the field of psychology focusing on the capacity of individuals, groups and organizations – particularly firms –. But, regional creative capacity is the subject of recent studies in the field of regional sciences focusing on especially urban and developed regions. Creative capacity means the capability of any region to generate knowledge and thus, to achieve innovation and the diffusion of the output of the innovative activity while obtaining viability and sustainability of this process. Regional creativity or regional creative capacity concepts are first undertaken in urban studies and have been popularized by Florida in 2002.

Regional creative capacity is the starting point of a region's sustained competitive advantage and its success route, therefore explains the economic growth and the development. The five components of creative capacity, viz. knowledge; innovation; entrepreneurship; creativity; and networks are seen as the real engine of economic and sustainable growth particularly over the long term period

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(Florida, 2002, 2005; Forte et al., 2005). That is why early attempts and studies on creative capacity focus on urban regions which are benefitting densely from their capacity for a long time. In contrast, rural regions which are usually evaluated as non-capable regions have become subject to creative capacity studies in the last few years. These late applications showed that rural creative capacity calls for a rural specific approach as urban specific creativity theories and methods misrepresent/underestimate the creative capacity of rural regions (McGranahan and Wojan, 2007).

From a strict conceptual approach, it can be thought that it is not possible to talk about a creative capacity of rural regions. But the recent changes and increasing attractiveness of rural regions have led researchers to bring up the concept – rural creative capacity – in the field of regional sciences. This attractiveness is not obtained by technology-related advances nor by the innovation nor even by the availability of infrastructures like it is in the urban regions but rather by the quality of life and locality characteristics in other words by the intervening opportunities lying at the heart of rural regions (Gülümser et al., 2009d).

On the basis of the above-mentioned background, in this study, we aim first to offer a contemporary rural-specific approach to measure rural creative capacity then second to evaluate the rural creative capacity with a special focus on selected European and Turkish rural settlements in order to highlight the critical creative capacity components for sustainable rural development. The data and the information used for the evaluation are retrieved from in-depth questionnaire surveys conducted in 60 European and 17 Turkish rural regions.

To reach our aims, Section 2 offers the measurements of rural creative capacity from a contemporary approach while Section 3 apply this approach on selected rural regions to investigate the critical component(s) of rural creative capacity. Section 4 discusses the differences and similarities between the capacity of European and Turkish rural areas while providing the reasons behind them. The study concludes by highlighting the role of creative capacity in sustainable rural development and the future research agenda.

2 Measuring Creative Capacity of Rural Regions

The creative capacity of rural region is different compared to the one of the urban regions and the application of urban-specific approaches misrepresents the actual capacity of rural regions. So, how do we measure rural creative capacity? To answer this question, in this section we discuss urban specific measurements and their operationalization for rural specific approaches.

The concept has five components, viz. knowledge; innovation; entrepreneurship; creativity; and networks. Knowledge as the component of creative capacity is the input of the innovation process (see for further information 'Knowledge Production Function' in Grilliches, 1990 and Audretsch, 2003). Each region has and produces its own knowledge (Maskell et al., 1998) and can convert it into a success. For rural regions, local/tacit knowledge is also accepted as the key development resource (Ray, 1998; Ploeg et al., 2000; Marsden, 2003; Ploeg and Renting, 2004; Tovey, 2008). Knowledge as an input in the success route of obtaining sustained competitive advantage in knowledge-based economy is usually measured by values, culture and traditions in the region. Although it is difficult to measure and interpret the knowledge of a region, the changes occurring in the habits, traditions and the increasing importance of local knowledge in rural areas may be useful to measure capacity of rural regions.

The second component – innovation – has its paradoxical structure for urban regions and also for rural regions. Innovation or the output as the (created) knowledge is measured by research and development (R&D) structures of both private and public initiatives ; its rate of returns, expenditures and employment; patents; technological parameters; productivity; diversity of industries; characteristics of region with a special focus on specific sectors so-defined as innovative sectors (Grilliches, 1990; Rogers, 1998; Audretsch, 2003). The dynamism of innovation process is not easy to measure and the transition of economies due to changing trends in the world brought up questions about the disadvantages of using some special parameters. One of such disadvantages is the dependency of the process on technology and R&D that does not give too much chance to the traditional knowledge. In other words, traditional knowledge is evaluated as less important than scientific knowledge in most of the innovation studies. But this is a biased view in knowledge-based world, that traditional knowledge is a scarce and desired good providing useful inside especially for R&D (Fonte, 2008). Therefore, while evaluating the rural creative capacity, the lack of high innovative activities make difficult to measure the innovation but the increasing use of technology in the processes can be seen as an innovative activity that the rural regions are not used to do so.

The third component is entrepreneurship which was ignored in the early economy theories but became recently one of the key elements of competitiveness and development. Basically, entrepreneurship does not refer only to the entrepreneur as an individual but as a change agent in an environment and it is very much related to the notions of social capital, human capital and networks (Noteboom, 1999; Cooke, 2002; Elfring and Hulsink, 2003; Westlund and Bolton, 2003). The rural economy is very much related to entrepreneurship/self-employment, but rural employment suffers to be allocated inside the region and also from the lack of education possibilities. Indeed, the traditional innovative processes do not call for high-education but rather a

high-experience. Thus, their contribution to human capital will be not only to increase the skilled-employment but also to increase the number of human capital by creating new job opportunities which can lead sustainable development in rural regions. Therefore, this component can be measured as the widening of job opportunities rather than increasing the skilled employment.

The main component of creative capacity is no doubt 'creativity'. The notion, having more than 60 definitions elucidated with respect to arts has a long history especially in the field of psychology (Sternberg, 1998). In contrast, creativity in regions or cities − recently developed form of creativity − is popularized by Florida (2002). Being recently popularized, not much contribution is put in the measurement of creativity but rather Florida's measurement has been criticised. Regional creativity is measured by different indexes i.e., bohemian index; gay index; diversity index with a special focus on a group of people so-called 'creative class' who work in so-called 'creative industries'. Factors attracting creative class are not the job opportunity but cultural supply; tolerance; openness to new ideas, new people and new lifestyles and also stimulus or inspiration for new experience. Due to the recent development of the notion of creativity, it remains obscure and open to discussion that many criticism on scientific and empirical side of the study (i.e. Glaeser, 2005; Qian and Stough, 2008) or mentioned that the field must be revisited (Scott, 2006; Peck, 2007). Thus, empirically and statistically biased and misinterpreted including the paradoxical sometimes insufficient side of the measurement is accepted also in the academic arena. However, it is also evident that creativity provides a boom in the economy and increase competitive advantage of the region (Scott, 2006). Although the concept is new, especially for rural regions which are a composite of close social defensive localism, their openness and being able to involve technology in their traditional processes can be seen as the creativity in rural regions.

The last and the most important component of regional creative capacity is 'network'. Network which realize the transfer of product – particularly knowledge − became the key parameter of obtaining success in knowledge-based economy. Through network(s), innovation can create a sustained competitive advantage thus a region can be visible. Therefore networks depends on the distance of the region which can be evaluated in terms of the physical distance, which refers to the distance of rural regions to the nearest urban centres, innovation clusters and their geographical accessibility, the economic distance, which means the place of rural regions and their products in the global markets, and the social distance, which points out the networks and relations of rural people through which they become capable of transferring knowledge and accepting the novelty.

Physical distance of rural regions as peripheral and lagging regions and its effect on the returns of R&D – in a broader sense on innovation and technology – are discussed widely in the literature.

Different views, i.e. Schumpeterian view and neoclassical view brought up a conflict of interests (see Rodriguez-Pose, 2001). For instance, neoclassical theories was side to invest in R&D especially in peripheral and lagging rural regions which can create economic convergence while Schumpeterian view – also von Thünen Model and core-periphery theories – highlighted the complexity of the connection of R&D and growth with a link to the spill-over effects from one region to the neighbouring regions. This conflict have led public investors to doubt about investing in R&D in rural areas but to increase creative capacity and to improve competitiveness of economic actors, this investment has remained as a need (Rodriguez-Pose, 2001). Alston et al. (2000) supported the importance of R&D investments and their increasing rate of returns in rural regions stressing on the paradoxical side of these effects. Rural areas are dynamic by being involved in different networks and offering a diffusion of knowledge, i.e. relocalisation of food, culture etc. being more innovative depends on location (Lundvall, 1992; Cooke et al., 1994). Employment growth of rural regions is positively associated with innovative activity in nearby metropolitan areas only if the metropolitan area is a highly active centre of innovation and entrepreneurship (Barkley et al., 2006). In contrast, late studies (i.e. McGranahan and Wojan, 2007; Gülümser et al., 2009) showed that the increase of creative class does not depend on the physical distance or R&D, but depends on the attractiveness capacity of rural regions and the motivation of entrepreneurs. Thus, there is no single sign of the association between physical distance and rural creative capacity but the reduction of the physical distance can be measured by the increase of individuals reaching the rural regions with their own abilities.

The economic distance of rural regions is much related to the ability to use and to adapt communication technologies to the entrepreneurship in order to succeed in knowledge based economy (Keeble, 1993; North and Smallbone, 2000; Malecki, 2003; Cannarella and Piccioni, 2005). Adaptation of rural firms and entrepreneurs to the new ICT tools is not easy to achieve. Although they learn how to use it, they are not able to use it in their business due to the shortage of the dispersion of communication infrastructure in rural regions (Grimes, 2000). In other words, rural regions are not yet efficient beneficiaries of the ICT era, therefore they are still using the old generation of ICT, i.e. computer but not involved to the new generation technologies, and e-commerce widespread in the world. This situation creates an unfair competitive arena in the global market for the rural economy. Rural and small town SMEs development is closely related to the growth in the wide economy of new specialised niche markets in which small firms can supply efficiently, even though it is not more efficiently than large firms (Keeble, 1993). Thus, while evaluating rural creative capacity, the widening of the market, the selling of rural products to the outside can be a better measurement.

The third type of distance - social distance - is a measure of the closeness between players in a strategic interaction and has recently been acknowledged to have a profound influence on individual decisions (see Akerlof, 1997). There are evidences that social distance matters more than physical distance and even more than economic distance in terms of cooperating and transferring knowledge while creating knowledge externalities (Autant-Bernard et al., 2007). Social distance is also fundamental for diminishing economic distance. Rural regions possess a very defensive localism in terms of accepting the new (Winter, 2003). Therefore, in rural regions, the acceptance of newcomers as well as new economic activities that can create and increase opportunities in terms of increasing human capital, innovation, adaptation and economic diversity, is one of the most important determinants of rural creative capacity with the continuity of the existing. Thus, instead of measuring the extension and density of social networks, to measure the openness and tolerance of rural inhabitants, in other words the ability to change the social networks and relations of the region.

Here, we propose to measure the components of rural creative capacity by the changes occurring in rural regions to better estimate the capability of rural regions to be adapted into the new era. The next section evaluates the critical components of rural creative capacity with a special focus on 60 villages from Europe and 17 villages in Turkey.

3 The Critical Components of Rural Creative Capacity

In this study, we aimed to evaluate the critical components of rural creative capacity while focusing on the examples of rural settlements from developed and developing countries. In this section, we will analyse the creative capacity of rural regions in Europe, i.e. Belgium, France and Italy, and Turkey to identify the critical components of creative capacity.

3.1 Prefatory remarks: the survey

Today, the changes occurring in rural areas have attracted much attention. Especially the demographic changes and their consequences have become the interest of both theoretical and empirical studies. On this basis, in this study, we investigated rural settlements by means of an in-depth questionnaire survey. We conducted our survey first, in Europe between July and August 2008 with a special focus on the member settlements of The Association of the Most Beautiful Villages in Belgium, France and Italy that we collected data from 60 members and second in Turkey between March and May 2009 with a special focus on 17 rural settlements by means of a multi-stage sampling (see for further information Gülümser, 2009).

The questionnaire applied has four main parts, (1) the general information; (2) the environmental characteristics; (3) the relations and connections with the outside; and (4) the changes. Part 1 and Part 2 were designed to reveal the similarities and the differences of the characteristics of the villages, while Part 3 was designed to measure the attractiveness of villages, and Part 4 was designed to evaluate the changes occurred in the villages. When preparing the questionnaire, the aim was to highlight the perception of relevant experts, with a special focus on the changes occurring in rural regions. In Part 1 of the questionnaire, we investigated the characteristics of the villages. In Part 2, we asked questions about the natural, physical and social environment. Part 3 focused on the diverse networks created inside the villages and built between the village and the outside.

The Turkish questionnaire is almost the same as the one used for the European case, except the second part, which is related to the environmental characteristics of the villages. The reason not to include this part related to the characteristics of the villages was that we visited all the villages thus we were able to answer these questions during the field surveys. The questionnaire of villages for Europe and Turkey are intrinsically the same however due to the operational definitions they differ in terms of partition and in terms of some additional information needed to be collected, i.e. the data on the association for the European case. The questionnaires were translated into French, Italian and Turkish in order to avoid any language problems.

The survey in Europe was conducted via emails and out of 354 we were able to reach only 254 of them that 60 villages have returned the questionnaire. In addition, in Turkey, 17 villages were selected as the result of multi-stage sampling that the questionnaire was conducted face-to-face by visiting all the villages. In the next sub-section, we explained how we retrieved our data from the questionnaires and the methodology applied to determine the critical components of rural creative capacity.

3.2 Data and methodology

The creative capacity of a region is the basic identifier to reach success in sustainable development. Capacity of region means what exist and what can exist or be absorbed by a region. Regional creative capacity and its components are mainly measured by returns and output of the innovative processes of which effectiveness and efficiencies depend on creative capacity. In other words, creative capacity of a region is usually measured by already existing strengths of regions rather than their intervening opportunities. But creative capacity of rural regions depends on the capability of region to be changed.

The multidimensionality of creative capacity calls for an overall measurement to compare the capacity of rural areas. In this section, we aimed to generate an overall score of creative capacity,

thus to define the relatively most important component of rural creative capacity. To reach our aim, Principal Component Analysis (PCA) is deployed in this section for the evaluation of data obtained from 60 European and 17 Turkish rural settlements, separately.

Principal component analysis (PCA) is used to transform the set of originally mutually correlated variables into a new set of independent variables (Hair et al., 1998). It is a non-stochastic approach and it only deals with the common variance of the original variables. It first derives the first factor or the first principal component, which is supposed to account for the greatest part of the common variance. The second factor is supposed to account for the next greatest part of the common variance, and so on. A minimum part of the common variance is set, and factors below this critical level must be eliminated. The relative lengths of the lines that express the different variable combinations are called critical values.

The list of variables used in the analysis is given in Table 1. It is widely accepted in the literature that the creative capacity of a rural region is very much related to the changes occurring in them. Therefore, in order to calculate an overall score of creative capacity for each village, we used changes occurred in terms of the five components of the creative capacity. The data is retrieved from the questionnaire applied in the villages, thus the variables are ranging by the five level Lickert scale depending on the level of change as the data is collected so. The data obtained by questionnaire reflects the opinion of the responsible of the settlements.

Table 1 Variables used for creative capacity score in Europe and Turkey

Component	Variable	Definition	Range
Knowledge	Tradition	The increase in the back to the tradition	1=very low; 2= low; 3=average; 4=high; 5=very high
Innovation	Technology	The increase in the use of technology	
Entrepreneurship	Human capital	The increase in the number of job opportunities	
Creativity	Creative activity	The increase in the use of technology and talent in job	
Network	Economic distance	The increase in the product sell to other cities	
	Social distance	Changes in social relations	
	Physical distance	The increase in the car ownership	

Therefore, we accept that the increase in the back-to-tradition is related the knowledge component which is related to the increasing importance and the continuity of tacit knowledge. In addition, the use of technology is very much related to innovation and technology. For the component of entrepreneurship, we used the human capital not in the sense of skills but rather as the creation of job opportunities to be able to include the opportunities to create a human capital accumulation in the village. The creativity component in the literature is usually equivalent to R&D activities or patents. But, we also mentioned that in the countryside most people do not register their innovative

products, and also the R&D activities excluding the local knowledge in their process may not contribute to the rural creative capacity. Thus, here, we measured creativity component as the increase of the combination of technology and local talent in economic activities. The last component network is a complex component itself that we distinguish three types of distance, viz. economic, social and physical and included in our analysis each variable as a separate variable. The next sub-section provides the results of the PCA analysis applied for each cases Europe and Turkey, thus Section 4 compares European and Turkish rural creative capacity by means of the empirical evidences obtained at the end of the analytic evaluation.

3.3 Empirical evidence from European and Turkish rural regions

Creative capacity is a multi-dimensional concept and includes both old and new resources for regional development. On this basis, it is difficult to calculate on single score. Therefore, we applied the PCA which is a multi-criteria analytical tool that helps to reduce the number of variables in order to create a new component.

According to the results of the analysis on European rural settlements, we obtained one single score that enabled us to explain 75 percent of the total variance. The factor scores of 60 European settlements range between -2.40 to 1.70 (see Appendix). This shows that each settlement is unique in terms of their creative capacity and their capacity depends on the opportunities they have.

In addition, the results of the analysis on Turkish rural settlements suggested that we can explain 84 percent of the total variance but this time with three components. Obtaining more than one component shows that Turkish settlements differ very much from each other by different components of creative capacity that generating one single score may lead us to lose information about the capacity of rural region. Therefore, we did not apply PCA by determining in advance the number of scores as 1. Thus, we calculated an overall score by a simple adding. As a result, we obtain one single creative capacity score for each settlement which changes between -2.58 and 4.43 (Appendix).

While applying the PCA our aim was not to generate a score to rank the settlements but it was more to show how different can be the capacity of each settlement and to determine the critical component(s) of the rural capacity. Therefore, instead of component scores, here we use the communality of each variable to explain the rural creative capacity and its components. In other words, we use loadings of each variable while defining the complex structure of creative capacity. The extraction communality is the estimate of the variance in each variable accounted for by the components. The high level of communality indicates that the extracted components represent the variables well.

The communalities of each component to explain the creative capacity of rural settlements are mentioned in Table 2. The results suggest that the components of creative capacity in Europe and Turkey differ from each other very much. However the critically important and less important components are the same. In other words, creativity is the most important component to determine rural creative capacity while physical network are the less important component.

Table 2 Communality of components in the creative capacity score

Component of Creative Capacity	Variable	Communality	
		Europe	Turkey
Creativity	Creative Activity	0.94	0.90
Innovation	Technology	0.94	0.82
Network	Social Distance	0.89	0.86
Knowledge	Tradition	0.88	0.84
Entrepreneurship	Human Capital	0.83	0.87
Network	Economic Distance	0.78	0.85
Network	Physical Distance	0.76	0.70

The opportunities in rural regions are very diverse thus the important component of creative capacity depends on them. Therefore, the local knowledge and the converting of it into innovative activities are important in each rural regions in terms of capacity analysis but on the other hand, the results show also that rural regions whether they are in developed country or not whether they are located close to urban regions or suffering from being physically less connected can have a high rural creative capacity. From an opportunistic perspective, it can be also stated that the creative capacity in other words the ability to attract so-called 'creative class' is not very associated with physical networks as creative class, most of the time, comes into rural regions because they are remote and undiscovered. In the next section we will discuss the results of our analyses while comparing the rural creative capacity of Turkish and European rural regions in detail.

4 A Comparative Evaluation: Turkish and European Rural Regions

The above mentioned analysis demonstrated that basically the evaluation of creative capacity from a rural specific approach do not change the essential of the concept but differentiate in terms of the type of data used for the measurement. The evaluation of different cases from Europe and Turkey – developed and developing countries – showed also that the opportunities and capacity in rural regions differentiate from each other. On this basis in this section, we will discuss the similarities and differences between European and Turkish rural regions by means of the results of the analyses.

The results show that in order to explain the creative capacity of a European village the main variables are the creativity and innovation (Table 2). The following important variables are the social networks inside the village and its tradition. Moreover, neither economic distance nor physical distance is as important as the other components. The results of the analysis show that the rural creative capacity in European villages depends heavily on technology and its junction with the tacit knowledge. Furthermore, rural aspect remains as rural with the capacity of the area reflecting its rural uniqueness, i.e. social characteristics and traditions which are also relatively important components of rural creative capacity. According to the results of our field surveys, we can state that rural Europe which does not suffer very much from the economic and physical distance is looking for more providing an innovative milieu while maintaining their powerful sense of community.

The results of the analysis on Turkish settlements show that creativity in other words, to be able to meet technology and the local knowledge is the most important identifier of the rural creative capacity in Turkish villages. This is followed by the entrepreneurship component that most of the Turkish villages face still the difficulty to expose their economic opportunities and convert them into strengths. In addition, social networks, economic networks and local knowledge are relatively important identifiers of rural creative capacity of Turkish villages. Physical distance having the lowest communality suggests that neither the remoteness of a rural region nor to shorten the physical distance have a great effect on increasing or identifying the creative capacity.

We cannot state that European and Turkish rural regions are absolutely different from each other. Although each region is unique, the general problems, the appearance of novelty and the reaction of rural regions to the innovative activities including the importance of locality characteristics have a similar basis in both European and Turkish rural regions. But it is obvious that Turkish rural settlements have much to do to increase the awareness of the local population to be able to realize the opportunities. In other words, European rural settlements are not anymore dealing with the well-known rural problems as they used to be compared to the Turkish ones.

5 Concluding Remarks

Rural areas are usually ignored or neglected as they are disadvantageous in terms of their capacity compare to urban areas. The capacity of a region is measured by the capability to attract economic change agents that is related to the newly popularized concept, i.e. creative capacity. The capacity of a region is not one single dimensional concept but rather a multi-dimensional concept covering the five components, viz. knowledge, technology, entrepreneurship, creativity and networks. The focus on mainly urban regions and the underestimation of rural creative capacity by the application of

urban specific methodologies and the increasing attractiveness of rural regions have led us to come up with a rural specific evaluation. On this basis, in this study, after offering a rural specific approach to measure rural creative capacity, we aimed to identify the critical factors of rural creative capacity with a special focus on European and Turkish rural regions by means of Principal Component Analysis (PCA).

According to the literature review and the late evaluation of rural creative capacity, in this study, we discussed the urban specific measurements and thus we come up with the argument that to measure the rural creative capacity by using the changes occurring in rural areas can give a better estimation. Therefore, we retrieved our data from the 60 questionnaires conducted in Europe and 17 questionnaires conducted in Turkey that we applied PCA in both cases separately.

The results of the PCA analysis showed that rural specific approaches of rural creative capacity succeeds to measure the creative capacity in association with the concept in general and that the creativity is the most important components while the physical networks do not have an efficient impact on the rural creative capacity. While this was the overall conclusion of our evaluation, the results stated also that rural regions of developed and developing countries have different capacity especially in terms of innovation and economic networks as well as social networks. For instance, Turkish rural regions are still suffering from the lack of technology thus it is relatively less important while determining the capacity of Turkish villages. On the contrary in Europe, innovation with creativity is the most important identifier of rural creative capacity.

Relatively small number of settlements in our sample limited us to use a wide list of variables/attributes while conducting our research. Nevertheless, this evaluation provides a valid background for future development strategies. Therefore, policies need to focus first on the identification of locality characteristics which play an important role to determine the opportunities in rural regions and then focus on how to increase the quality of rural areas and to open societies to new ideas to increase both the creative capacity.

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Appendix 1. The dataset and Creative Capacity scores

Village	*Country*	*Creative Capacity*	*Tradition*	*Technology*	*Human Capital*	*Creative Activity*	*Economic Distance*	*Social Distance*	*Physical Distance*
Lagrasse	France	0.50	3	4	4	3	4	3	4
San Donato Val di Comino	Italy	0.53	4	4	4	4	3	2	4
Gordes	France	-2.40	0	0	0	0	0	0	0
Morano Calabro	Italy	0.00	5	2	3	4	0	3	3
Saint Lizier	France	-0.86	2	2	2	2	0	2	3
Fources	France	-0.16	2	3	2	3	3	3	3
Novara di Sicilia	Italy	0.06	4	3	2	2	2	4	4
La Flotte-en-Re	France	0.76	4	4	5	4	4	3	3
Gourdon	France	0.59	3	4	3	3	5	3	5
Bova	Italy	0.31	4	4	3	3	3	3	3
Bienno	Italy	0.42	4	4	4	3	3	3	3
Volpedo	Italy	0.42	4	4	4	3	4	3	2
Neive	Italy	0.62	4	3	4	4	4	3	4
Zavattarello	Italy	-1.36	2	1	1	1	1	1	2
Fagagna	Italy	0.11	4	4	3	3	2	3	2
Castel di Tora	Italy	1.21	5	5	5	5	0	5	5
Geraci Siculo	Italy	1.00	5	4	4	4	4	4	4
Civita di Bagnoregio	Italy	-0.99	2	3	1	1	1	1	3
Gradara	Italy	0.32	4	3	3	4	3	3	3
Cusano Mutri	Italy	0.46	4	4	4	4	2	3	3
Mombaldone	Italy	-0.29	4	3	2	2	3	2	2
Borgio Verezzi	Italy	-2.40	0	0	0	0	0	0	0
Castel del Monte	Italy	0.96	4	4	5	4	4	3	5
Furore	Italy	0.91	5	4	5	4	5	4	1
Saint Quirin	France	-1.96	0	0	4	0	0	0	0
Orvinio	Italy	0.23	4	4	2	3	2	4	3
Tourtour	France	-0.17	3	3	3	2	1	3	4
Giglio Castello	Italy	0.04	5	4	3	2	3	1	3
Stilo	Italy	-0.55	3	2	1	2	3	2	3
Sauveterre de Rouergue	France	1.70	5	5	5	5	5	5	5
Oramala	Italy	-2.40	0	0	0	0	0	0	0
Sainte Agnes	France	1.70	5	5	5	5	5	5	5
Vernazza	Italy	0.71	4	4	4	4	4	5	1
Cutigliano	Italy	-0.52	2	2	2	3	3	2	2
La Roche-Guyon	France	-1.58	1	1	1	1	1	1	1
La Bastide Clairence	France	0.54	4	4	2	4	4	3	4
Asolo	Italy	-0.26	4	4	2	2	2	2	2
Moresco	Italy	0.80	5	4	4	4	4	4	2
Montsoreau	France	0.29	4	3	4	3	3	3	3
Pettorano sul Gizio L'Aqu	Italy	0.47	5	4	2	3	4	5	1
Bettona	Italy	-2.40	0	0	0	0	0	0	0
Le Bec Hellouin	France	0.18	4	3	3	3	2	3	4
Saint Benoit du Sault	France	0.19	3	3	3	3	3	4	3
Ars en Re	France	0.39	4	3	4	3	4	3	3
Crupet	Belgium	0.07	3	3	4	3	2	3	3
Chardeneux	Belgium	0.14	4	2	4	2	2	4	4
Pietracamela	Italy	0.65	4	4	3	4	4	3	4
Campo Ligure	Italy	-2.40	0	0	0	0	0	0	0
Navelli	Italy	-0.19	3	3	3	3	3	1	3
Mirmande	France	0.79	4	4	5	4	2	4	4
Belves	France	0.98	3	5	5	4	4	3	5
Montefioralle	Italy	0.04	3	3	1	3	4	3	4
Canale	Italy	-0.76	2	2	2	2	2	2	2
Chiusa	Italy	0.30	5	3	3	3	3	3	3
Roussillon	France	0.86	3	4	4	4	4	4	5
Brisighella	Italy	0.40	3	4	4	3	4	3	3
Massa Martana	Italy	-0.49	4	3	2	2	2	2	1
Ricetto di Candelo	Italy	0.99	4	4	5	4	4	4	4
Buonconvento	Italy	0.28	4	3	3	3	3	3	4
Offida	Italy	0.21	3	3	4	4	4	3	1

Akçeşme	Turkey	-0.83	5	2	1	1	4	1	4
Alballar	Turkey	4.43	5	5	1	1	5	1	3
Alhan	Turkey	-1.26	1	4	1	3	2	0	1
Başköy	Turkey	0.45	3	1	1	1	1	0	1
Beldibi	Turkey	0.21	1	1	1	1	1	0	1
Çakallar	Turkey	0.56	3	5	1	3	1	1	3
Değirmenl	Turkey	0.24	2	3	2	2	4	0	5
Dereköy	Turkey	-2.27	2	1	2	3	3	0	4
Emiraşikl	Turkey	-2.58	4	5	1	4	2	1	4
Halil beş	Turkey	2.22	5	4	1	1	4	1	5
Kapakli	Turkey	-0.63	4	1	3	4	3	0	5
Karaçakal	Turkey	0.4	4	4	2	4	4	1	2
Karahasan	Turkey	-2.15	2	1	1	4	1	0	5
Mahdumlar	Turkey	-1.18	4	4	2	2	1	0	4
Ovacik	Turkey	0.4	1	5	1	5	5	1	4
Ovapinari	Turkey	0.88	5	2	4	3	4	0	5
Susuz şah	Turkey	1.1	5	2	1	5	2	1	5