

Local development using social capital as an instrument: a comparative analysis

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Abstract

This study aims to present the process for the development of a social capital measurement tool, which was adapted to the Greek socio-cultural context. The validity and the reliability of this social capital questionnaire were evaluated in a sample of 318 adults drawn from two different mountain rural areas in Greece. The social capital questionnaire is a useful instrument in measuring the existent stock of social capital and in understanding the local development “physiognomy” of two Greek mountainous rural areas. However, we should keep in mind that the reliability of responses to questionnaires is always questionable, in particular for subjective questions about social norms. This is why detailed interviews constitute a precious tool to corroborate the results of a survey. For this reason, the present survey was subsequently followed up by 46 in-depth, semi-structured interviews with selected participants in both areas. The overall socio-economic status of the two case study areas was assessed in relation to a wide variety of social capital related variables. Using the data collected from the quantitative research, the paper describes how social capital is distributed geographically between the two different mountain areas. On the whole, both case study areas appear not to be substantially different in aggregate levels of social capital. Therefore, social capital seems to be different in its characteristics and underlying structure in both case study areas.

Keywords: local development, social capital, mountain rural areas, Greece.

1 Introduction

Social capital is not a single entity, but is rather multi-dimensional in nature. The definition of social capital dimensions used varies considerably from one study



to another. This lack of clarity can be partly explained by the variety of disciplines that have examined the concept. Woollock differentiates between “bonding” social capital and “bridging” social capital and asserts that without the latter, communities do not have what is needed to “get ahead”. Put simply, one can distinguish three major approaches of social capital (Woollock [1]). The micro-approach focuses on the nature and forms of co-operative behaviour, the macro-approach focuses on the conditions for co-operation and the meso-approach highlights structures that enable co-operation to take place. After an overview of the literature and drawing on the work of James Coleman and Robert Putnam and others we can say that the main dimensions of social capital are six: group and networks; trust and solidarity; collective action and cooperation; information and communication; social cohesion and inclusion; and empowerment and political action (e.g. Grootaert and Van Bastelaer [2]; Grootaert and Van Bastelaer [3]; Grootaert [4]; Ibáñez et al. [5]; Narayan and Cassidy [6]; Narayan and Pritchett [7]; World Bank [8]). From this analysis, a set of specific items was designed to provide (partial) empirical tests of the theoretical components of social capital.

The relationship between social capital and socio-economic development constitutes a controversial relation with both positive and negative interconnections and interactions. Putnam argues that social capital and a civil society promote economic growth (Putnam [9]). Furthermore, according to Knack and Keefer much of the economic backwardness in the world can be explained by the existence of a lack of mutual confidence (Knack and Keefer [10]). Moreover, they argue that low levels of trust in a society could probably discourage its processes of innovation. What is very interesting is that societies that are characterized by high levels of trust are also less dependent on formal institutions to enforce agreements. In addition, government officials in societies with higher trust may be perceived as more trustworthy, and their policy declarations are seen as more credible (Knack and Keefer [10]). On the other hand, according to Trigilia, social capital does not have only positive impacts but it can also create obstacles to local development (Trigilia [11]).

Therefore, it is very important, according to the aims of this study, to investigate under what conditions social capital can favour local socio-economic development in Greece. In order to achieve this is necessary to construct first a methodological instrument such as an integrated questionnaire suitable for the measurement of social capital in the specific socio-cultural Greek context and especially in Greek mountainous areas. The main objective of this paper is to validate a social capital measurement tool in order to develop empirical evidence of social capital's association with local development outcomes in two Greek mountainous rural areas. Until this moment there does not exist in Greece such kind of instrument so the development of this is a big challenge. The tool that best served this purpose, and that we used as a pattern, is the social capital questionnaire developed in Australia by the Onyx & Bullen (e.g. Onyx and Bullen [12]; Kritsotakis et al. [13]). The following two sections present a brief summary of the methodologies used to develop a suitable methodological instrument in order to collect both quantitative and qualitative data for the



estimation of the structure and the profile of social capital in the mountain areas of Pilion and Zagori, as well as some first findings from the statistical data analysis used in order to check the reliability of the social capital questionnaire. The final section concludes with the key issues revealed by the whole analysis.

2 Methodology

2.1 The study areas

The research strategy employed in this study consists of two distinctive components: the adoption of a case study approach and the use of both quantitative and qualitative techniques in data collection. Due to the complex nature of the social capital concept, it was decided that the scope of inquiry would be improved by having two different case study areas to provide a more compelling and robust interpretation of the information collected. These areas differed in unemployment rates, population density, real estate value, and percentage of people with a university degree. The Region of Thessaly (*the municipalities of Portaria, Zagora, Mouressio, Milies, Argalasti and the commune of Makrinita*) and the Region of Epirus (*the municipalities of Anatoliko Zagori, Kentriko Zagori, Tymfi and the commune of Papigo*) were the chosen case study areas for this study. Regarding the first case study area, it is one of those which have adequate resident population and economic sustainability, based on stock farming, forestry, traditional industry, tourist and vocational activities. The second case study area includes the village complex of Zagori. This area tends to become highly isolated, since many inhabitants have migrated to urban areas; it also faces considerable environmental problems such as soil erosion, and insufficient preservation of residential properties and monuments. Zagori is the most mountainous and most isolated area in the region. If, as Coleman and others suggest, social capital is most likely to develop in communities with a strong sense of internal identity and boundary, then it is highly possible that socially isolated and rural communities will demonstrate higher levels of social capital (Onyx and Bullen [12]). However, these communities are also likely to demonstrate more conservative attitudes and intolerance to difference, characteristics also believed to be associated with low levels of social capital (Cox [14]; Putnam [15]). Consequently, the context of this case study provides us with the opportunity to investigate social capital in two different areas that make up a representative sample of the Greek mountainous rural area.

2.2 Data collection procedures

A research strategy, which included the use of a locally –based integrated questionnaire, was applied, in order to measure the available stock of social capital and its role in the development of the two areas under study, taking into consideration all seven pairs of dimensions (groups and networks, trust and solidarity, collective action and cooperation, information and communication,



social cohesion and inclusion, empowerment and political action and social innovation). A draft questionnaire was developed and pilot tested by students and staff at Harokopio University and by citizens in some of the case study areas. More specifically, the first version of the social capital questionnaire was pilot tested in a convenience sample of 42 men and women, 19-75 years old who had completed different levels of education. The main purpose of this process was to establish the clarity and comprehension of the questions and instructions. The final survey has been carried out throughout the mountainous areas of Pilion and Zagori and, as was expected, this survey provides the main empirical basis for the study. The final questionnaire contained 102 closed-type questions which are divided into nine different sections and provide information about the characteristics of the residents questioned in each of the study areas as well as robust evidence about the household members' participation in various types of social organizations and informal networks, and the range of contributions that the individual gives and receives from them. Furthermore, it provides information about the citizen's trust towards neighbours, it examines how these perceptions have changed over time and gives evidence regarding the citizens' collective action and cooperation as well as their access to information and communication infrastructure. It also provides information about the nature and the range of differences and mechanisms, which threaten the social cohesion and exclude some population groups from key public services. At the same time, there is some evidence about the individuals' empowerment and political action and the dynamics of social innovation in the two case study areas. The research sample consisted of 318 individuals, aged 15 years (194 of whom were residents in the Prefecture of Magnesia, and 124 were residents in the Prefecture of Ioannina).

Care was taken to obtain a cross-sectional sample of adults in each area. The sample was obtained with the assistance of the staff of registry offices in each municipality and community of those selected to take part in the survey. Each registry office was given detailed instructions and assistance in order to obtain a local sample that was a broad cross-section of adults in each community. Actual methods varied in each area, depending on its specific characteristics, but in all cases, a proportion of the sample was obtained from a door-knocking procedure modelled on the census collection procedure. Some other methods to access people also included setting up stalls in public places such as coffee shops and approaching local community centres such as central squares, schools and local workplaces. Although it was not representative of the whole Greek population, the sample was distributed across different ages, educational levels, income categories, and sources of income.

2.3 Data analysis

The questionnaires were analyzed, using descriptive statistics and factor analysis. Factor analysis was used to identify the elements of social capital and also to determine which questions were related to social capital and which ones were not. A hierarchical factor analysis was carried out using SPSS 13 package. The



factor analysis was conducted to establish the factors of the social capital questionnaire and to compare its structure with that found in the Australian sample (Onyx and Bullen [12]). There were 102 social capital items in the original questionnaire. Based on the work of Onyx & Bullen we finally used 35 of the original 102 items. According to Sapnas and Zeller (2002), a sample size between 50 and 100 was adequate to evaluate the psychometric properties of social science questionnaires (Kritsotakis et al. [13]). By this means, a set of oblique factors may be identified and correlations between them computed. The analysis permitted the identification of a set of specific factors that might identify the separate components of social capital.

3 Some first findings

3.1 Socio-demographic and economic characteristics of the sample in the two case study areas

The sample comprised 318 citizens aged 16 to 73 in the area of Pilion and 23 to 82 years old in the area of Zagori. Of the total sample, 60% in the mountainous area of Pilion were female and the average age was 39, with a standard deviation of 12, while in the mountainous area of Zagori 62% were male and the average age was 44, with a standard deviation 16. With regard to family status, most of the individuals in the area of Pilion were married (70.6%). On the other hand, the majority of the citizens in the area of Zagori were unmarried (51.6%). Also in the area of Pilion 11% of the total sample had university qualifications, whereas 29% had not even managed to finish high school, while in the area of Zagori 14% had university qualifications and 27% had less than high school qualifications. The respective percentages for the Zagori area were 14% and 27%. Twenty four percent of the sample in the area of Pilion had an annual family income ranged from €17,610 to €29,347, while in the area of Zagori twenty one percent of the sample had an annual family income ranged from €8,806 to €11,739. This particularly low income is due to the fact that most of the respondents, in this area, are economically dependent on tourism activities, which is characterised by seasonality. Furthermore, most of the respondents in the mountainous area of Pilion were permanent residents who had lived in the area an average of 31 to 40 years, while the majority of the residents in the area of Zagori lived the area an average of 21 to 30 year.

3.2 Results of factor analysis

Tables 1 presents the most basic statistical sizes of factor analysis, such as the factor loadings of each variable in all the factors and the proportion of total variance that each factor explains. The recognition and the determination of the identity of the main factors were supported in the variables with the higher values of factor loadings. High prices ratings of loadings for one or more variables of factor identified this factor. On the whole, we can say that all the resulted factors have the following characteristics: a) are meaningful in terms of



Table 1: The results of factor analysis.

Variables that best define each factor	
Mountain area of Pilon	Mountain area of Zagori
FACTORS	
Factor 1: quality of life in the local community Satisfied with living in this area (.53) Seek mediation for dispute (.54) Feels isolation by the community (.69) Level of cohesion in the community (.54) Joined local action in emergency (.55) Give help when needed (.56) Influence the community quality life (.49)	Factor 1: quality of life and cohesion in the local community Satisfied with living in this area (.46) Seek mediation for dispute (.65) Stranger accepted (.47) Feels isolation by the community (.67) Feels empathy from others (.60) Level of cohesion in the community (.58) Get help from friend when needed (.26) Asks neighbour to help care for child (.61) Visited neighbour (.50) Importance of relatives relation (.67) Influence the community quality life (.39)
Factor 2: family and neighbourhood connections Asks neighbour to help care for child (-.49) Talked to relatives (.67) Visited relatives (.75) Importance of relatives relation (-.72)	Factor 2: Tolerance to diversity, reciprocity and friends connection Strangers create problems (.69) Local population willingness for help others (.54) Give help when needed (.53) Phone friends (-.62) Visited friends (-.53) Take initiative in the community (.49)
Factor 3: feeling of trust and reciprocity Feels empathy from others (.43) Most people can be trusted (.57) Local population willingness for help others (.82) Visited neighbour (-.44)	Factor 3: family connections, feeling of safety and information Residence place feels like home (-.34) Workplace feels like home (.47) Joined local action in emergency (.39) Most people can be trusted (.44) Talked to relatives (-.44) Visited relatives (-.72) Access information (.53)
Factor 4: developmental character of the local community Socio-economic character of areas' development (.46) Take initiative in the community (.53)	Factor 4: Solidarity and empowerment By helping others you help yourself (.75) Cooperation with local citizens (.50) Ability to control life (.67) Power to change life (.65)
Factor 5: participation in the local community & access in the information Notifying a local problem (.53) By helping others you help yourself (-.67) Cooperation with local citizens (.61) Attended community event (.42) Access information (.45)	Factor 5: value of life and feeling of safety Satisfied with life (.70) Notifying a local problem (-.57) Feels safe in street after dark (.63)
Factor 6: value of life and feeling of safety Satisfied with life (.62) Feels safe in street after dark (.24) Strangers create problems (.37) Ability to control life (.37) Power to change life (.79)	Factor 6: participation, friend connections and character of the community development Attended community event (.58) Importance of friend relation (.53) Active member of local organization (.46)
Factor 7: friends and residence place connections Residence place feels like home (.30) Phone friends (.57) Importance of friend relation (-.58) Visited friends (.71)	



Table 1: Continued.

Variables that best define each factor	
Mountain area of Pilon	Mountain area of Zagori
FACTORS	
Factor 8: work & friend connections, and tolerance of diversity Workplace feels like home (.36) Stranger accepted (.35) Get help from friend when needed (.46) Active member of local organization (.72)	Socio-economic character of areas' development (-.57)

Source: author's elaborations.

the conceptual framework, b) are relatively stable across the two different samples, c) all items included in the factors correlate with the total scale score, d) have eigenvalues greater than 1 and e) all the factors together account for a substantial amount of the variance.

3.2.1 Results of factor analysis for the mountain area of Pilon

The factor analysis gave 12 factors that interpret the 100% of the total variance. The final solution identified eight specific independent factors. The eight factors together accounted for 49.3% of the total variance. The rest of the factors are not commented because the percentage of variance for each one of them is very small in relation to the globally interpreted variance. For the whole sample in the mountain area of Pilon the Kaiser-Meyer-Olkin measure of sampling adequacy was 61%, which is above the recommended .60 (Kaiser [16]). Also the Bartlett's test of sphericity with a significance level less than 0.5 indicates that there are significant relationships among our variables and that our data are suitable for factor analysis. More specifically, the fit statistics is the following: fit Chi-square 1.751 and *df* 595. The eight primary factors were first identified with a principal component analysis (varimax normalized). The meaning of each factor can be inferred from the item content. Factor 1 was labelled "*Quality of life in the local community*" and refers to the cohesive character in the local community and to the willingness of the local population to offer their help when it's necessary. Factor 2 was labelled "*family and neighbourhood connections*" and is defined by questions such as "do you leave / go away from your local community to visit your relatives?". Factor 3 was labelled "*feelings of trust and reciprocity*" and is defined by questions such as "do you agree that most people can be trusted?". Factor 4 was labelled "*development character of the local community*". Factor 5 was labelled "*participation in the local community and access to information*" and refers to participation in community events and to the ability of the local population to be well informed. Factor 6 was labelled "*empowerment and feeling of safety*" and is defined by such items as "do you think that you have the power to change your life?". Factor 7 was labelled "*friends and place of residence connections*" and is defined by questions such as "How much did you talk with



your friends on the phone last week?”. Finally, factor 8 was labelled “*work & friend connections, and tolerance to diversity*” and is defined by questions such as “do you think that the strangers are easily accepted by the local population?”.

3.2.2 Results of factor analysis for the mountain area of Zagori

The factor analysis gave 12 factors that interpret the 100% of total variance. The final solution identified six specific independent factors. The six factors together accounted for 48.9% of the total variance. Also for the whole sample in the mountain area of Zagori the Kaiser-Meyer-Olkin measure of sampling adequacy was 55%. Moreover the Bartlett's test of sphericity with a significance level less than 0.5 indicates that there are significant relationships among our variables and that our data are suitable for factor analysis. More specifically, the fit statistics as follows: fit Chi-square 1,958 and *df* 595. The six primary factors were first identified with a principal component analysis (varimax normalized). The meaning of each factor can be inferred from the item content. Factor 1 is the most important factor of all, as it interprets the 18,15% of the variance of the total number of variables that was inserted into the analysis. This factor was labelled “*quality of life and cohesion in the local community*”, as it refers to the main characteristics of the local community that determine its level and quality of life. Factor 2 was labelled “*tolerance to diversity, reciprocity and friends connection*” and is defined by questions such as “do you think that the strangers create problems in the local community?”. Factor 3 was labelled “*family connections, feeling of safety and information*” and is defined by questions such as “do you go outside your local community to visit your family?”. Factor 4 was labelled “*solidarity and empowerment*” and is defined by questions such as “do you agree that by helping others you help yourself in the long run?”. Factor 5 was labelled “*value of life and feeling of safety*” and is defined by items “if you were to die tomorrow, would you feel satisfied with your life”. Finally, factor 6 was labelled “*participation, friend connections and character of the community development*” and refers to participation in formal community structures.

4 Discussion

Social capital is an important parameter for achieving high levels of local development because of the effect it may have on the application and the outcomes of local development policies. Greater social capital suggests a better quality of local governance and an active local community leading to a balanced socio-economic local development. The study examined the profile of the available stock of social capital in two Greek rural areas. Measuring social capital on an individual and on a community level is not that simple and is more complex than envisaged, but it contributes considerably to the endeavour of increasing the understanding of this concept. The measurement of social capital in Greece, and especially in the Greek countryside constitutes a big challenge, considering that the research on social capital is still at an early phase in Greece. During this research we had the unique opportunity to access two different areas on a wide range of indicators of social capital that will help us to understand the



relationship between their differential socio-economic performance and their available stock of social capital. More specifically, the first case study area, which belongs to the Region of Thessaly, is an area with a relatively “successful” performance and the other area which belongs to the Region of Thessaly is an area with “less successful” economic performance. Our social capital questionnaire has been validated by Australian samples and proved to be a valid and practical tool to measure individual and community level social capital in Greek mountain areas.

Factors analysis produced an eight-factor solution for the mountain area of Pilion, and a six- factor solution for the mountain area of Zagori and appears to offer a reasonable fit to the questions. The first results of the study concluded that these areas have carry different available stock of social capital in quantitative and in qualitative terms, despite the fact that they have quite similar geographical and policy contexts. Nevertheless, a more systematic and detailed presentation of the dimensions of social capital in the two case study areas is needed. The value of different forms of social capital is context dependent. Social capital does not function in a vacuum. It is affected by complements, or reinforces the role of other resources that have relevance to a particular challenge or issue. It is therefore necessary to consider the value of different characteristics of social capital in the context of the specific Greek mountainous rural areas.

Regarding the next step of this study, it will focus on explaining whether the existing stock of social capital determines the socioeconomic progress of a place or the other way round the socioeconomic progress of a place defines the profile of its social capital. In fact, the study will add to the argument that the concept of social capital itself can be used to cover the negative effects that a lack of social and economic resources can have on a community.

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