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## **Social capital in Greece: Measurement and comparative perspectives**

**Nikoleta Jones, Chrisovaladis Malesios, Theodoros Iosifides, Costas M. Sophoulis**

### **Abstract**

The exploration of social capital formation on national level is a multipurpose task. The aim of this article is to analyze each component of aggregate social capital in Greece and to measure social capital across Greek regions. Through the comparison with other European countries it is concluded that several components of social capital in Greece may be characterized as weak. In addition, differentiations across Greek regions concerning the total stocks of social capital and each of its elements are observed. Through the article the need for further research is emphasized mainly on the formation of social capital and its consequences on several aspects of the Greek society.

**Keywords:** Social Capital, Greece, Measuring Social Capital, Greek Regions, Confirmatory Factor Analysis

## **Introduction**

Social capital may be regarded as one of the most influential sociological concepts (Portes 1988). During the last twenty years, theories concerning social capital have expanded rapidly indicating the importance of its investigation in contemporary communities. Although Bourdieu was one of the first theorists who initiated the discussion on social capital (Bourdieu 1986), the work of James Coleman (1988; 1990) and Robert Putnam (1993; 1995) made the concept widely known and used in European and American sociology. Coleman (1990) emphasized social networks which are developed among 'different entities' whereas Putnam (1993, p. 167) underlined social trust and norms of reciprocity which exist among individuals' social networks and influence collective activity. According to several definitions (e.g. Coleman 1990; Putnam 1993; Portes 1998; Woolcock & Narayan 2000; Bowles & Gintis 2002) the main elements which constitute social capital are: social networks, social and institutional trust, political participation, social support and norms of reciprocity.

Over the last decade, extensive research has indicated that social capital is a useful explanatory factor for economic development (e.g. Knack & Keefer 1997), the health sector (e.g. Poortinga 2006) and the management of natural resources (e.g. Pretty 2003). For the exploration of these connections several surveys have been conducted in order to quantify and measure central aspects and features of social capital. According to Grootaert & van Bastelaer (2002), the measurement of social capital may be categorized in three levels: micro, meso and macro. Micro social capital refers to the level of the individual whereas meso and macro social capital refer to larger social groups (e.g. neighborhoods or communities for the former and regions or nations for the latter).

Regarding social capital in Greece, there is a limited literature which analyses it mainly on macro level (e.g. Lyberaki & Paraskevopoulos 2002; Christoforou 2005; Paraskevopoulos 2006). Furthermore, Greece is often not included in European comparative studies (e.g. Beugelsdijk & van Schaik 2005; Kaariainen & Lehtonen 2006). Despite this limitation, a general assumption is that basic elements of social capital in Greece are weak and limited (e.g. Kazakos 2006; Paraskevopoulos 2006). The aim of this article is to contribute to this discussion by focusing certain features of social capital in Greece and comparing them with other European countries. In particular, the most influential factors of social capital in Greece will be briefly analyzed before proceeding to a detailed analysis of different elements such as social trust, networks and institutional trust. Additionally, an index of social capital scores

across Greek regions has been created in order to investigate spatial variations within the country.

### **Investigating Elements of Social Capital in Greece**

Before proceeding to the analysis of components of social capital in Greece, it is necessary to briefly investigate possible influential factors for its formation. An initial point, which has been extensively analyzed in the literature, is the idiosyncratic development of civil society in Greece (Mouzelis 1987, 1995; Mouzelis & Pagoulatos 2003; Sotiropoulos 2004a). Civil society may be regarded as an ‘epiphenomenal’ of social capital (Fukuyama 2001) with significant influence during its creation and development. Several analysts have emphasized the traditionally weak civil society in Greece (Mouzelis 1987; Tsoukalas 1987; Mavrogordatos 1988; Diamandouros 1997, p. 64). This weakness has been attributed to the existence of social and political conditions which have developed since the establishment of the Modern Greek state and are connected mainly with the irregular process of political integration of citizens (see Mouzelis 1987; Tsoukalas 1987; Mavrogordatos 1988)<sup>[1]</sup>.

Additionally, two main features of modern Greece refer to the dominant role of political parties that operate more or less as ‘factions’ rather than open political agents and the highly interventionist state that persists both under progressive and conservative administrations (Tsoukalas 1987; Mouzelis & Pagoulatos 2003). The development of the interventionist state was historically based on patron-client relationships between state agencies and citizens. Although this characteristic had some positive influence during the economic development of Greece in the 60s and 70s (Diamandouros 1997, p. 61), nowadays statism is regarded as a major obstacle for structural changes in both the public and the private sector (Lavdas & Papadakis 2003). Even during the 1980s, when there was an increase of political participation, the state continued to function as a patron, through clientelistic relationships (Kairidis 1997) and political parties were still based on vertical networks (Mouzelis & Pagoulatos 2003). These vertical networks, which have penetrated several sectors of public life, lead to an ineffective public sector accompanied with frequent incidents of corruption (Sotiropoulos 2004b). A significant outcome of the above features was the gradual formation of an utilitarian political culture leading to problems of cooperation and trust between citizens and the state (Mouzelis 1995).

Although an extensive literature emphasizes the above mentioned features, limited publications have analyzed the current situation of social capital in Greece (e.g. Paraskevopoulos 2001, 2006; Lyberaki & Paraskevopoulos 2002; Christoforou 2005). The

majority of these studies underline several of its basic features, mainly including social trust and trust in institutions, formal social networks and the importance of family ties (bonding social capital <sup>[2]</sup>), which are included in informal networks. A basic assumption from the relevant literature is that not all features of social capital in Greece are equally weak. In particular, components of social capital such as family networks and those between friends (informal networks) are regarded as very dense whereas social trust is significantly low.

In the following paragraphs the analysis of social capital is divided into five sections: social trust, institutional trust, social networks, social norms and political participation. The data were obtained from a series of Eurobarometer surveys (1986-2006), the European Values Survey (EVS) of 1999, surveys of the Greek National Center for Social Research (EKKE) and two rounds of the European Social Survey (ESS 2002/2003 and 2004/2005) (Jowell, 2003, 2005). Additionally, a comparison of Greece to several European countries, presented in table one, was conducted.

**[Insert table one around here]**

### *Social Trust*

Social trust refers to the level of trust and trustworthiness which is developed among citizens. In several studies of social capital, social trust is measured through the question “*Most people can be trusted or you can’t be too careful*” (e.g. Paxton 1999; Newton & Norris 2000; Beugelsdijk & van Schaik 2005). Regarding Greece, by comparing data of the Eurobarometer 25 in 1986 and the European Values Survey in 1999 a significant reduction on social trust is observed. Both surveys included a dichotomous question where respondents selected whether ‘most people can be trusted’ or ‘you can’t be too careful’. As presented in Table two, the tendency to trust individuals has dropped significantly from 50.2 per cent in 1986 to 23.7 per cent in 1999. Furthermore, according to data of the European Social Surveys – rounds one and two- where social trust was investigated with a scale for answers from one to ten, Greece presents significantly lower levels of social trust from that of other European countries. In particular, according to wave one of ESS, the mean level of social trust for Greece is 3.64, the lowest from the other European countries included in the study. Similar results are also observed from the second wave of ESS where mean social trust is 3.90, the third lowest after Portugal (3.88) and Poland (3.60).

**[Insert table two around here]**

### *Institutional Trust*

Another important element of social capital is trust in certain institutions (e.g. Newton & Norris 2000; Narayan & Cassidy 2001) both national (e.g. national parliament, police) and international (e.g. European Parliament, the UN). Indicative data for Greece may be derived from the series of Eurobarometer surveys conducted since 1999 (a selection of data from these surveys is presented in table three). From these data it may be observed that politicians and civil services (though few data are available for the latter) are low trusted as opposed to the level of trust towards the legal system and the police. Regarding international institutions, there is a high tendency to trust the European Parliament and a lower tendency to trust the United Nations. Further data are available from the second wave of ESS where trust towards institutions was measured on a scale of one to ten. In particular, low levels of trust were observed towards political institutions (political parties and politicians presented mean trust 3.55 and 3.65 respectively) whereas the highest levels were observed towards institutions of law and order (police and legal system with mean trust 6.08 and 5.45 respectively).

**[Insert table three around here]**

Although the previous data indicate distrust in political institutions it is also useful to compare Greece with other European countries. For this purpose data from European Social Survey (round two) were selected (due to the inclusion of political parties). Data show that Greece presents a mean level of trust close to the average of the selected European countries for the majority of institutions: national parliament (Greece mean: 4.72, average Mean: 4.59), legal system (Greece mean: 5.45, average mean: 5.12), police (Greece mean: 6.08, average mean: 5.90) and politicians (Greece Mean: 3.65, average mean: 3.65). However, Greece has a slightly lower mean than the average concerning trust in political parties (Greece mean: 3.55, average mean: 3.64) and the lowest mean of trust in the United Nations (Greece mean: 4.02, Average mean: 5.24). Finally it is noteworthy that Greece presents the highest mean of trust in the European Parliament (Greece mean: 5.39, average mean: 4.56).

### *Social Networks*

Social networks are regarded as a structural feature of social capital (Uphoff 1998; Grootaert & Bastelaer 2002) and refer to the involvement of citizens in both formal and informal social groups (Putnam, 1998). Due to their importance for civil society development, social networks are included in several studies measuring social capital (e.g. Putnam 2000; Narayan & Cassidy 2001). Concerning social networks in Greece, a general assumption sustained by

the relevant literature is that formal networks are weak whereas informal networks of family and friends are significantly denser (Lyberaki & Paraskevopoulos 2002; Yiannis 2004; Christoforou 2005).

From the first wave of ESS one may observe that passive participation in formal networks (membership) is significantly higher compared to active participation (volunteerism). In particular, 24.8 per cent of the total sample declared being a member of at least one from a list of organizations, whereas only six per cent had done any voluntary work. By comparing Greece with other European countries (using the same data), Greece presents the second lowest level of membership (after Poland) and the fourth in volunteer action in the list of 21 countries.

Apart from the involvement in formal networks, when investigating social capital it is necessary to explore participation in informal networks as well. Informal networks refer to the everyday connections of individuals in non-organized social groups, such as family, friends, colleagues and individuals practicing common activities (e.g. sports). Regarding informal networks in Greece, several authors have underlined the existence of strong family ties (e.g. Lyberaki & Paraskevopoulos 2002). An indicative analysis is the one conducted by van Oorschot et al. (2006), where significantly high scores in the factor 'family' were presented for Greece compared to other European countries.

Concerning the frequency of meetings in the context of informal connections, according to data from the second wave of ESS a significant percentage of Greek citizens is in contact with relatives, friends and colleagues more than once a month (56.1 per cent). Nevertheless, when comparing Greece with other European countries informal networks are not as dense as expected. Firstly, by observing percentages in three possible answers of the question: 'How often socially meet with friends, relatives and colleagues?' ('Never', 'Several times a month' and 'Every day'), Greece presents one of the highest percentages on the frequency of 'never meeting' (6.9 per cent whereas mean per cent of all countries is 2.7). As for more frequent meetings ('several times a month') Greece presents a frequency close to the average of the European countries (Greece: 19.3 per cent, European countries: 19 per cent). Finally, regarding daily meetings Greek citizens declared one of the lowest percentages (10.3 per cent while mean per cent of European countries is 16.1).

Although the frequency of meetings within informal networks is low, the level of importance of family and friends is nevertheless comparatively higher. In particular, the mean for Greek citizens (on a scale of one to ten) for the importance of family is 9.71, the second highest after



Poland (9.74) (according to data from round one of ESS). Regarding the importance of friends the mean score is lower (8.95), however it is above the average (8.26) of the other European countries included in this analysis.

### *Social Norms*

Social norms are a fundamental component of social capital with strong interconnections with social trust and networks. However they have not been adequately explored in the context of social capital in Greece. The main instrument for the exploration of social norms is the construction of questions which investigate the level of compliance with social behaviours necessary for the common benefit (e.g. van Oorschot et al. 2006). Unfortunately, little data exist for the investigation of this component of social capital in Greece. Indicative data can be collected from the EVS of 1999 and the second round of ESS. According to these surveys the least justifiable action for the Greek citizens is the acceptance of a bribe (from citizens or public officers). In particular, according to EVS the acceptance of a bribe is regarded as 'never justifiable' from 64.4 per cent of the respondents whereas the most justifiable action is the claim of governmental benefits which one is not entitled to (only 24 per cent of the respondents regarded this action as 'never justifiable'). Other actions investigated were the avoiding of paying a fare on public transport and cheating on taxes, which were regarded as 'never justifiable' from 36.3 and 37.1 per cent of the Greek sample. Nevertheless, regarding the offering of a bribe, 2.6 per cent of the Greek respondents had proceeded in such an action, ranking Greece in the fifth place from the countries included in the comparative analysis. Higher scores are presented in the Czech Republic, Poland, Ukraine and Slovakia (7.2 per cent, 4.2 per cent, 15.1 per cent and 7.7 per cent respectively).

### *Political Participation*

In order to complete the analysis of social capital in Greece it is essential to investigate the level of political participation. The most indicative question used in this context is the level of interest in politics. Available data (see table four) show a significant decrease in the level of interest in politics, especially in recent years. In particular, the percentage of individuals who are highly interested in politics has dropped from 18 per cent in 1983 to 9.4 per cent in 2004/2005 (ESS, round two). On the other hand, the percentage of individuals who are totally disinterested in politics has remained over 25 per cent since 1983 (except the survey of 1989 which was an election year). In addition, when comparing Greece with other European countries (e.g. from the data of ESS, round one), the level of interest in politics is significantly low in the former.

**[Insert table four around here]**

Other questions which may reveal the level of political participation refer to the involvement of citizens to certain political actions and the tendency to vote in national elections. Regarding the latter, according to data of the ESS (wave one), 83.4 per cent of those who were eligible, voted in the last national elections in Greece. Concerning participation in political actions indicative data may be obtained from the same survey. In particular, in the last 12 months, 4.6 per cent of the sample had signed a petition, 4.3 per cent had taken part in lawful public demonstration, 8.4 per cent had boycotted certain products and 6.6 per cent had bought a product due to ethical, environmental or political reason. All these percentages are well below the average of the other European countries.

### **Regional Differentiation of Social Capital in Greece**

In order to proceed with the investigation of measurable dimensions of social capital in Greece in more detail and to capture spatial variations of crucial features of social capital within Greece a social capital score index was created for the Greek regions (the division is based on NUTS II). The data used for the measurement were obtained from round one of the ESS and social capital scores were calculated with the use of Confirmatory Factor Analysis (CFA).

#### *Data and Methodology: Confirmatory Factor Analysis for Measuring Social Capital*

Factor analysis is a commonly used technique for the measurement of social capital (e.g. Narayan & Cassidy 2001; van Oorschot et al. 2006). In this article Confirmatory Factor Analysis (CFA) was used, which is applied when attempting to explicitly test an already stated hypothesis and provides the opportunity to test hypotheses about a specific factor structure imposed *a priori*. In order to apply the CFA model, 12 ordinal variables were selected, which were regarded as explanatory for the formation and current situation of social capital in Greece. In the following sections the selected variables and the associated factors included in the analysis are briefly described

#### *Interpersonal trust*

In order to measure interpersonal trust two different variables were included. First, the commonly used question of trust (e.g. Knack & Keefer 1997; Paxton 1999; Newton 2001): “Most people can be trusted or you can’t be too careful” and second, a question regarding the level of fairness (e.g. Paxton 1999; Narayan & Cassidy 2001): “Most people try to take

advantage of you or try to be fair". Both questions were measured on a scale from one to ten. These two variables were included in the factor of '*interpersonal trust*'.

#### *Institutional trust*

A second category of variables, necessary for the measurement of social capital, is the level of trust in certain institutions (see Paxton 1999; Newton & Norris 2001; Narayan & Cassidy 2001; van Oorschot et al. 2006). Four institutions were included in the measurement of this study, which represent different fields: political institutions (national parliament), institutions of order and law (legal system and police) and international institutions (the European Parliament). The level of trust was ranked on a scale from one to ten. These variables were included in the factor of '*institutional trust*'.

#### *Civic participation*

Another important indicator of social capital is the participation of citizens in civic actions (e.g. Green & Fletcher 2003; van Oorschot et al. 2006). Two variables were included in the factor of '*civic participation*' in the study. The first one referred whether individuals participated in at least one of a list of political actions (e.g. Signed a petition in the last 12 months; taken part in a lawful public demonstration in the last 12 months; boycotted certain products in the last 12 months). The second variable included, explored whether citizens voted in the last national elections (as proposed by Narayan & Cassidy 2001; Green & Fletcher 2003; Hjollund & Svendsen 2003; Grootaert et al. 2004).

#### *Social networks*

The final factor included in the measurement is related to the density of social networks, divided in formal and informal (Putnam 1998; Krishna & Shrader 2002). In the case of informal networks, two questions were used from the ESS data. First, the level of frequency of meeting friends, relatives and colleagues and second, the level of taking part in social activities compared to others of the same age. These two variables were included in the factor of '*informal networks*'. In order to measure formal networks two new variables were created, which included the membership and volunteer action in at least one of a list of organizations (e.g. sport club, cultural organizations, environmental organizations, trade unions). The distinction between members and volunteers represents passive and active participation (as suggested in the study of Beugelsdijk & van Schaik 2005). Both variables were included in the factor of '*formal networks*'.

### *Path Diagram and Model Fit*

Before proceeding to the Confirmatory Factor Analysis (CFA), a preliminary analysis for the suitability of the data was conducted through SPSS (Norusis, 2006), using the Kaiser-Meyer-Olkin (KMO) measure of model adequacy (Kaiser, 1970). The observed value (0.685) indicated that the data were suitable for conducting CFA. Statistical software LISREL 8.80 (Jöreskog and Sörbom, 1999) was utilized for estimation of the CFA model. Specifically, the model consists of five first-order factors associated with the 12 manifest variables, which are in turn associated with a single second-order factor, the 'Social Capital'. Social norms were not included in the model due to the absence of appropriate variables. Weighted Least Squares (WLS) methodology was implemented for the estimation of the model's parameters as it does not rely on the assumption of multivariate normality for the observed variables. Confirmatory Factor Analysis indicated that the second-order factor model tested provided a good fit to the 12 observed variables.

The estimated CFA model is displayed via the path diagram presented in Figure one. In the path diagram, squares represent the observed variables, whereas circles represent the latent variables (factors). The single-headed arrows are used to connect first-order factors to the associated observed variables and the second-order factor (Social Capital) to the first-order factors. Numerical values along each arrow correspond to the (standardized) factor loadings of each observed variable on the corresponding latent variable.

From the path diagram one can observe that most factor loadings are significant at a five per cent significance level. A large proportion of the variance in each observed variable (with only the exception of the 'vote' variable) is accounted for by the fitted model. Accordingly, all five first-order factors are related to social capital, not equally however. Higher loadings are observed on factors of 'Civic Participation', 'Informal Networks' and 'Formal Networks' (0.55, 0.51 and 0.54 respectively). On the other hand, the lowest loading was observed on the latent factor of 'Institutional Trust' (0.13). The validity of the model was tested by using various fit statistics (e.g. Marsh & Balla, 1994) available by LISREL which verified that the model presents a good fit to the data <sup>[5]</sup>.

**[Insert Figure one around here]**

### *Social Capital Scores across Greek Regions*

It is common to estimate individual factor scores (Bartholomew and Knott 1999) in order to utilize them for subsequent statistical analysis. For instance, predicted factor scores may be used as variables in ANOVA and OLS regression (as dependent or explanatory variables) (e.g. Urban and Hauser 1980) or as input data to cluster (e.g. Funkhouser 1983) and discriminant analysis (Horton 1979).

In the model of this analysis, LISREL 8.80 was used to derive factor scores (Mels 2004) of the second-order CFA model, containing data on the 12 observed variables. These variables were used as indicators of the five first-order latent variables which in turn were used as indicators of the social capital factor. Through the individual score estimates obtained, the mean social capital values were calculated for the 13 Greek regions (Table five). As observed from table five, Greek regions may be divided in three main categories (Figure 2). Regions with the lowest levels of social capital are: the Ionian Islands, Peloponnisos, Ipeiros, Ditiki Ellada and Attiki (social capital score 1.35-1.50). Regions with a medium level of social capital are: Central Macedonia, West Macedonia, Thessalia and Sterea Ellada (scores 1.51-1.65). Finally, the highest stocks of social capital are observed in East Macedonia and Thraki, the islands of the Aegean (North and South) and Crete (scores 1.66-1.80).

**[Insert table five around here]**

**[Insert Figure two around here]**

## **Conclusions and Discussion**

The main purpose of this article was to present certain features of social capital in Greece and to measure social capital across Greek regions. In this final part of the article we initiate a discussion concerning possible factors which may explain the current situation of social capital in Greece and emphasize the need for further research for a complete approach of the current situation of social capital and the use of this knowledge for the improvement of certain community aspects.

A first assumption derived from the previous analysis is that one of the weakest features influencing stocks of social capital in Greece is trust in political institutions. This feature is connected to the irregular development of these institutions since the establishment of the Modern Greek state and the problematic political integration of citizens (see Mouzelis 1987). In particular, the traditionally dominant role of the state and the development of clientelistic vertical networks where political parties were involved in, may have influenced significantly

the low levels of trust towards all political institutions. Especially regarding vertical networks, political parties have traditionally been evolved through them in order to ensure their political influence (see Sotiropoulos 2004b). In addition, during the years, a political culture has been cultivated which promotes the conception of the state as an ‘obstacle’ to the everyday needs and politicians as an alternative ‘path’ for the achievement of individualistic objectives (Mouzelis 1995). Relative to these assumptions, a reduced percentage of interest in politics from the citizens in the last decade was also indicated through this study. This fact may be attributed to some extent to the enforcement of civil society in the recent years which has caused a shift of citizens’ interest from the political parties to different types of formal and informal organizations in the Greek community (Sotiropoulos, 2004a).

Regarding the observed reduced levels of trust towards the civil service, these may be attributed to the general inefficiency of the public sector with the extended bureaucracy and its domination from clientelistic networks (Sotiropoulos 2004b). In this context, several incidents of corruption occur, a fact which is underlined from the high ranking of Greece on the International Corruption Index (Transparency International 2006). Finally, there is an impressive difference on the levels of trust on other types of institutions such as the legal system, the European Parliament and the police which needs further research in order to be explained.

Another element which should be underlined when investigating social capital in Greece is the low level of trust among citizens which has not been adequately explored in the literature. Although the explanation of this social capital component is beyond the scope of the study some first assumption may be indicated. Firstly, the observed reduction in the last 20 years may be connected to the long-term cultivated political culture which has lead to an increase in incidents of free-riding behaviour. On the other hand social trust may have also been influenced from the several major incidents of corruption in the public sector which have been revealed, especially since 1989. The low levels of social trust may also be reflected through the observed tendency to compliance to social norms. The disregarding of institutionalized social norms is a typical characteristic of Greek citizens according to several analysts, which is also connected with issues of political culture (Tsoukalas 1995; Mouzelis 1995). Through the available data, one may claim that citizens’ attitudes reflect the tendency of exploitation of the state and the high occurrence of free-riding behaviours (typical example the claim of false state benefits). Nevertheless, further research is needed in order to investigate the main reasons for the reduced levels of social trust. Indicative example for such an investigation is the exploration of trust towards different social groups, such as

neighborhoods, locals and public officials and the level of compliance towards informal social norms which are not determined from the state.

A final feature of social capital in Greece which needs attention refers to the density of social networks, both formal and informal. The available data revealed that participation in formal networks is not significant and that passive involvement is higher than active. This feature may be connected with the general weakness of the civil society in Greece and its domination from the political parties (Mouzelis & Pagoulatos 2003). On the other hand, several analysts indicate the density of informal networks in Greece (e.g. Lyberaki & Paraskevopoulos 2002; Sotiropoulos 2004a). According to the data presented in this analysis, informal networks do not present such density when compared to other European countries. However, it seems that relatively to other components of social capital (such as social and institutional trust), informal networks are one of the 'strong' features of social capital in Greece. The importance of such networks (especially family networks) may be connected mainly with the function of the family in Greece as a substitute for inefficiencies of the state and as a source of benefits for the individual such as labor market participation (e.g. Chtouris et al. 2006). Nevertheless, available data indicate that there is no difference between the importance of family ties and networks of friends. Consequently, further research is needed in order to indicate several forms of informal networks and investigate their density.

Finally, regarding the measurement of social capital in Greece at regional level, differences are not statistically significant across all regions. Specifically, the results of one-way analysis of variance procedure showed that average social capital score of Kriti region differs statistically significantly (at a ten per cent significance level) from average social capital scores in the regions of Attiki, Peloponnisos, Dytiki Ellada and Ionia Nissia (p-values: 0.005, 0.02, 0.003, 0.096, respectively). Furthermore, the score estimates comparison showed a statistically significant difference between Thesalia and Dytiki Ellada (p-value=0.085), and Anatoliki Makedonia and Dytiki Ellada (p-value=0.094)<sup>[6]</sup>. Through this analysis the existence of variations even in large scale measurements was indicated. For instance, in Greek regions it was observed that the Ionian Islands had the lowest stock of social capital. Nevertheless, not all elements of social capital were the lowest in this region. Consequently, even in a large-scale measurement and in the context of the same nation, differences exist across communities. This assumption is important especially due to the acceptance of the influences deriving from social capital in the context of public policies where the simultaneous enforcement of weak social elements has been supported as an optimum solution (Jones et al. 2007).

Concluding, according to the previous analysis it may be supported that social capital in Greece is weak, especially regarding social trust, involvement in social networks and trust in political institutions. Some first suggestions for the explanation of these features were presented through the previous discussion. However, when investigating social capital in Greece, one should keep in mind that not all of its features are weak, a fact which indicates a differentiation of the consequences - positive or negative - on individual and collective level. Due to the importance of social capital in today's communities, the necessity for further research especially on community (local) level is underlined. Such research in Greece should emphasize on two main issues. Firstly on the further explanation for the formation of social capital in Greece, mainly based on the social and political circumstances since the establishment of the Modern Greek state. Secondly, on alternative ways through which social capital may be enforced. Regarding the latter, such research may facilitate the understanding of the implications of social capital in the context of communities with different social and political characteristics and the promotion of utilizing social capital for the improvement of collective behaviour in order to improve the efficiency of public policies.

## Notes

[1] Political integration of Greek citizens has been characterized by several distinct features. According to Mouzelis (1987, 1995) the process of political integration of Greek citizens may be divided in three periods. Firstly, since the establishment of the Modern Greek state and until 1909 a domination of the political sphere from certain powerful families is observed. A second period is determined until 1967 where there is a cultivation of clientelistic networks between the lower classes and citizens who were already politically integrated. A final period corresponds to the third Greek democracy and initiates in 1974. One of the main features of this period is the increase of political interest among citizens with a significant spatial diffusion of participation. Nevertheless even during this period political integration is influenced from the existence of dense clientelistic networks.

[2] Based on the type of social networks, social capital may be distinguished in three main forms (see Woolcock 1998; Putnam 2000, p. 22; Woolcock & Narayan 2000). Bonding social capital refers to the connections among members of a community (e.g. a neighborhood or even a region) whereas bridging social capital refers to the connections between communities or social groups. Finally, linking social capital, concerns the connections among social groups with different social roles and authorities in a community.

[3] Data of 1999-2000 refer to reliability of institutions, whereas since 2001 the surveys have included the question of trust towards institutions.



- [4] According to the Eurobarometer the scale one to four included 'a great deal', 'to some extent', 'not much', 'not at all'; in the ESS 2002 and 2006 it included 'very', 'quite', 'hardly' and 'not at all interested'. In the research of EKKE the scale was 'very', 'quite', 'little', 'not at all'.
- [5] Fit indices obtained by LISREL: RMSEA: 0.056 (Accepted boundaries for close fit 0.00-0.06), GFI:0.99, AGFI:0.98, NNFI:0.93, NFI:0.94, CFI:0.95 (Accepted boundaries over 0.90)
- [6] In addition, differences across the factors of social capital were investigated. As regards 'formal networks', differences are mainly focused on the Notio Aigaio region, where average score exhibits statistically significant differences (p-value<0.1, ANOVA) compared to all remaining regions. Concerning 'Informal networks' the analysis revealed significant differences of Attiki region when compared to Kentriki Makedonia and Sterea Ellada (p-values: 0.015, 0.003, respectively), and of the Ipeiros region when compared to Sterea Ellada, Kentriki Makedonia and Voreio Aigaio (p-values: 0.005, 0.072, and 0.073, respectively). Most statistically significant differences are observed for 'Institutional trust' factor, where Attiki region exceeds significant differences with regions of Anatoliki Makedonia (p-value=0.006), Thessalia (p-value=0.001), Sterea Ellada (p-value=0.059) and Peloponnisos (p-value<0.001). Regarding 'Interpersonal trust', at a ten per cent level of significance, ANOVA indicated that average scores for the region of Kriti differ from average scores of five regions, namely Attiki (p-value=0.061), Ionia Nissia (p-value=0.057), Dytiki Ellada (p-value<0.001), Sterea Ellada (p-value=0.007), and Peloponnisos (p-value<0.001). Finally, no statistically significant differences in any regions were observed for average scores of 'Civic Participation' indicator.

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**Table 1. Countries used for comparative purposes**

Country	Code	Country	Code	Country	Code
Austria	AT	Hungary	HU	Slovakia*	SK
Belgium	BE	Iceland*	IS	Slovenia	SI
Czech Republic	CZ	Ireland	IE	Spain	ES
Denmark	DK	Italy**	IT	Sweden	SE
Estonia*	ESS	Luxembourg	LU	Switzerland	CH
Finland	FI	Netherlands	NL	Ukraine*	UA
France	FR	Norway***	NO	United Kingdom	UK
Germany***	DE	Poland	PO		
Greece	EL	Portugal	PT		

\*missing ESS round one, \*\*missing ESS round two, \*\*\*missing EVS, 1999

**Table 2. Social trust in Greece(1986-1999)**

Year	Most people can be trusted	You could not be Too careful
1986	49.8	50.2
1999	23.7	76.3

Source: Eurobarometer 25 (1986) and EVS 1999

**Table 3. Trust in Institutions. Eurobarometer (1999-2006)**

EB <sup>[3]</sup>	Polit. Parties	Police	Justice system	Nat. Govern.	Nat. Parl.	Civil Service	Eur. Parl.	EU	UN
<b>1999 (51)</b>	-	55	55	38	51	-	55	45	30
<b>2001 (55)</b>	18	63	62	38	49	31	60	-	43
<b>2002 (57)</b>	16	58	61	39	51	31	58	-	38
<b>2003 (59)</b>	17	68	69	43	56	-	62	55	31
<b>2004 (61)</b>	28	72	73	55	63	-	70	68	40
<b>2005 (63)</b>	23	-	53	40	47	-	59	57	30
<b>2006 (65)</b>	25	-	55	43	56	-	63	63	36

Source: European Commission. Eurobarometer 51, 55, 57, 59, 61, 63, 65

**Table 4. Interest in politics**

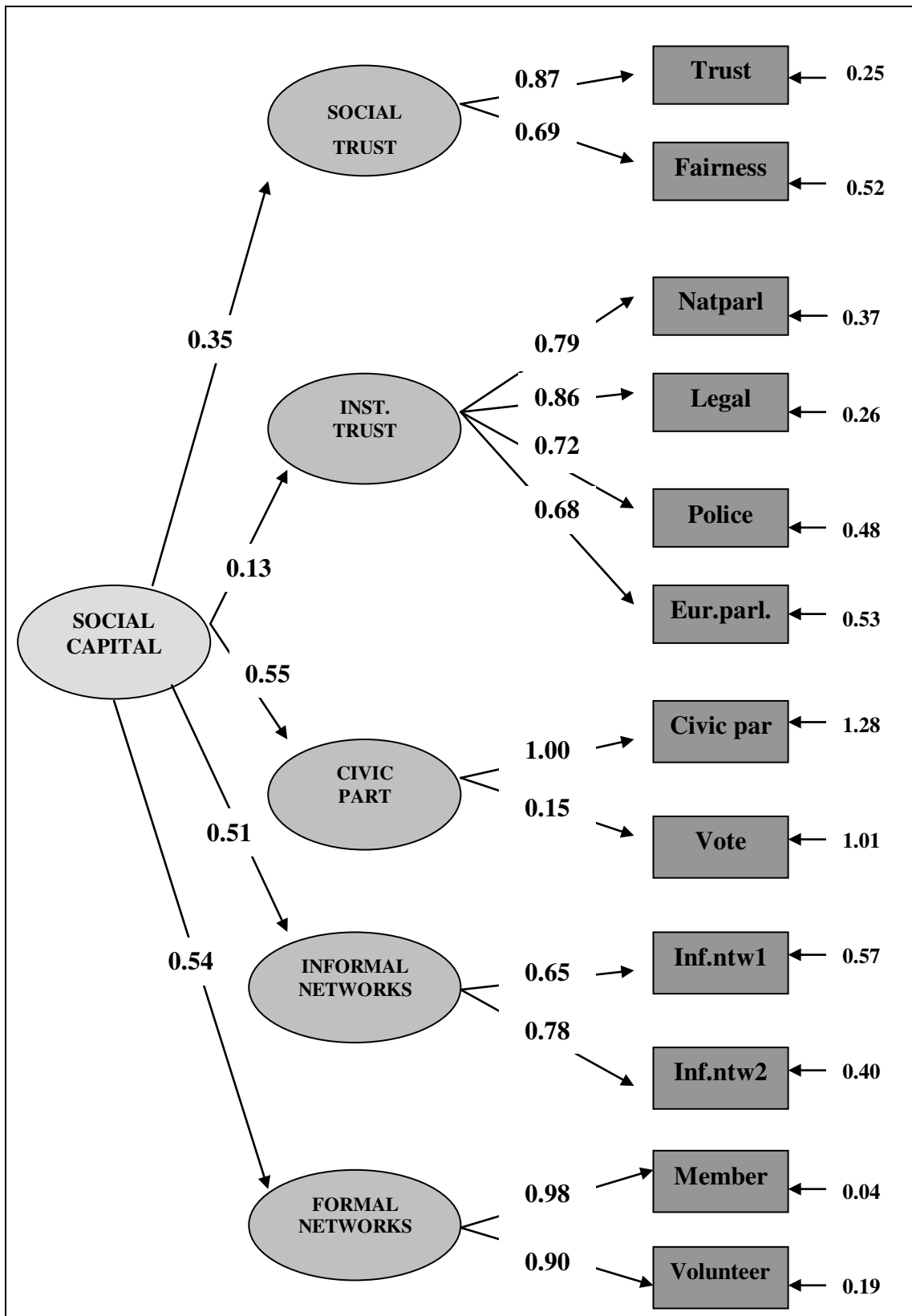
Interested in politics <sup>[4]</sup>	EB19 (1983)	EB 30 (1988)	EB 31 (1989)	EKKE (1996)	ESS (2003)	ESS (2005)
Very interested	18	12	16	16	9.5	9.4
Quite interested	27	31	37	25	22.1	23.4
Hardly	25	32	29	32	34.1	36.3
Not at all interested	30	25	17	27	34.3	30.8

**Table 5. Social Capital Scores for Greek regions**

Regions	Inter. Trust	Inst. Trust	Civic Part.	Formal Netw	Informal Netw	Social capital
<b>Ionia Nissia (GR22)</b>	2.16	5.93	1.14	0.31	2.22	<b>1.36</b>
<b>Dytiki Ellada (GR23)</b>	2.44	5.40	1.05	0.43	2.30	<b>1.44</b>
<b>Peloponnisos (GR25)</b>	2.22	6.46	1.15	0.34	2.37	<b>1.46</b>
<b>Ipeiros (GR21)</b>	3.06	5.61	1.16	0.40	2.15	<b>1.47</b>
<b>Attiki (GR30)</b>	3.01	5.10	1.12	0.39	2.34	<b>1.50</b>
<b>Kentriki Makedonia (GR12)</b>	3.10	4.87	1.06	0.39	2.58	<b>1.59</b>
<b>Sterea Ellada (GR24)</b>	2.58	5.79	1.05	0.42	2.73	<b>1.63</b>
<b>Dytiki Makedonia (GR13)</b>	2.82	6.05	1.13	0.38	2.66	<b>1.67</b>
<b>Thessalia (GR14)</b>	3.15	5.89	1.08	0.46	2.54	<b>1.65</b>
<b>An. Mak. &amp; Thraki (GR11)</b>	3.48	6.02	1.14	0.37	2.48	<b>1.66</b>
<b>Voreio Agaio (GR41)</b>	3.03	5.39	1.03	0.48	2.73	<b>1.69</b>
<b>Kriti (GR43)</b>	3.85	5.26	1.21	0.47	2.60	<b>1.73</b>
<b>Notio Agaio (GR42)</b>	3.40	5.60	1.20	0.86	2.64	<b>1.80</b>

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**Figure 1. Path diagram of the second-order factor model**





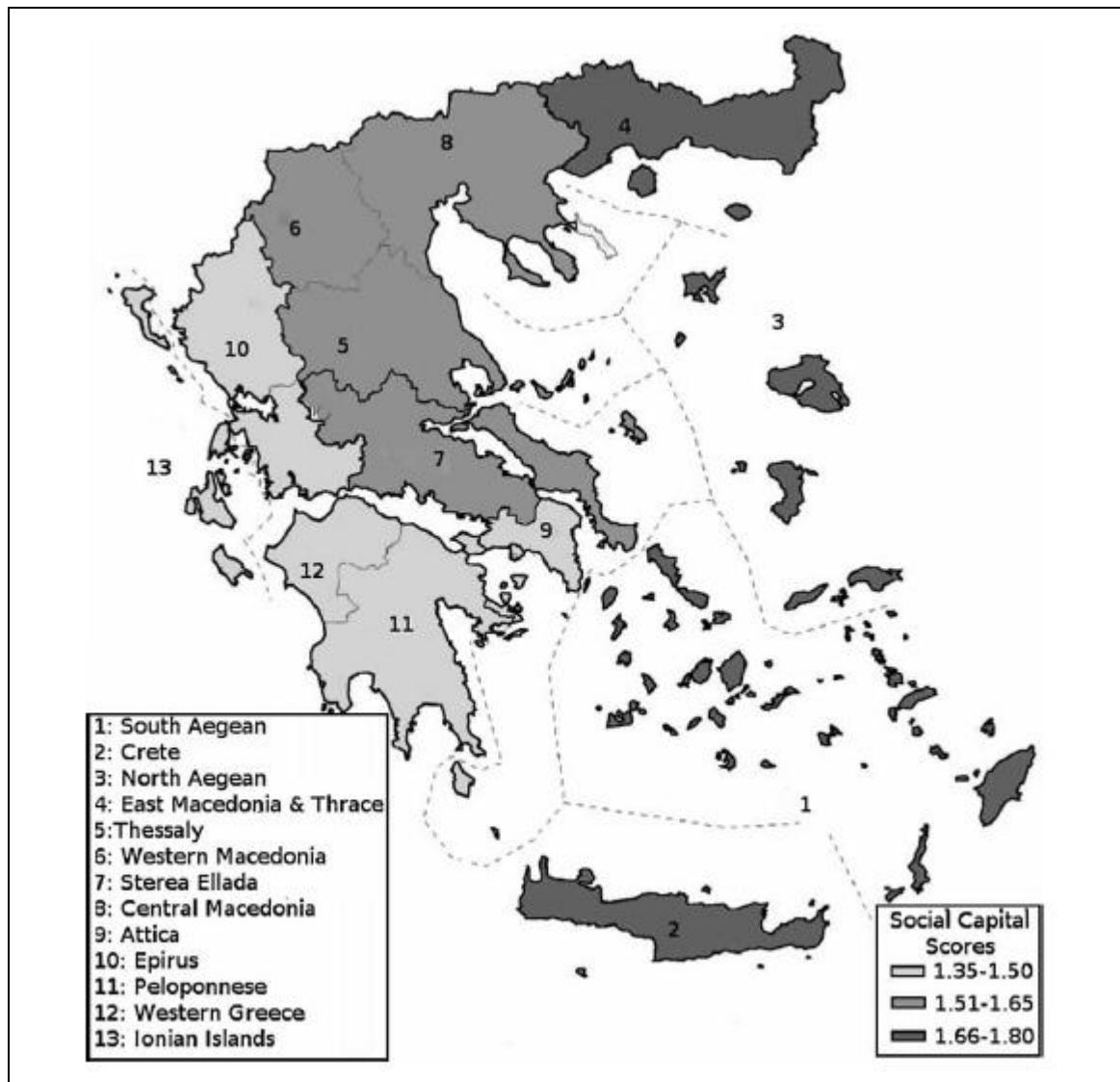


Figure 2. Greek regions shown in three main categories