

**SOCIAL CAPITAL, ECONOMIC GROWTH AND HUMAN DEVELOPMENT:
AN EMPIRICAL INVESTIGATION ACROSS EUROPEAN COUNTRIES**

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**Paper presented at
The 2006 Annual Meeting of the
Human Development and Capability Association,
Freedom and Justice,
29 August – 1 September,
University of Groningen,
Groningen, The Netherlands.**

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Abstract

In this paper our aim is to investigate the impact of social capital on aggregate socio-economic performance across European countries. We argue that social capital, as norms and networks of trust, association and civic engagement, affects human welfare by fostering participation in public discourse and cooperation in the provision of public goods. But the literature on the aggregate effects of social capital, particularly in the developed world, give greater weight to cross-country economic growth and changes in (material) output, and less to human development, capabilities and basic needs. We express the view that differences in growth factors (e.g. physical / human capital, technology) explain only part of the development story in post-war Europe; we need to consider differences in norms and institutions, such as social capital, which affect the means and aims of development policy.

We test these hypotheses empirically by conducting cross-sectional regression analyses for a sample of 32 European – EU and some non-EU – countries, during the post-war period. We first regress average growth on indicators of social capital, such as social trust, group membership and civic behaviour, controlling for standard growth factors. Then we regress the UN's Human Development Index on social capital, controlling for development factors such as public expenditure, the quality of governance, economic growth, trade openness and conditions of political stability and social exclusion. We conclude that social capital, and particularly group membership, is more strongly and positively related to human development than economic growth, *ceteris paribus*. Our results are consistent with a concept of social capital seen not only as an instrument for material abundance, but as an end in itself, also conducive in expanding capabilities through improvements in health, education and living standards. Furthermore, group membership constitutes one of the main factors, following public provisions and government accountability, which contribute to human development. This perhaps captures the impact of social organisations on development by providing public goods and mediating between government and civil society for attaining consensus among conflicting interests. Hence, countries with higher levels of social capital, such as Scandinavia and continental Europe, appear to relate to relatively higher levels of human development, as opposed to South and Central East Europe. This emphasises the importance of generalised norms and networks of participation in enhancing development, which could inform policy in countries such as South and Central East Europe, where patron-client relations and special-interest groups appear to inhibit wider social reform and welfare.

Key words: social capital, economic growth, human development, Europe.

Acknowledgments: I am highly indebted to Heather Gibson and Euclid Tsakalotos for valuable insights, constructive comments and, above all, their moral support in carrying out this project. Also I give many thanks to Ruud Luijkx for his help on the European Values Study database, without which this project would have never got off the ground. A grant was offered by the 'Heraclites' research funds (EPEAEK II), co-financed by the European Union.

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I. INTRODUCTION

In this paper, we investigate the impact of social capital on development across European countries. Social capital is defined as norms and networks of trust, association and reciprocity that facilitate collective action for the pursuit and achievement of mutual benefits. It affects development by fostering participation and cooperation in public discourse for the formation of policy and the voluntary provision of public goods. However, the literature, particularly in the developed world, gives greater weight to cross-country economic growth and changes in output, and less to human development, capabilities and basic needs. We argue that differences in growth factors (e.g. physical / human capital, technology) explain only part of the development story in post-war Europe; we need to consider differences in norms and institutions, such as social capital, which affect the means and aims of development. Our contribution is the empirical investigation of the role of social capital in economic growth and human development for a sample of 32 European countries, including EU and some non-EU, during the post-war period from 1960 to recent years.

First, in Section II, we describe the nature and origin of social capital and operationalise the concept by shedding light on the various aspects of norms and networks that influence widespread cooperation and participation, as well as development and well-being. Then, in Section III, we begin our investigation across Europe by examining the relationship between social capital and economic growth. Following recent research, we regress average cross-country per capita GDP growth (1960-2003) on a set of social capital indicators, namely social trust, group membership and civic norms, whilst controlling for standard growth factors. However, we argue that economic growth offers a narrow definition of development, reducing it to an assessment of material opulence, which tends to ignore the social, political and moral aspects of development and social capital. Therefore, in Section IV, we introduce a multi-dimensional concept of development incorporated in the basic needs and human capabilities approaches. Here the idea is that social capital, as social and political participation, is constitutive of, as well as conducive to a concept of development, which stresses the importance of human capabilities and basic needs, such as health, knowledge, recognition, dignity, social interaction and public discourse. For our empirical study, we introduce measures such as the UN's Human Development Index (HDI), which includes improvements in individuals' health and education, as well as increases in their level of income. Then we regress average HDI (1975-2002) on our different measures of social capital, controlling for a series of development factors, such as public expenditure on education and health, the quality of governance, economic growth, trade openness, conditions of political stability and social exclusion.

We close with some concluding remarks in Section V. One basic conclusion from our analysis is that, within our European sample, social capital is more strongly related to human development than economic growth. This is contrary to findings in the literature for economic growth, which have pointed to the economic and statistical significance of the contribution of social capital. We argue that our results are consistent with a concept of social capital seen not only as an instrument for material abundance, but as an end in itself, also conducive in expanding opportunities through improvements in health, education and living standards. Another important conclusion from our empirical study is that social capital that takes on the form of group membership has a much stronger influence on levels of human development, compared to civic norms and social trust. Again this is counter to evidence produced in the growth literature that stresses the importance of civic norms and social trust, as opposed to group membership, which is often associated to the activities of special-interest groups against the public good. However, this ignores the direct impact of social organisations on development either by undertaking the provision of public goods or mediating between government and civil society to create a forum for achieving consensus amongst conflicting interests.

II. DEFINING SOCIAL CAPITAL

According to Putnam (1993), social capital includes “the features of social organisation, such as trust, social norms and networks that can improve the efficiency of society by facilitating coordinated actions” (p. 167). Cooperation is often required between workers and managers, among political parties, between the government and private groups, between firms and voluntary organisations. Social norms and networks “provide defined rules and sanctions for individual participation in organisations” (op. cit., p. 166), and promote reciprocity and cooperation “founded on a lively sense of mutual value to the participants of such cooperation, not a general ethic of the unity of all men or an organic view of society” (op. cit., p. 168). Putnam provides evidence that attribute the relatively higher levels of socio-economic development and institutional performance of North Italy, compared to the South, to a richer endowment of norms and networks of cooperation and trust.

It is important to note that the type of cooperation produced by social capital is unlike that predicted by standard game theory. Game theorists speak of cooperation attained in conditions of perfect information, third party enforcement, tit-for-tat strategies, indefinitely repeated games (Folk Theorem), and face-to-face interaction amongst a limited number of players. However, “success in overcoming social dilemmas of collective action”, Putnam contends, “depends on the broader social context in which the game is played. ... Voluntary cooperation is easier in a community that has inherited a substantial stock of social capital, in the form of norms of reciprocity and networks of civic engagement” (op. cit., p.166). He speaks of a type of cooperation that articulates the use of pre-existing social connections between individuals, which are often built up for reasons other than their economic value, and range from kinship ties to networks of civic engagement that encompass broader segments of society and support collaboration at community and regional level (professional groups, sports clubs, cooperatives, mutual aid groups, rotating credit associations, cultural associations and voluntary unions) (op. cit., pp. 169, 170). Hence, Putnam uses indices of group membership and civic engagement to measure the stock of social capital. These indices express the extent to which individuals fulfil obligations as social and political entities, as citizens and members of social groups. Most of the empirical literature on social capital continues to use such indices, along with measures of interpersonal trust (see APPENDIX, TABLE 1 for an indicative list of social capital indices employed in the literature).

Of course, not all types of social connections and organisations have a positive effect on social efficiency and economic performance. As Coleman (1988) puts it, although “a group within which there is extensive trustworthiness and extensive trust is able to accomplish much more than a comparable group without that trustworthiness and trust” (p. S101), “a given form of social capital that is valuable in facilitating certain actions may be useless or harmless to others” (p. S98). Olson (1996) sets it bluntly when he refers to the activity of special-interest groups: “An organisation for collective action can shift the distribution of income in the society in its favour through lobbying for special-interest legislation – for subsidies, tariffs, tax loopholes or regulations that limit entry and competition” (p. 75). In other words, there exists a variety of groups, which can occasionally be characterised by socially passive or less benign motives and aims, and, thus, their expansion could hardly be considered a benefit to either widespread cooperation or economic effectiveness. Streeten (2002) discusses the negative effects of certain social organisations, which are referred to as ‘anti-social’ capital (pp. 11-13). Some organisations, such as urban gangs, militia movements, drug cartels, crime syndicates, and racist groups are all part of civil – or rather uncivil – society and suppress other social groups, leading to illegitimacy, bribery, corruption, nepotism, cronyism and crime (op. cit., p. 11). Under these circumstances, the positive effects of intra-group relations in favour of cooperation and the common interest of its members may be offset by the negative effects of inter-group relations (op. cit., p. 10).

However, Olson (1996) recognises that larger, more encompassing groups, i.e. groups that represent a large part of the income-earning capacity of a country, have the incentive to serve wider public interests. He observes that such encompassing interest organisations exist in Austria, Norway and Sweden, and to a lesser extent in Germany and Japan (op. cit., p. 75). Knack and Keefer (1997) speak of forms of generalised trust and civic norms, which are identified with the trust and civic behaviour individuals express towards people who are not close friends or relatives, as opposed to particularised forms of reciprocity and cooperation that follow from expectations based on kinship or intimacy. However, forms of particularised trust and association need not be solely identified with kinship; they may involve groups, which are introvert and occasionally discriminate against the interests and needs of other groups. In this light, Putnam (2000) distinguishes between bonding (or exclusive) and bridging (or inclusive) social capital, where the former represents ties within groups and is “good for undergirding specific reciprocity and mobilising solidarity”, and the latter captures ties across groups and is “better for linkage to external assets and for information diffusion” (p. 22). Woolcock (2002) also proposes types of linking social capital, i.e. alliances with sympathetic individuals in positions of power to leverage resources, ideas and information from formal institutions beyond the community, such as the state, banks and courts (pp. 23-24). Hence, socially excluded groups facing poverty or discrimination (on account of race or gender, for example) would need to build bonds amongst its members, as well as across groups, who sympathise with their situation, in order to voice their needs towards society and particularly towards the state to promote necessary reforms for the resolution of pressing social problems.

Norms and networks of generalised reciprocity are considered to be a highly productive component of social capital, by reconciling self-interest and solidarity and creating dense, horizontal networks of social relations (Putnam, 1993, p. 172). As Polanyi (1944) discussed several decades ago, reciprocity assists the give-and-take of goods and services in the absence of written records and elaborate administration (pp. 48-49). This is because they depend on a type of mutual regard and sympathy, and on a sense of community and social obligation. As Uphoff (1999) states, the word ‘social’ implies some personal attachment, cooperation, solidarity, mutual respect and sense of common interest; hence, “the defining characteristic for the meaning ‘social’ is there being *some degree of mutuality, some degree of common identity, some degree of cooperation for mutual, not just personal, benefit*” (p. 222). Therefore, generalised norms and networks of cooperation and reciprocity should not be viewed in the present context as a corollary of a generalised morality identified with the unity of all men or a universal ethical principle. The latter tend, according to Granovetter (1985), to oversocialise human behaviour, subjecting it completely to rules and norms. It is more a result of identifying with the problems, needs and values of other individuals and groups and creating procedures, rules of conduct and networks to serve a general or common interest for overall progress and development.

On the whole, individual motivations that undergird social capital are most likely to be mixed, drawing on some combination of self-serving, instrumental and altruistic, normative considerations. In this sense, social capital is conceived as much more than a mere lubricant or means for the effective conduct of economic transactions and the pursuit of self-defined interests by individuals. As Streeck (1998) points out: “to make economic liberties conditional on compliance with social obligations, [is] *for the sake not only of the former, but also of the latter*. It thus leads to a view of the ‘embeddedness’ of the economy in society” (p. 206). For example, the pursuit of social justice as an end in itself may be supportive of economic action to the extent that it sets the limits within which it may take place (op. cit., p. 216). For developed countries such as Germany and Japan, he argues, industries and states coordinated action to construct strategies and policies for securing employment, wages and equity, within the scope of a political logic of social integration, overriding, when necessary the competing logic of economic efficiency (op. cit., pp. 200-206, 208). This is unlike traditional economic views that interpret collective action as the right to authoritatively

intervene in markets to correct for imperfections, particularly in terms of distribution. Rather it is associated with views that see the very objective of economic efficiency as conditional on the effective enforcement of social constraints, which will preserve social interaction and political intervention for the pursuit of social values or collective political preferences of citizens (op. cit., p. 198). Hence, improved economic performance in terms of both efficiency and equity, requires a restructuring of collective identity and shared values, which cannot be normally sought for economic reasons and in response to rational voluntarism (op. cit., p. 204).

The effectiveness of generalised collective attempts to offset outcomes produced by special-interest groups depends on the historical and institutional context within which norms and networks emerge and evolve. This is determined by the interaction of personal dispositions and beliefs with collective processes of socialisation and political participation. It is not only discounted payoffs, repeated interaction or even socio-economic characteristics of an individual that matter, as argued by economists such as Becker (1996) or Glaeser, Laibson and Sacerdote (2000). As Whiteley (1999) argues, social capital is also generated by individuals' normative beliefs, moral code, and perceptions of membership in 'imaginary' communities (pp. 29-31). He also recognises that collective identities and shared values are not a pure result of biological or psychological properties of the individual, but are influenced by aggregate mechanisms of socialisation and participation in voluntary organisations (op. cit., pp. 29-31). Hence, the evolution of social capital is affected by path dependence (Putnam, 1993, pp. 178-179), by learning-by-doing processes (Ostrom, 2000, p. 184), by state intervention (Levi, 1996, p. 51; Rothstein and Stolle, 2001, pp. 5, 7; and Rothstein, 2003, pp. 59-60), and by conditions of income inequality and social segregation (Bourdieu, 1986, pp. 250-251). Apparently, factors such as a history of corrupt and authoritarian governments, as well as inequality and social fragmentation cultivate distrust towards the state and organised groups, which may have a negative impact on the development of collective action and social capital.

However, according to Fox (1996), the growth of the building-block organisations of an autonomous civil society in an authoritarian and sectarian environment requires the synergy of state and society or what he terms the political construction of social capital. As the author argues, to rely on the state or society alone, according to most state- or society-oriented approaches to collective action and civil society-building, does not explain the origins of institutions and thus cannot resolve the reconstruction of social capital, especially in societies with low levels of trust and civic behaviour. His long-term regional case studies in rural Mexico show that the development of social capital can be co-produced by the state and local societal actors, such as grassroots and regional organisations. On the one hand, state reformists create political opportunities, following pressure from local groups for securing political, civil and social rights. On the other hand, local groups produce social energy, shared values and common goals, following support from external groups (international development or religious and human rights groups) and inspired leaders, who are willing to pay the 'irrational' start-up costs of mobilisation.

Few papers have addressed the problem of building social capital within an environment of social divergence and conflict. Fine (2001), an economist and critic of the concept of social capital, agrees that social capital cannot be addressed outside of a context of conflict and power relations. He observes that "economists tend to view social capital positively, as a means both to understand the response to market imperfections and to correct them" reflecting the absence of concepts that are standard in social theory, such as conflict and power (op. cit., p. 123). Indeed, he cites studies in which structures of inequality and power support synergy relations across the public-private divide that reinforced relationships founded on patronage and clientelism rather than fostering more inclusive forms of civic engagement. He, thus, becomes skeptical of whether social capital, as widespread trust and civic engagement, could overcome conditions of conflict and power and resist the pervasive

forces of parochial groups. He argues: “if conflict undermines the notion of social capital, than why not take conflict and its theoretical underpinnings as a starting point, rather than a social capital that has been rendered both ambiguous [if used to sustain power] and redundant [if it cannot overcome power]?” (op. cit., p. 123).

A response to this sort of skepticism may come from Heller (1996), who explores the civics movement and local government restructuring reform in the region Kerala of India. He observes that the mobilisation of industrial workers has led to the adoption of progressive policies and high levels of development unlike any other region in India, despite hostility from the national state and social castes. Indeed, “the high level of social development and successful redistributive reforms are a direct result of mutually reinforcing interactions between a programmatic labour movement and a democratic state” (op. cit., p. 1055). Thus, synergy relations between state and society are capable of creating the institutional forms and political processes required for negotiating the group compromises through which redistribution and growth can be reconciled. Of course, Heller recognises that “not all of collective action are conducive to developmentally useful forms of state intervention” (op. cit., p. 1057). He points to the politics of cast and communal groups, which do not readily lend themselves to positive-sum accommodations, geared as they are to securing particularistic interests and giving rise to patronage politics. Moreover, he observes that the social structure of castes and factions in the region of Kerala is as diverse as any other region in the subcontinent. Nonetheless, what makes this region exceptional is that “the cacophony of fragmented societal demands has taken a back seat to demands of a more programmatic and encompassing character ... conducive to the transformative projects broadly associated with development, particularly those of a redistributive character” (p. 1057).

Woolcock (1998) analyses the type of social networks and organisations that cultivate forms of reciprocity, trust and cooperation that are beneficial to development and well-being. He introduces two concepts that refer to two distinct but complementary forms of social capital, namely ‘embeddedness’ and ‘autonomy’ (op. cit., p. 162). He argues that economic exchange is embedded in social relationships, cultural practices and political contexts. He also recognises, though, that a high degree of density and closure characterising the social relations of a community could in fact impose considerable constraints on successful members to make the transition to membership in the larger, more extensive exchange networks. Additionally, the social ties among powerful institutional actors, especially those transcending the public and private realm, could function as vehicles of corruption, nepotism, or exploitation against development and well-being. Hence, a complementary set of autonomous social ties needs to be established, alongside embedded social relations and exchange networks at both the micro and macro level (op. cit., pp. 163-164). Therefore, development depends on the willingness and capacity of a society to combine these dimensions of social capital and produce what he terms beneficent autonomy, where social opportunity at the micro level is combined with a developmental state at the macro level (op. cit., pp. 175-176). He mentions the case of Japan and S. Korea, where a concrete set of social ties provide institutionalised channels for social participation and negotiation of goals and policies that secure basic needs (e.g. mass education and full employment) and promote organisational effectiveness and efficiency, while minimising the potential for corruption and malfeasance (op. cit., p. 178). This reflects what Woolcock and Narayan (2000) describe as the synergy view to social capital.

The question that remains, however, is what do we mean when we say ‘development’? What are the objectives or dimensions of development that we wish to fulfil? What type of development do we envision and wish to achieve by exploiting our stock of physical and social resources? To this issue we turn to in the following section.

III. SOCIAL CAPITAL AND ECONOMIC GROWTH

A. Earlier work of social capital and growth

In contemporary economics, most researchers study the causes and prospects of growth by appealing to so-called neoclassical theories of economic growth. Neoclassical models of growth can be said to stem from Solow (1956, 1957) and Swan (1956) (Jones, 1976, p. 69). The Solow-Swan model assumes a Cobb Douglas production function, where the levels of aggregate output or income depend on the stock of capital and labour inputs available to an economy, as well as a time factor to account for (neutral) technical change. Hence, the evolution of worldwide economic growth or cross-country income differences is explained by differences in technological change or what has been termed the Solow residual (op. cit., p. 23). New growth theories drop the original assumption of exogenous, constant technological change and attribute differences across countries and through time to different levels of knowledge and human capital investment, or differences in the organisation of production, societal arrangements, policy institutions and public provisions (Pack, 1994, pp. 60, 66, 67). To empirically test the impact of social, cultural, and political institutions on per capita income, controlling for the stock of capital and labour inputs, researchers have employed cross-country growth regressions, pioneered by the work of Barro (1991) and Mankiw, Romer and Weil (1992).

Barro-type growth regressions, as they are called, have been applied in a series of studies that empirically investigate the effect of social capital on development across regions or countries (see, e.g. Helliwell and Putnam, 1995; Knack and Keefer, 1997; Whiteley, 2000; Zak and Knack, 2001; Rupasingha, Goetz and Freshwater, 2002; and Beugelsdijk and Schaik, 2005). The hypothesis tested is whether societies with richer stocks of social capital, in the form of generalised trust, group membership or civic behaviour, achieve higher growth rates of per capita output. The rationale is that social capital fosters growth by reducing transaction and monitoring costs, supporting government trustworthiness and policy credibility, promoting innovation and public goods provision and enhancing the level and character of political participation and citizenship. Most studies provide evidence of the positive and statistically significant impact of social capital on the average growth rate of per capita GDP. This suggests that policies in favour of expanding the stock of social capital in underdeveloped societies could improve economic performance.

Cross-country studies include the work of Knack and Keefer (1997), Whiteley (2000) and Zak and Knack (2001). Knack and Keefer (1997) examine cross-country growth differentials for the period 1980-1992 in a sample of 29 market economies from around the world. Whiteley (2000) and Zak and Knack (2001) examine a larger sample, including a larger growth period, 1970-1992, as well as a larger number of countries: Whiteley studies a sample of 34 countries with data from the World Values Survey; Zak and Knack expand their sample to 41 countries by further exploiting data from the Eurobarometer surveys. These studies regress average cross-country per capita GDP growth on various social capital indicators, whilst controlling for a series of standard growth factors, namely initial per capita income, school enrolments (primary and secondary) and investment in physical capital. Knack and Keefer (1997) and Zak and Knack (2001) introduce a measure of generalised trust which asks whether most people can be trusted, especially strangers; Whiteley (2000) expands his trust indicator to include trust in family members and fellow nationals. In general, the authors observe that trust exhibits a strong and significant relationship to growth. The robustness of trust in the growth regressions applied by Zak and Knack is further substantiated by sensitivity analyses and tests conducted by Beugelsdijk, Groot and Schaik (2004). Whiteley also supplements his empirical study with robustness tests that confirm the strong impact of his trust indicator on economic growth.

Knack and Keefer (1997) also introduce an index of civic norms to measure the stock of social capital in each country. Norms of civic cooperation are calculated from responses to questions about the extent to which one justifies certain acts, such as not paying taxes or accepting bribes. Similar to trust, this variable has a strong effect on growth, so that more civic behaviour is associated with higher growth rates. In contrast, their group membership variable, expressed as the average number of groups per respondent in each country, appears to be statistically insignificant in the growth equations. The authors speculate that this might be due, as Olson argues, to the negative effects imposed by rent-seeking organisations, which offset any positive effects of more encompassing groups. In order to capture the opposite effects of different types of groups, the authors propose to differentiate ‘Olsonian’ from ‘Putnam-esque’ groups, by including trade unions, political parties and professional associations in the former, and religious / church organisations, cultural groups and youth work associations (scouts / guides) in the latter (op. cit., pp. 1272-1273). No meaningful results are produced with regards to the role of groups in economic growth. As the authors state, it is perhaps the case that the two previous social capital variables of trust and civic norms actually capture the socially beneficial dimensions of social capital in terms of generalised trust, as opposed to group memberships “that do not permit us to distinguish between socially efficient and inefficient memberships and activities” (op. cit., p. 1274).

However, regional empirical studies point to the economic and statistical significance of membership variables. For instance, Rupasingha, Goetz and Freshwater (2002) explain cross-regional growth differentials within a sample of 3040 US counties, based on national data sources. Social capital is measured as the density of social groups and organisations per 10.000 persons in each county (op. cit., pp. 146, 147). This study also applies a distinction similar to the one employed by Knack and Keefer (1997) between ‘Putnam-type’ groups and ‘Olson-type’ groups (op. cit., p. 143). Results suggest that social capital variables are robust even after inclusion of ethnicity and income inequality (op. cit., p. 148, Table 2 and p. 149). What is interesting is the *positive* and statistically significant coefficient for *both* ‘Putnam-’ and ‘Olson-type’ groups. The authors argue that this offers “no support for Olson’s argument that organisations with redistributive goals encourage anti-growth rent-seeking. In contrast, rent-seeking organisations in this data set have a positive and significant effect on growth” (Rupasingha, Goetz and Freshwater, 2000, p. 569 and p. 570, Table 1).

Further evidence on the significant role of group membership is offered by another cross-regional study conducted this time across the Atlantic within the continent of Europe. Beugelsdijk and Schaik (2005) take a sample of 54 European regions from 7 countries, namely France, Italy, Germany, Spain, The Netherlands, Belgium, and the United Kingdom, based on data from the European Values Study (pp. 306-307). They regress cross-regional growth on measures of generalised trust and group membership (the average score per region of respondents belonging to at least one association) (op. cit., pp. 311-312). Also, the authors distinguish between Putnam groups and Olson groups according to the definition of Knack and Keefer (1997) (op. cit., p. 311), as well as between passive and active group membership, which includes respondents that are not only members, but also do unpaid voluntary work (op. cit., p. 311). The rationale is that it is active membership that provides spillover channels, with “the level of unpaid voluntary work [being considered] as an indication of collective feelings of responsibility. As such these moral norms may have positive effects on the provision of public goods” (Beugelsdijk and Schaik, 2001, pp. 13-14). Their results show that the trust variable is not statistically significant. In contrast, group membership has a coefficient that is positive and statistically significant at the 5% level, regardless of whether it reflects passive or active group membership. Extensive robustness analyses also show that active membership is robust, whilst trust is never statistically significant (op. cit., pp. 318-320 and p. 319, Table 4).

B. Empirical study across European countries

1. *Stylised facts on economic growth and social capital*

In the present section, our aim is to explain economic growth across European countries in terms of differences in their relative stock of social capital. Similar to prior research, we apply Barro-type growth regressions and use some standard indicators of social capital, namely: (i) group membership, as the percent of individuals in each country that is a member of at least one social group or organisation (Beugelsdijk and Schaik, 2005); (ii) social trust, as the percent of individuals in each country claiming that, in general, most people can be trusted (Knack and Keefer, 1997; Zak and Knack, 2001); and (iii) civic norms, as the average across countries of four items each capturing, on a scale from 1 to 10, whether individuals justify certain unsocial acts (claiming benefits to which one is not entitled, refusing to pay taxes, lying for one's own interest, and accepting bribes), so that an increase in this index would reflect a fall in social capital (Oorschot and Arts, 2005). Data on social capital represents figures for the year 1999 and is derived from the European Values Study (2003) (EVS, hereafter), which is part of the World Values Study, employed by most empirical work.

We contribute to prior research by expanding the time period examined to cover the period from 1990 to the beginning of the new millennium (- 2003). Also, we expand our sample to include a total of 32 European countries which extend beyond the typical set of Western European countries of the EU. Hence, we introduce countries of Central East Europe, which have recently become members of the EU or stand as candidate countries for future accession, as well as countries of the former Soviet Union. We are able to enrich our sample in terms of time and countries, because of data made available by the latest wave of the EVS, which provides not only recent data for social capital, but also for a larger group of European countries. Based on these items, we wish to examine whether the hypotheses developed and tested in the relevant literature on the relationship between economic growth and social capital still hold for Europe following developments in the global economy that took place after 1990 and within the traditional Eastern communist bloc.

Let us discuss the evolution of economic growth and social capital in our sample of European countries (see APPENDIX, TABLE 2, 3 and 4). Economic growth is measured as the average growth rate of GDP per capita for the period 1960-2003.¹ We observe that economic growth is lowest for countries of the former Soviet Union (Ukraine, Russia, Lithuania and Belarus), along with Romania and Croatia; the highest growth rates are achieved by countries that were the least developed in the EU-15, such as Ireland and countries in the South of Europe, namely Greece, Spain and Portugal. Overall, it is countries of the former Eastern bloc that suffer very low, even negative rates of economic growth, whereas less developed European countries that have been members for at least two decades have higher growth rates.

With regards to social capital, countries in the Northern Scandinavian regions have higher levels of group membership and social trust, whereas countries in South and East Europe have much lower levels of membership and trust. The situation with civic norms is less clear-cut. This probably reflects a common problem in attitudinal studies concerning a respondent's reluctance to admit engaging in such action, which depends on both psychological and cultural factors. Indeed, whilst the correlation between group membership and trust is rather high and statistically significant at the 1% level ($r^2=0.76$), the civic norms variable is weakly

¹ The reference period for all variables may vary across countries, given the availability of data. For instance, it is the case that for most East European countries data is not available until the year 1990, so the initial year would be the year 1990, rather than 1960.

correlated with both membership ($r^2=0.00$) and trust ($r^2=-0.04$). There also appears to be a weak relationship between social capital variables and economic growth. The correlation of per capita GDP growth with group membership ($r^2=0.22$), social trust ($r^2=0.08$), and civic norms ($r^2=-0.37$) is very small and statistically insignificant.

However, one might argue that our membership index captures passive or even less benign forms of participation, which could not be an appropriate indicator of generalised trust and reciprocity. Hence, we create measures of social capital, which distinguish between passive and active group membership, as well as membership in Putnamian and Olsonian groups (Beugelsdijk and Schaik, 2005) (see APPENDIX, TABLE 4). We observe that active group membership, measured as the percentage of group members also performing unpaid voluntary work, is smaller in all countries, compared to passive forms of membership, since the average of active membership falls to almost half, from 47.9 to 25.1%. It is interesting to note though that both forms of membership are highly and positively correlated ($r^2 = 0.87$), i.e. countries that tend to have relatively higher levels of passive group membership are also the countries with higher levels of active group membership. This perhaps means that passive forms of group membership are not completely devoid of the norms and motives that rule active forms, since passive forms of association could corroborate a sense of duty towards active voluntary contributions and services from the part of the individuals that comprise these organisations. However, similar to passive group membership, active group membership appears to be weakly correlated with economic growth ($r^2 = 0.28$).

Finally, membership in Olsonian groups – political parties, professional associations and trade unions – is much higher compared to membership in Putnamian groups – religious, cultural and youth work groups – in East European countries (Belarus, Russia, Ukraine, Slovenia, Bulgaria, Poland, and Latvia); but this is also true for more developed, high-social capital, countries of Northern Europe (Denmark, Netherlands, Finland and Sweden). Hence, care must be taken in interpreting the role of Putnamian and Olsonian groups, since differences in historical, cultural and legal factors influence the effectiveness of groups across countries. In Denmark, for instance, the dominance of trade unions might be raising the proportion of membership in Olsonian groups, perhaps because of legislature which dictates mandatory participation; but this does not mean that, following Olson's terminology, they function as distributional coalitions. They might operate as more encompassing social organisations, which would fall under the label of Putnamian-type groups. This might be contrary to some social groups in East European countries, where factors of uncertainty or corruption might allow for rent-seeking and lobbying practices, which characterise Olsonian-type groups. Also it is worth noting that in our sample membership in Putnamian and Olsonian groups are highly and positively correlated ($r^2 = 0.79$), so that countries with higher membership in Putnamian groups also tend to have higher membership in Olsonian groups, despite the apparent conflicting motives and aims of these groups. Again it appears that membership in either set of groups is weakly correlated with aggregate growth rates ($r^2 = 0.27$ for Putnamian groups and $r^2 = 0.00$ for Olsonian groups).

2. Regression results

We proceed to a multi-variate analysis to examine whether there is a role for social capital after controlling for other factors that might influence economic growth. Our regression specification and measures for growth factors are based on the work of Barro (1991), Mankiw, Romer and Weil (1992) and Whiteley (2000). Hence, we regress economic growth, expressed as the log difference of per capita GDP (in constant local currency) for the period 1960-2003, on our social capital indicators, controlling for: (i) convergence, represented by the initial level of per capita GDP (in international 1995 US \$); (ii) investment in physical

capital, measured as the share gross fixed capital formation in GDP; (iii) investment in human capital, measured as the rate of gross school enrolments in primary and secondary education; and (iv) the average rate of population growth to capture changes in labour inputs. Explanatory variables are averaged for the period in question and expressed in natural logarithm, in accordance to prior cross-country studies.

Regression results reveal that convergence has not occurred, since the coefficient of initial GDP is statistically insignificant and, in most cases, positive (see APPENDIX, TABLE 5). Primary school enrolments and social capital for the period 1960-2003 appear to be the only variables with a positive and statistically significant effect on growth. For the period in question, group membership and civic norms, as opposed to social trust, have statistically significant coefficients (equations 2, 3 and 4). In particular, a 1% increase in group membership would bring about a rise in the log difference of per capita GDP by approximately 0.7%.² The variable for civic norms also has a statistically significant coefficient and with the expected – negative – sign, so that an increase in the average score of justifying practices such as not paying taxes, would cause a fall in economic growth. Indeed, a 1% increase in the civic norms index would lead to a 1.2% fall in the log difference of per capita GDP. Finally, it is worth noting that in both periods (1960-2003, 1990-2003) membership in Putnamian groups has a positive and statistically significant coefficient at the 1% level, as opposed to membership in Olsonian groups, which is statistically insignificant, albeit with the expected – negative – sign (equations 5 and 10). This implies that a 1% increase in participation in religious, cultural or youth work groups (Putnamian groups) would increase the log difference of GDP per capita by 0.8%. However, given the low explanatory power of the regressions, it is possible that social capital variables might be capturing differences across countries that affect growth, but are attributed to factors other than group membership.

These findings are contrary to prior cross-country empirical work which points to the positive impact of social trust and civic norms variables, as opposed to group membership. More importantly, our results contradict evidence in the wider growth literature of the negative impact of initial GDP and population, and the positive effect of investment and education on economic growth (see, for instance, Kormendi and Meguire, 1985; Grier and Tullock, 1989; Barro, 1991; Levine and Renelt, 1992; Mankiw, Romer and Weil, 1992; Granato, Inglehart and Leblang, 1996; Swank, 1996; Knack and Keefer, 1997; Kalaitzidakis, Mamuneas and Stengos, 2000; Zak and Knack, 2001; Beugelsdijk and Schaik, 2001; Beugelsdijk, Groot and Schaik, 2004; Beugelsdijk and Schaik, 2005).

We manage to replicate results of prior research only when we restrict our analysis to a group of Western OECD countries and a period from 1960 to 1985, in accordance to most studies.³ In this light, we speculate that our results are a consequence of either the larger time period or the expanded sample of European countries employed. We, therefore, repeat regressions separately for East and West European countries, by restricting our analysis to the period 1990-2003, since data for East European countries is generally available from 1990 onwards. To begin with, we would expect that East European countries, as a consequence of their former communist regimes and current efforts at transition to a market economy, would have certain idiosyncrasies that cannot be explained by standard neoclassical growth models, which assume competitive market economies. Indeed, our regression results for East Europe produce coefficients that are statistically insignificant and without the expected sign: positive for initial GDP and negative for investment. Also social capital variables are in most cases statistically insignificant and negative. This perhaps reflects the disenchantment and distrust

² The case is similar if we replace our standard index of group membership with measures of active group membership.

³ Regression results are not presented, but are available upon request by the author.

of individuals in East Europe towards collective organisation, which has been associated with the inequality, uncertainty and corruption displayed particularly by the leadership of social groups during communist years, as well as after during the current period of transition. However, it is interesting to note that, at least for the period 1990-2003, the situation for Western 'market' economies is not that different. Very low and statistically insignificant coefficients for initial GDP, as well as negative and statistically insignificant coefficients for investment shares, reveal a divergence from predictions of traditional neoclassical growth models.

Overall, growth regressions do not perform well when including East European countries and periods after 1990. Such results give rise to conceptual and empirical issues associated with the neoclassical framework. Theoretically, our regressions might be reflecting problems related to assumptions of perfect competition and a homogeneous production function; empirically, they might be revealing misspecification or sampling errors, which are characteristic of most social science empirical research. Thus, the question remains: does social capital explain cross-country differences in levels and growth rates of income? Within the framework we propose, this question is perhaps not the one we should be asking in the first place. We argue that the concept of social capital may be more consistent with broader notions of aggregate socio-economic performance beyond that of economic growth. Hence, rather than addressing the relationship between elements of social capital and economic growth, we restate the question to address the relationship between social capital and a notion of human development, i.e. a type of development seen "as a process of expanding the real freedoms that people enjoy" (Sen, 1999, p. 3).

IV. SOCIAL CAPITAL AND HUMAN DEVELOPMENT

A. Earlier work on social capital and development

Neoclassical development theory is based on the idea that economic growth – the expansion of per capita output, measured as GDP – would resolve problems associated with underdevelopment, i.e. structural imbalance and instability in the economic, social and political sphere (Hunt, 1989, pp. 292-316). The expansion of resources through specialisation, technological progress and industrialisation would alleviate inequality and poverty, creating opportunities for consumption and investment, as well as modernisation and democratisation. The policy implications of this theory is that development, seen as economic growth, should be based on the improvement of human resources and market institutions, by minimising the role of the government and expanding international trade to support capital accumulation and thus the increase in output. However, there is serious criticism against the effectiveness and feasibility of such policy strategies. On the one hand, the neoclassical approach tends to overlook the historical experience of countries such as Taiwan, S. Korea, Brazil and Mexico that became successful exporters following various forms of government intervention in the economy, including a prior phase of import-substituting industrialisation, quite similar to policies adopted in the early phase of industrialisation in countries such as the US and Germany (19th century), or Japan (20th century) (Hunt, 1989, p. 321). On the other hand, the assumptions underpinning the neoclassical paradigm – the operation of perfectly competitive markets, the optimisation of utility and profits by individual agents and firms, and the exploitation of comparative advantage – can hardly be fulfilled in developing countries. Formal market and state welfare institutions do not exist, and people are not only deprived of material means for survival, but also of natural rights and freedoms that limit opportunities for individual incentive, self-development and competitive enterprise.

According to Adelman (1999), “development policy requires a more complex understanding of social systems which combines economic, social, cultural and political institutions and their changing interactions over time” (p. 4). Apparently, neoclassical development theory has alienated itself from the legacy of classical theorists, such as Smith, Malthus, Ricardo, Mill and Marx. As Jones (1976) stresses, their theories were “never purely economic – a large variety of political, sociological and even psychological factors are intermixed so as to produce an all-encompassing ‘vision’ of the long-run process not only of economic growth but also of the development of society” (p. 4). Indeed, Adelman (1999) argues that the degree of institutional and policy flexibility that enables governments to implement the appropriate development strategies depends on “the nature of political institutions and on the influence of civil society on the polity ... Policies and institutions are shaped by the identities, influence and interests of the political elites and by how the government interacts with civil society” (op. cit., p. 24). Overall, it appears that social capital, manifested in norms and networks of reciprocity and particularly in state-society synergy relations, is more consistent with a broader notion of development that takes into account objectives and policies beyond the expansion of output and markets, and depends on the intervention of government and civil society.

For this purpose, we introduce an alternative framework incorporated in the so-called basic needs paradigm and the human capabilities approach. The basic needs paradigm emerged in the mid-1970s and early 1980s. Evidence of increasing poverty and inequality in Third World countries had begun to cast doubt on the sufficiency of liberalisation and redistribution policies, and gave rise to concerns amongst international organisations, researchers and development practitioners with respect to “the apparent absence of a trickle-down effect from economic growth” (Hunt, 1989, pp. 76, 259). In this light, Adelman (1975) proposed a ‘basic needs first’ development programme based on a strategy of political reforms and public provisions to expand human rights, health and education, while opening opportunities for resource productivity by exploiting more healthy and skilled labour. The ultimate aim would be “the removal not only of material but equally importantly of social, political and spiritual forms of deprivation” (op. cit., p. 306). During the 1980s, the pioneering work of Sen (1980) and Nussbaum (1988) led to a shift in research from basic needs towards a concept of human capabilities. According to Robeyns (2005) in her recent survey of the literature, the human capabilities approach conceptualises the ends of well-being, justice and development in terms of the expansion of people’s capabilities to function, i.e. of the opportunities available to individuals to effectively undertake the actions and activities they wish to engage in (pp. 94-96). These actions and activities, called human functionings or flourishings, constitute “what makes life valuable” and would, thus, include “working, resting, being literate, being healthy, being part of a community, being respected, and so forth” (op. cit., p. 95). This contrasts with views that concentrate on people’s happiness or desire-fulfillment, or on income, expenditures, or consumption (op. cit., p. 94).

However, there are doubts on the effectiveness of such strategies, concerning their political viability and economic efficiency. To counter these arguments we support the view that it might even be in the interest of influential groups to adopt strategies against inequality and poverty and channel resources towards the provision of public goods. In developing countries, as Hunt (1989) points out, an urban class alliance may override landlord resistance to land reform in the interest of lower food prices, while producers might support the same measure in the interests of increased mass demand in domestic markets (p. 284). Again in developed countries, Esping-Anderson (1990) purports that historically the birth of the welfare state follows not only from the social organisation and political pressure of working and rural classes; but also from the readiness of conservative ruling circles to grant social rights, not so much to repress labour mobilisation as much as to secure traditional morals and loyalties threatened by individualisation and market competitiveness (pp. 30, 40). Furthermore, he stresses that expenditures are epiphenomenal to the substance of welfare states and their

effectiveness depends on a series of commitments to values of universality, equality and full employment.⁴

The greater challenge is determining what basic needs or human capabilities ought to be valued. According to Sen (1999), this judgemental exercise can be resolved only through reasoned 'social' evaluation based on some kind of reasoned 'consensus', which in turn requires public discussion and a democratic understanding and acceptance (pp. 78-79). Nussbaum (2003) argues that the capabilities approach will supply a definite and useful guidance only if we formulate a definite list of the most central capabilities (p. 36). She then proposes a list that aims to satisfy a human being's basic needs by preserving life, health, integrity and dignity, as well as the ability to freely and equally think, speak and participate in social and political institutions and fora (op. cit., pp. 41-42). Alikre (2002) suggests a middle road in favour of a list that is neither too prescriptive nor too vague (p. 184). After a comprehensive survey of the various 'lists' that have been developed in the literature, Alkire recommends a shift of focus from basic needs (based on biological and psychological considerations) and human capabilities (based on a consideration of political necessity) towards a concept of basic 'purposes' (op. cit., p. 185). Basic purposes constitute reasons for acting which need no further reason,⁵ and reflect the complete range of human functionings: life, work and play, friendship, self-integration (or inner peace), self-expression or practical reasonableness, and religion (op. cit., pp. 185-186). According to Alkire, they "comprise a set of those reasons out of which people act in seeking 'wholeness' or 'well-being', in pursuing 'human development'. Thus they may be accurately ... considered as *the dimensions of human development*" (op. cit., p. 186).

To secure development, policies must focus not only on the availability of financial resources and the expansion of economic production; they must take into account political practices and institutions, such as the protection of the freedom of thought, political participation, social or cultural practices and institutions, social norms and public goods, such as the provision of public health care and education (Robeyns, 2005, p. 96). Evidently, one of the main inputs to well-being and development within the framework of human capabilities is social capital. Sen (1999) observes that the creation of more opportunities and the elimination of sources of 'unfreedom', imposed by conditions of economic, political and social repression, are contingent on the existence of norms and networks of social capital (pp. 70-71). Within the basic needs/human capabilities paradigm, social capital in the form of popular participation and social trust functions both as an end in itself, as well as an instrument or means for resource mobilisation and redistribution (Hunt, 1989, pp. 281-283; Sen, 1999, pp. 36-38). On the one hand, it is an end in itself, because to prevent people from speaking freely, or participating in public debates and decisions, is to deprive them of something that they have reason to value, which violates their opportunity to freedom or development. On the other hand, social capital is also conducive to development, because it implies the creation of effective social organisations and groups, ranging from non-governmental organisations, cooperatives, self-help groups, elected representatives to district planning committees, which would: (i) press local authorities and development planners to act in favour of the basic needs of the wider segment of the population; (ii) enhance opportunities to fund policy programmes, social reform, public services, and institutional development (in R&D, credit provision, or public infrastructure); and (iii) take initiative at the local grassroots level to create small-scale

⁴ For example, he argues that expenditures grew in Britain during the Thatcher period as a function of increasing employment, whereas countries with lower expenditure may signify a more serious commitment to full employment (op. cit., p. 20).

⁵ Practically, this consists of the task of asking ourselves 'why do I/others do what we do?' repeatedly until no other answer can be given. In this manner, "a person is reflecting on her life experiences, her historical situation, relationships, projects, tastes, beliefs, and the lives of others she knows to try to see the 'point' or the 'value' of different activities" (op. cit., p. 185).

groups for providing access to resources amongst their members or sustaining infrastructure projects.

The general hypothesis explored in development studies adhering to the synergy view of social capital is, thus, whether different types of social groups and memberships extending across society, from local grassroots associations to larger, more encompassing groups have a positive effect on development outcomes identified with improvements in health and education, beyond increases in per capita output and productivity. Some of these studies include, but are not limited to works of Uphoff and Wijayaratna (2000), Isham and Kähkönen (2002) and Krishna and Uphoff (2002), which examine the development of water system projects for irrigation and the provision of clean drinking water in regions of Sri Lanka, Indonesia and India, respectively. These studies reveal a positive and statistically significant impact of social capital indicators on measures of development, which are identified with productivity, health and voluntary participation in the conservation of common resources. They simultaneously control for a number of factors such as social division, political competition, mechanisation of production, infrastructure, government staff support, literacy, number of castes and village size.

Fewer studies examine the impact of widespread participation and organisation on health, education and equity in developed countries. Some of these issues have been touched upon in Putnam (2000) for the US, and examined further in Svendsen and Svendsen (2004) for North and East Europe. In Western capitalist democracies, the role of social capital could be understood in terms of social mobilisation and political participation for the social organisation of industry, based on the development of the welfare state and the third (voluntary) sector of the economy. Case studies beyond the realm of social capital research, offer evidence that countries promoting the universal provision of public benefits and services, as in Scandinavia, appear to outperform liberal and corporatist regimes in terms of eliminating poverty, inequality, instability and economic dependence (Esping-Andersen, 1990; Goodin, Heady, Muffels and Dirven, 1999; and Brooks and Manza, 2005). In the following, we explore the relationship between social capital and human development in Europe.

B. Empirical study for European countries

1. Stylised facts on human development

We proceed to our empirical analysis of the relationship between social capital and human development in our sample of 32 European countries. We explore the hypothesis that differences in social capital, i.e. norms and institutions of trust, reciprocity and cooperation, across European countries explain differences in terms of a broader notion of aggregate socio-economic performance related to human development, as it evolved during the post-war period (1975-2002). We formally test this hypothesis by regressing cross-country development on our indicators of social capital, namely civic norms, social trust and group membership, while we control for a group of factors that influence development, namely public welfare, social exclusion, the quality of governance and the operation of the market. We contribute to prior research by employing multi-dimensional measures of development, such as the UN's Human Development Indicator, as opposed to the more common, narrowly-defined measures of economic growth. The HDI is calculated on a scale from 0 to 1 and represents the average of three measurable dimensions of human development: (i) living a long and healthy life, measured by indices of life expectancy; (ii) being educated, measured

by adult literacy rates and school enrolment rates in the three levels of education – primary, secondary and tertiary; and (iii) having access to the (material) resources needed for a decent standard of living, measured by per capita levels of GDP (UNDP, 2004, pp. 127-128 and Table 1, p. 259).

Also, unlike prior research, we focus on a sample of rather ‘developed’ countries in the European continent. Sen (1999) points out there are many districts within the ‘developed’ world that face low levels of income and education, high poverty rates and poor health, and high rates of crime and terrorism. This would be particularly relevant for countries of the South of Europe, where the path to democracy and modernisation took place later during the post-war period, as well as for regions of Central East and Eastern Europe, which since the 1990s have been in a phase of transition to market economies. However, given the period under study, such issues could also apply to more developed countries of North and Continental Europe as recovery and reconstruction from the consequences of World War II constituted an ultimate challenge for re-embarking on growth and progress achieved before the wars. Furthermore, having reached a certain level of development, does not ensure sustainability of development, i.e. the intergenerational distribution of qualities, such as health, knowledge, dignity, participation and sense of justice, that, apart from opulence, determine the standard of living of a person (Anand and Sen, 2000). That is, a society must constantly invest in a system of provisions, which will secure access to resources for fulfilling basic needs and building opportunities for enhancing the quality of life for the wider population and particularly those segments of ‘developed’ societies that, despite economic growth and technical progress, are still deprived of the opportunity and right to a full life.

We begin our analysis by examining the levels of HDI across Europe (see APPENDIX, TABLE 6 and 7). Evidently, countries of Scandinavia (Finland, Denmark and Sweden) and Northern Europe (France, Belgium, the Netherlands and Iceland) achieve the highest scores of HDI – around 0.9. Countries with the lowest scores include Turkey and countries of the former Soviet Union (Ukraine, Belarus, Russia and Latvia), and Central East Europe (Romania, Bulgaria and Hungary). We must make note of the rather small variation of HDI, due to the fact that the vast majority of countries in our sample belongs to the high category of HDI rankings, which implies small differences in the underlying indicators (UNDP, 2004, p. 138). However, this can also be viewed as a benefit for our analysis in the sense that it can provide a more stringent test of our hypothesis on the role of social capital. In relation to social capital, development, measured as HDI, is positively and rather highly correlated with both group membership ($r^2=0.71$) and social trust ($r^2=0.59$). Similarly, the HDI is positively and highly correlated with measures of active group membership ($r^2=0.68$) and membership in so-called Putnamian groups ($r^2=0.64$); the correlation coefficient is positive, but rather smaller between HDI and membership in Olsonian groups ($r^2=0.41$). To the contrary, the civic norms index produces a very small and statistically insignificant correlation coefficient with human development ($r^2=0.11$), as in the case with economic growth. However, we must move on to a multi-variate analysis to control for other development factors.

2. *Regression results*

The econometric specification we apply to our regression analysis of the determinants of human development comes from the work of Ranis, Stewart and Ramirez (2000). The authors address the relationship between human development and economic growth for a sample of 41 to 76 developing countries, depending on the availability of data, to examine the standard neoclassical assumption that economic growth must precede progress on human development. They view human development as the central objective of human activity, and economic growth as a potentially very important instrument for advancing it, alongside a series of

factors that determine the allocation of resources between households, government, and civil society (local community groups and other NGOs in general, i.e. social capital). From their analysis, we are especially interested in the important role the authors reserve for civil society, NGOs and social capital in the enhancement of human development (op. cit., p. 201). However, although they control for a series of factors, such as public provisions in health and education, conditions of income inequality and regional dummies, they fail to incorporate the impact of social capital, on account of lack of data for their sample of developing countries.

We regress average cross-country HDI on social capital, controlling for: (i) the public provision of health, education and social security, measured as the share of public expenditure in GDP (health and education) or total expenses (social security); (ii) the interaction between public expenditure on health and education to account for spill over effects;⁶ (iii) innovation and technology, captured by total R&D expenditure as a percentage of GDP; (iv) market system operations, represented by per capita GDP growth, exports and imports as a percentage of GDP, and the share of money supply M1 in GDP; (v) social exclusion, captured by income inequality, as the ratio of income share quintiles, at-risk-of-poverty rate, as the percentage of the population below the cut-off threshold (60% of equivalised median income before social transfers), and the total unemployment rate; (vi) the quality of governance, which assesses the accountability and effectiveness of state officials in securing political and human rights and delivering public goods; and (vii) conditions of political instability that cover the likelihood of violent threats to, or changes in government, including terrorism and the extent of corruption amongst officials, civil servants and civilians. We also use regional dummy variables to account for the differential impact of country-specific factors. Data for these variables have been derived from a series of sources such as the World Bank, OECD, EUROSTAT, IMF, Penn World Tables (6.1), Transparency International and national statistical services. These variables are expressed as cross-country averages for the post-war period 1960-2002, depending on the availability of data for each variable and country.

From our regression results it is evident that amongst our social capital indicators only group membership has a coefficient that is positive and statistically significant across all specifications (see APPENDIX, TABLE 8). This is not in general agreement with findings in the growth literature, where it is argued that the weak relationship between group membership and growth performance could be attributed to the negative externalities produced by special-interest groups, which engage in activities of rent-seeking and lobbying to redistribute and monopolise public provisions and resources against public interest. It is perhaps the case that measures of material wealth do not capture the direct voluntary contributions and support of the third sector of the economy in areas such as welfare, health and education. Indeed, the coefficient for group membership in equation 7 implies that a 1% increase would produce an increase in the human development index of around .0008 units, *ceteris paribus*. That is, if group membership increased by 1% in Greece then the human development index would increase by 0.09%.

However, social trust appears to have no statistically significant impact on human development in any of the equations, even though its coefficient has the expected sign, a result which maintains even if we drop the group membership variable. One possible explanation is that development depends on factors beyond attitudes and sentiments of trust for one another; it perhaps depends on the capacity of the members of groups and society as a whole to organise and cooperate to set goals and fulfil objectives in favour of generalised well-being. With regards to civic norms, when we introduce political variables of governance,

⁶ For instance, emphasis on improved health would provide the population with the potential to build their education and ensure better earnings. Also support for better education would expand the population's knowledge base and skills, not only for better conditions of employment, but also for raising health standards, by offering access to information on prevention and cures, as well as professional help.

political stability and corruption in equation 6, the coefficient becomes statistically significant, but positive, i.e. an increase in the index, which implies limited civic behaviour, improves development. Maybe it is the case that, after controlling for the degree to which the system of law and governance in a country secures the effectiveness and accountability of authorities, any improvement in the development of countries that are poorly endowed with such institutions relies on the ability of civilians to pursue their personal welfare and well-being individually, through participation in patron-client relations. A similar argument could be applied for our corruption index, which also has a negative sign even though higher scores are associated with less corruption. For our final specification in equation 7, we omit corruption and civic norms, because they are difficult to interpret.

Additionally, we observe that public provisions in health and education play an important role in the improvement of human development. Coefficients for public expenditure on health and education are positive and statistically significant. Their interaction term also has a statistically significant coefficient with a negative sign. This perhaps reveals the substitutability between these two types of public expenditure in satisfying development objectives in the more developed countries of our sample. What it implies is that there is a certain threshold beyond which a rise in public expenditure in one area has a positive effect on human development, given the level of expenditure in the other area. For instance, from equations 1 and 2 (APPENDIX, TABLE 8), we derive that an increase in public expenditure on education by 1% would produce a rise in HDI only in countries with levels of average public expenditure on health below roughly 5% ($=0.055/0.011$). This would include all countries but the Netherlands, Estonia, Denmark and Sweden. To illustrate, if Greece chose to increase public expenditure on education by 1% from 2.3%, with a level of public expenditure on health at 4.5%, it would increase human development by roughly 0.05 units, or 6%. To show how generous this contribution should be, we must consider the fact that, although a 1% increase in public expenditure on education is a bit less than a one standard deviation change across countries (1.2%), it is much greater than a one standard deviation change in public expenditure in Greece across time (0.6%) for the period 1960-2000. This means that in Greece human development objectives could be met only with more radical policy choices towards expanding public expenditure on education.

Another variable that appears to be equally important to the development process refers to the quality of governance. In equations 5 and 6, we observe that governance is amongst the political indicators employed in our analysis that has a statistically significant coefficient with the expected positive sign. In particular, an increase in the scale of governance by 1 unit, which corresponds to an improvement in the level of accountability and effectiveness of government authorities, will increase the value of HDI by 0.03. This means that if Greece would have been able to improve the quality of governance by one standard deviation, i.e. by 0.81 units, then it could increase the level of human development by 0.02 units, which is equivalent to an increase of 2.3%. The variable capturing conditions of political instability has a coefficient that is statistically insignificant. One might have expected that in certain European countries historical events of political unrest and conflict, such as the dictatorships in South Europe and the collapse of the communist regime in East Europe, would have had adverse effects on development and policy. It is perhaps the case that our variable is not capturing these effects because it covers the period from 1996 onwards, leaving out events of political instability during the post-war period we are investigating.

Next we come to assess the influence of economic variables on HDI. We observe in equations 1 and 2 that GDP per capita growth has a positive, statistically significant coefficient, implying that a rise in economic growth by 1% would increase the value of the human development index by 0.007 units, *ceteris paribus*. For instance, if Greece raises the growth rate by 2%, human development would increase by approximately 2%. The other economic variables become statistically significant in equation 2, where we introduce the variables for social capital. The coefficient for financial development, measured as the share of money

supply M1 in GDP, is positive, which is consistent with arguments by development theorists that the creation of financial institutions for ensuring credit could improve the development prospects of a region. Economic growth loses statistical significance when public expenditure or political variables are introduced in equation 6. This is also true for variables of technological innovation (R&D expenditure). It perhaps reveals the fact that economic growth and technology have an impact on development through effective governance and political participation for the equal distribution of output and public resources. Therefore, we omit these variables from our final specification in equation 7. Only openness to international trade, measured as exports plus imports over GDP, remains statistically significant, but its coefficient is negative. This result is influenced by less developed countries of Eastern Europe that exhibit a relatively high degree of openness, much similar to more developed countries like Belgium or the Netherlands. It is possible that opening markets at such an early stage of transition, without the appropriate domestic institutions for policy, finance and research, might have had adverse effects on their prospects for development. Further regional characteristics of East European countries, captured by our dummy variable for the Czech Republic, the Slovak Republic, Hungary, Poland and Romania, appear to have a negative and statistically significant impact on development. Perhaps this is reminiscent of times of tribulation for these countries during the communist era.

Finally, our social exclusion variables, namely inequality, poverty and unemployment, are introduced in equations 3 and 4. In both specifications, with and without social capital, the coefficients of these variables are statistically insignificant, and only that of income inequality has the expected – negative sign. There is thus evidence that factors of social exclusion have not posed a serious threat to development in these countries. One explanation for such findings is lack of long-run data to capture the actual magnitude of such problems, since for inequality and poverty data is only available for the period 1994-2002. Alternatively, one might think that aggregate measures of performance are usually unable to capture often dispersed, localised or simply undetected instances of low income and high poverty in more developed countries. However, as Ranis, Stewart and Ramirez (2000) observe in their study of developing countries, income distribution variables run counter to their expectations, i.e. a more equal distribution does not seem to advance human development (p. 204 and Table 1, p. 205).⁷ One might also argue that the consequences of social exclusion cease to have overall adverse effects on development, because we have controlled for the contribution of the welfare system, based on the provision of public goods by the state, and the third sector of the economy, often aimed at alleviating inequality, poverty and unemployment. Indeed, after regressing HDI on inequality, poverty and social exclusion, we discover that the coefficient for income inequality becomes statistically significant at the 1% level, is negative and implies a reduction of the value of HDI by 0.014 units for each increase in inequality by 1%. However, when we introduce group membership into the regression, the coefficient for income inequality falls to half its initial value and is statistically significant at the 10% level. This might be indicative of the contribution of provisions of the third sector of the economy to combat problems such as income inequality and enhance development.

Our final specification in equation 7 implies a positive relationship between social capital, measured as group membership, and human development: countries with higher levels of group membership have a relatively higher HDI, *ceteris paribus*.⁸ What is interesting to note is the effect of membership in Olsonian and Putnamian groups depicted in equation 8. In particular, we observe that Olsonian groups have a positive and statistically significant coefficient, whereas Putnamian groups have a negative, albeit statistically insignificant one. This is counter to hypotheses that it is Olsonian groups, rather than Putnamian groups, that have a

⁷ One might think of the possibility of multicollinearity between these variables; but diagnostics based on comparisons of variance inflation factors do not reveal severe multicollinearity (VIFs are around 1.2, way below the critical level of 10). This extends to all economic, social and political variables examined here.

⁸ The case is similar with active forms of group membership.

negative impact on socio-economic outcomes. Perhaps it is the case that in Olsonian groups we have included trade unions, which for regions such as Scandinavia have had a positive contribution in development and reform, whereas in Putnamian groups we list religious groups, which for some countries have posed a bit of an obstacle to social reform and further development. Also, externalities in participation and membership might exist and spill over to other groups, enhancing widespread association and cooperation. Indeed, correlation coefficients between memberships in individual groups are all positive and rather high and statistically significant. Hence, a country with relatively higher overall group membership tends to have higher membership across most social groups; conversely, countries with relatively lower levels of overall group membership also have lower levels of group membership across all individual groups.

One might argue that in our final specification the coefficient for group membership is capturing the effect of development on social capital, as improved conditions of health, education and income expand the ability for social and political participation, rather than the other way round. Hence, in equation 8, we repeat estimation with 2SLS to solve for potential endogeneity of the group membership variable. The coefficient for group membership falls, but remains statistically significant (APPENDIX, TABLE 8). The instruments we introduced are standard determinants of social capital, according to the theoretical and empirical literature, such as interpersonal trust, trust in institutions, membership in certain types of groups and associations, economic growth, political instability, social exclusion and country dummy variables. We must note, however, that these instruments are large in number, compared to our small sample and, more importantly, they might be interrelated. This reduces the appropriateness of instruments as they might prove to be irrelevant or invalid. To confront this possibility, we conducted a principal component analysis for this set of instruments. The components were used to create new variables based on factor scores (see APPENDIX, TABLE 9 for detailed results of principle component analysis). We have also conducted a series of formal tests for instrument relevance and validity, and we can safely say that we do not have severe inconsistencies from 2SLS.

Nevertheless, we basically discover how difficult it is to capture the extent and direction of the externalities produced from widespread participation and cooperation. Within a multi-directional and multi-dimensional framework, these externalities not only interact with development and welfare, but also feed back into norms and networks of reciprocity and association to consolidate further the stock of social capital that already exists in the economy. Therefore, there is an issue not only of *what* variables interact with social capital, but *how* these variables interact, especially what are the mechanisms and channels through which these relationships are initiated, strengthened or weakened. We argue, though, that the empirical literature on social capital, including case studies in developing and developed countries some of which have been mentioned throughout this paper, offer substantial opportunities for theories to be tested, revised and created anew. We must consult these studies for understanding the formation of social capital, its evolution and implications for individual well-being and development. In any case, we should keep in mind that if we seek that factor that functions as the initial driving force of human development, then what could be more natural and logical than to refer to *people* themselves and their social relations. People and societies could be the only factor with the incentive and will for progress and improvement and would, thus, invent the means and *meanings*, such as social capital, for achieving these goals.

V. CONCLUSIONS

Our analysis focused on the relationship between development and elements of social capital, namely civic norms, social trust and group membership. First, we dealt with the effect of social capital on economic growth; then we referred to the potential role of social capital in the advancement of human development. We reviewed theoretical and empirical studies from contemporary social capital research that attribute differences in socio-economic performance across regions or countries to their relative stock of social capital. We proceeded then to test whether these hypotheses hold for a sample of 32 European countries, and what they would imply for the impact of social capital on regional economic, social and cultural differences across Europe. We tested separately for the impact of elements of social capital on economic growth and human development. The former drew from the vast literature on new growth theories; the latter extended the theory and practice of the literature on basic needs and human capabilities.

One basic conclusion from our analysis is that in our sample, for the largest part of the post-war period, social capital is more strongly related to human development than economic growth. This is contrary to findings in the literature for economic growth, which have pointed to the economic and statistical significance of the contribution of social capital. We argued that social capital anticipated as a force for social and political representation and participation, based on norms and networks of reciprocity and solidarity, would be more consistent with a broader concept of development, which focuses on the betterment of human life and the equitable redistribution of resources and opportunities, rather than with a narrower definition related to changes in income and material output in terms of economic growth. The latter, we stress, is an important *means* to development, by expanding a region's potential for further consumption and production; but it could not be an end in itself since it cannot on its own secure this potential for the wider population, on the one hand, and, on the other, it is unable to ensure the full satisfaction of basic needs such as health, knowledge, recognition, dignity and participation, which are determined by contributions beyond income.

Another important conclusion from our empirical study is that social capital that takes on the form of group membership has a much stronger influence on levels of human development, compared to civic norms and social trust. Again this is in contrast to evidence produced in the growth literature, which stress the relative importance of civic norms and social trust, as opposed to group membership. Indeed, the ambiguities observed with regards to the effects of group membership and associational activity in general on cross-country economic growth are attributed to the variety of motives, aims and effects of social organisations that could be beneficial as much as detrimental to the growth process. Thus, development comes to depend on a concept of trust, based on factors such as repeated exchange, reciprocity and reputation, which supplies for the means to overcome social dilemmas, reduce transaction costs and information imperfections and reap the benefits of expanded output from improvements in efficiency. However, when we examined development, it was the case that group membership in various types of organisations constituted one of the main factors, coupled with public provisions and government accountability and effectiveness that, regardless of changes in output and international markets, contributed to human development in terms of improvements in health, education and income. In this manner, it appears to satisfy basic needs and secure opportunities for one to live the life one chooses, or as Sen argues, to eradicate sources of 'unfreedom', such as inequality, poverty and tyranny. This is achieved not only through indirect channels of enhancing the effectiveness of markets and governments; but also *directly* when social organisations, as part of the third sector of the economy, undertake (private) voluntary provisions of public goods and mediate between government and civil society to provide a social forum for attaining consensus amongst groups with conflicting interests and motives.

Therefore, our findings on the relatively more favourable position of Scandinavian or continental European countries might be capturing the importance of generalised norms and networks of participation in development, as opposed to patron-client relations and special-interest groups, which tend to prevail in countries of South and Central East Europe, and appear to inhibit wider social reform and development. However, further research needs to be done to establish the mechanisms through which social capital affects aggregate levels of development. This would inform potential policy and development programmes of the type of organisations, in terms of purposes, hierarchies, and complementarities to formal market and state systems, needed to promote widespread participation and goals for sustained development and welfare. For this purpose, we need to consult more contextual and historical approaches, based on the findings of regional and country case studies that have been conducted in both developed and developing countries around to explain performance as a function of social organisation and social capital.

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APPENDIX

TABLE 1: Indicators of social capital

Measures of community organisational life

- Service as an officer or committee member for some local organisation
- Social organisations per 1000 population
- Mean number of club meetings attended
- Mean number of group memberships

Measures of engagement in public affairs

- Turnout in presidential elections
- Attended public meeting on town or school affairs

Measures of community volunteerism

- Number of non-profit associations per 1000 population
- Mean number of times worked on community project
- Mean number of times doing volunteer work

Measures of informal sociability

- Spending time visiting friends
- Mean number of times entertained at home

Measures of social trust

- Agree that “Most people can be trusted”
 - Agree that “Most people are honest”
-

Source: Putnam, 2000, pp. 291-292; Table 4, p. 291.

**TABLE 2: DESCRIPTIVE STATISTICS OF
SOCIAL CAPITAL AND ECONOMIC GROWTH**

Variables	Valid N	Minimum	Maximum	Mean	Std. Deviation	Variance
<i>In percentage terms:</i>						
Growth rate of per capita GDP, average 1960-2003	32	-3.4287	5.1489	1.9898	1.7130	2.9343
Initial GDP, 1960	32	1177.34	17755.85	6558.22	4889.95	23911625
Share of investment in GDP, average 1960-2003	32	18.3759	29.1797	22.9626	2.6997	7.2885
Gross school enrolment in primary education, average 1960-2003	32	86.7857	122.8643	101.5512	6.3423	40.2247
Gross school enrolment in secondary education, average 1960-2003	32	50.9974	123.6824	94.9743	15.0726	227.1819
Population growth rate, average 1960-2003	32	.0380	2.2104	.5017	.3943	.1555
Group membership, % of population 1999	32	7.8	94.1	47.88	23.08	532.59
Trust, % of population 1999	32	6.7	64.1	28.70	14.64	214.47
Civic norms, average 1999	32	1.24	3.78	2.34	.53	.28
Active membership, % of population 1999	32	6.4	56.1	25.10	12.23	149.49
Membership, % of population 1999 – Putnamian groups	32	1.7	78.6	22.83	19.70	388.25
Membership, % of population 1999 – Olsonian groups	32	4.5	73.1	22.38	17.51	306.70
<i>In natural logarithm:</i>						
Growth rate of per capita GDP, log difference 1960-2003	32	-.5490	2.1625	.7717	.6294	.3962
Growth rate of per capita GDP, log difference 1990-2003	32	-.5345	.7167	.1727	.2140	.0458
Initial GDP, 1960	32	7.0710	9.7845	8.4826	.8337	.6951
Initial GDP, 1990	32	7.4398	10.5712	9.0802	1.0166	1.0335
Share of investment in GDP, average 1960-2003	32	-1.6941	-1.2317	-1.4779	.1166	.0136
Share of investment in GDP, average 1990-2003	32	-1.8443	-1.2182	-1.5407	.1423	.0202
Gross school enrolment in primary education, average 1960-2003	32	-.1417	.2059	.0135	.0616	.0038
Gross school enrolment in primary education, average 1990-2003	32	-.1725	.2263	.0130	.0684	.0047
Gross school enrolment in secondary education, average 1960-2003	32	-.6734	.2125	-.0648	.1701	.0289
Gross school enrolment in secondary education, average 1990-2003	32	-.5409	.3181	-.0233	.1782	.0318
Population growth rate, average 1960-2003	32	-7.8741	-3.8120	-5.5562	.8094	.6552
Population growth rate, average 1990-2003	32	-3.2363	-2.6871	-2.9736	.1202	.0144
Group membership, % of population 1999	32	-2.5510	-.0608	-.8631	.5439	.2958
Trust, % of population 1999	32	-2.7031	-.4447	-1.3680	.5061	.2561
Civic norms, average 1999	32	.2131	1.3297	.8251	.2336	.0546
Active membership, % of population 1999	32	-2.7489	-.5780	-1.5025	.5151	.2653
Membership, % of population 1999 – Putnamian groups	32	-4.0745	-.2408	-1.8094	.8638	.7462
Membership, % of population 1999 – Olsonian groups	32	-3.1011	-.3133	-1.7464	.7120	.5070

**TABLE 3: Economic growth and social capital -
Group membership, social trust and civic norms across European countries**

Country	GDP growth	Group membership	Social trust	Civic norms	Country	GDP growth	Group membership	Social trust	Civic norms
Ukraine	-3.4	34.5	25.9	2.8	Latvia	2.3	31.4	16.7	2.1
Russia	-1.7	31.5	23.2	2.6	France	2.5	39.4	20.6	3.0
Lithuania	-0.5	18.6	24.7	2.9	Belgium	2.6	65.2	27.9	2.9
Romania	0.2	21.1	9.9	2.2	Iceland	2.7	93.1	39.3	1.8
Croatia	0.4	43.1	19.8	2.2	Austria	2.7	66.8	31.1	2.2
Belarus	0.5	45.8	38.0	3.8	Italy	2.7	42.1	31.8	2.0
Czech Rep.	0.8	60.2	24.1	2.2	Finland	2.8	80.1	56.2	2.3
Slovak Rep.	1.1	65.0	15.4	2.8	Luxembourg	3.0	58.2	23.5	2.8
Estonia	1.2	33.5	22.3	2.8	Greece	3.2	56.4	20.5	3.1
Bulgaria	1.4	22.9	25.1	1.8	Hungary	3.2	30.8	21.9	2.2
Turkey	1.8	7.8	6.7	1.2	Spain	3.2	30.9	36.3	2.4
Germany	1.9	46.6	35.7	2.4	Poland	3.6	24.9	17.8	2.0
Denmark	2.1	84.1	64.1	1.6	Portugal	3.6	27.6	12.0	2.2
UK	2.1	33.6	27.7	2.3	Slovenia	3.8	51.3	21.2	2.4
Sweden	2.1	94.1	63.6	2.2	Ireland	4.0	57.0	35.3	1.9
Netherlands	2.2	92.4	59.7	2.3	Malta	5.1	42.2	20.5	1.4

Source: EVS, 2003; World Bank, 2004.

**TABLE 4: Economic growth and social capital -
Active group membership, Putnamian and Olsonian groups across European countries**

Country	GDP growth	Active group membership	Putnamian groups	Olsonian groups	Country	GDP growth	Active group membership	Putnamian groups	Olsonian groups
Ukraine	-3.4	12.9	8.1	22.8	Latvia	2.3	17.0	8.8	13.4
Russia	-1.7	7.7	4.0	24.1	France	2.5	25.7	12.4	7.9
Lithuania	-0.5	14.7	8.1	4.5	Belgium	2.6	34.8	29.9	25.3
Romania	0.2	15.5	6.7	12.0	Iceland	2.7	31.9	75.8	73.1
Croatia	0.4	22.9	19.7	18.0	Austria	2.7	30.2	33.7	28.7
Belarus	0.5	15.7	4.9	39.8	Italy	2.7	25.4	19.4	14.9
Czech Rep.	0.8	31.5	21.2	18.3	Finland	2.8	37.6	54.3	39.5
Slovak Rep.	1.1	50.0	26.2	24.3	Luxembourg	3.0	26.6	27.0	17.2
Estonia	1.2	16.2	14.3	9.2	Greece	3.2	34.9	27.9	22.0
Bulgaria	1.4	15.9	6.6	12.5	Hungary	3.2	13.3	15.8	11.5
Turkey	1.8	6.4	1.7	5.6	Spain	3.2	16.9	13.5	7.1
Germany	1.9	18.3	19.1	12.8	Poland	3.6	12.2	7.6	12.7
Denmark	2.1	37.2	28.8	60.5	Portugal	3.6	16.2	9.9	5.2
UK	2.1	26.9	17.7	10.0	Slovenia	3.8	26.7	16.3	22.2
Sweden	2.1	56.1	78.6	68.4	Ireland	4.0	31.0	28.9	17.6
Netherlands	2.2	49.2	64.3	39.0	Malta	5.1	25.8	19.2	16.2

Source: EVS, 2003; World Bank, 2004.

**TABLE 5: Cross-country regressions of economic growth and social capital
(N=32)**

Dependent variable: log difference of GDP per capita	1960-2003					1990-2003				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Constant	1.012 (2.243)	1.619 (2.176)	2.061 (2.424)	2.965 (2.182)	2.940* (1.693)	1.583 (1.596)	1.778 (1.649)	1.469 (1.659)	1.477 (1.608)	2.711* (1.565)
Initial GDP	.092 (.174)	-.126 (.206)	.024 (.183)	.094 (.158)	-.298* (.151)	.037 (.059)	.018 (.068)	.042 (.062)	.040 (.060)	-.053 (.068)
Gross fixed capital formation as a share of GDP	.646 (.935)	-.513 (1.101)	.595 (.932)	1.235 (.882)	-1.074 (.773)	-.010 (.242)	-.079 (.271)	-.013 (.247)	.068 (.260)	-.201 (.242)
Gross school enrolment in primary education	4.843* (1.771)	5.896*** (1.795)	5.350*** (1.821)	3.858*** (1.658)	5.744*** (1.410)	1.020* (.556)	1.182* (.627)	.956 (.596)	.931 (.568)	1.295** (.603)
Gross school enrolment in secondary education	.013 (.833)	-.782 (.912)	-.720 (1.060)	.579 (.791)	-1.144 (.677)	-.042 (.294)	-.130 (.333)	.020 (.351)	.023 (.305)	-.230 (.313)
Population growth rate	.024 (.145)	.018 (.139)	.035 (.144)	.042 (.132)	.051 (.107)	.598 (.388)	.623 (.395)	.592 (.395)	.492 (.409)	.749* (.373)
Group membership		.651* (.359)					.062 (.104)			
Social trust			.394 (.355)					-.035 (.104)		
Civic norms				-1.151** (.455)					-.141 (.164)	
Membership in Putnamian groups					.817*** (.165)					.176** (.075)
Membership in Olsonian groups					-.216 (.145)					-.088 (.059)
Adjusted R ²	.157	.225	.165	.302	.549	.307	.290	.283	.301	.395
Standard error of the estimate	.577	.554	.575	.526	.423	.178	.180	.181	.179	.167
F statistic	2.158 [.090]	2.502 [.049]	2.020 [.101]	3.237 [.017]	6.397 [.000]	3.750 [.011]	3.108 [.021]	3.039 [.023]	3.220 [.018]	3.885 [.006]
White heteroskedasticity test	12.04 [.28]	11.68 [.47]	14.79 [.25]	9.90 [.63]	16.65 [.275]	14.59 [.14]	14.92 [.24]	16.48 [.17]	16.81 [.16]	16.94 [.260]
Shapiro-Wilks normality test	.990 [.990]	.967 [.425]	.987 [.964]	.972 [.554]	.959 [.712]	.923 [.025]	.926 [.029]	.934 [.052]	.942 [.087]	.969 [.477]

Standard errors are in parentheses. *** 1% level, **5% level, and *10% level of statistical significance.
Probabilities are in brackets.

**TABLE 6: DESCRIPTIVE STATISTICS OF
SOCIAL CAPITAL AND HUMAN DEVELOPMENT**

Variables	Valid N	Minimum	Maximum	Mean	Std. Deviation	Variance
Average Human Development Index	32	0.6670	0.9077	0.8462	0.0554	0.0031
Public expenditure on health	32	2.4786	7.7933	5.3395	1.2232	1.4962
Public expenditure on education	32	2.3789	7.2848	4.8190	1.2256	1.5020
Interaction term between pub. exp. on health and education	32	5.9550	53.3610	26.5089	10.5412	111.1164
Subsidies and other transfers	32	23.5327	80.2026	56.7607	12.3865	153.4255
Total R&D expenditure	32	0.2800	3.6880	1.3006	0.8233	0.6778
Growth rate of GDP per capita 1960-2003	32	-2.9333	5.3631	2.1421	1.6349	2.673
Exports plus Imports over GDP	32	21.3400	193.7000	82.2944	43.8438	1922.2782
M1 over GDP	32	2.7200	59.7100	17.6150	11.2074	125.6068
Ratio of income share quintiles	32	2.9500	13.7500	4.9724	2.1805	4.7548
At-risk-of-poverty rate before social transfers	32	12.5250	31.8571	23.9447	4.9404	24.4072
Total unemployment rate	32	2.0545	17.6522	8.4323	3.6759	13.5120
Governance	32	-1.0749	1.9361	0.9205	0.8185	0.6699
Political stability	32	-0.9947	1.6169	0.8440	0.6282	0.3946
Corruption	32	2.2800	9.4400	5.8726	2.2340	4.9907
Civic norms	32	1.2375	3.7800	2.3412	0.5287	0.2795
Social trust	32	6.7000	64.1000	28.7031	14.6449	214.4719
Group membership	32	7.8000	94.1000	47.8813	23.0779	532.5900
Active group membership	32	6.4000	56.1000	25.1031	12.2267	149.4913
Group membership – Putnamian groups	32	1.7000	78.6000	22.8250	19.7040	388.2465
Group membership – Olsonian groups	32	4.5000	73.1000	22.3844	17.5129	306.7027
CECs	32	0	1	0.1563	0.3689	0.1361

TABLE 7: Human development across European countries

Country	Human Development	Country	Human Development	Country	Human Development	Country	Human Development
Turkey	0.6670	Croatia	0.8143	Greece	0.8686	Austria	0.8913
Ukraine	0.7720	Malta	0.8143	Ireland	0.8719	Finland	0.8934
Romania	0.7728	Lithuania	0.8208	Slovenia	0.8767	France	0.8973
Belarus	0.7755	Estonia	0.8263	Spain	0.8833	Belgium	0.8984
Bulgaria	0.7870	Poland	0.8278	Italy	0.8840	Denmark	0.9017
Russia	0.7930	Slovak Rep.	0.8420	Luxembourg	0.8851	Sweden	0.9047
Latvia	0.8008	Portugal	0.8457	Germany	0.8902	Netherlands	0.9067
Hungary	0.8113	Czech Rep.	0.8557	UK	0.8903	Iceland	0.9077

Source: UNDP, 2004.

TABLE 8: Cross-country regressions of human development and social capital (N=32)

Dependent variable: HDI	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Constant	.4387*** (.0811)	.4194*** (.0672)	.4158*** (.1111)	.3897*** (.1084)	.6155*** (.0840)	.5930*** (.0616)	.5292*** (.0545)	.5123*** (.0607)	.5474*** (.0573)
Public expenditure on health	.0625*** (.0173)	.0569*** (.0151)	.0716*** (.0190)	.0690*** (.0194)	.0363** (.0164)	.0363** (.0127)	.0484*** (.0113)	.0525*** (.0126)	.0455*** (.0118)
Public expenditure on education	.0545** (.0204)	.0519*** (.0174)	.0590** (.0219)	.0549** (.0211)	.0285 (.0186)	.0290* (.0142)	.0411*** (.0128)	.0414*** (.0138)	.0371** (.0134)
Interaction term: pub. exp. on health & education	-.0114*** (.0036)	-.0104*** (.0033)	-.0121*** (.0041)	-.0119*** (.0041)	-.0059* (.0034)	-.0061* (.0027)	-.0083*** (.0023)	-.0089*** (.0026)	-.0073*** (.0025)
Subsidies and other transfers	.0007 (.0005)	.0007 (.0005)	.0003 (.0006)	.0003 (.0006)	.0003 (.0004)	-.0003 (.0004)	.0006* (.0003)	.0009** (.0004)	.0006* (.0003)
Total R&D expenditure	.0383*** (.0116)	.0190 (.0113)	.0380*** (.0120)	.0227* (.0123)	.0230** (.0104)	.0103 (.0079)			
Growth rate of GDP per capita	.0066* (.0036)	.0062* (.0035)							
Exports + Imports over GDP	-.0001 (.0001)	-.0003** (.0001)					-.0002** (.0001)	-.0001 (.0001)	-.0002** (.0001)
M1 over GDP	.0005 (.0005)	.0011** (.0005)							
Ratio of income share quintiles			-.0028 (.0038)	-.0019 (.0035)					
At-risk-of-poverty rate			.0011 (.0015)	.0012 (.0014)					
Total unemployment rate			.0010 (.0019)	.0023 (.0019)					
Governance					.0372** (.0163)	.0657*** (.0130)	.0308*** (.0060)	.0404*** (.0082)	.0336*** (.0064)
Political stability					.0170 (.0196)	-.0030 (.0153)			
Corruption					-.0066 (.0057)	-.0122** (.0044)			
Civic norms		.0140 (.0105)		.0033 (.0111)		.0235*** (.0072)			
Social trust		-.0001 (.0007)		.0001 (.0008)		.0008 (.0005)			
Group membership		.0011** (.0004)		.0010** (.0004)		.0005* (.0003)	.0008*** (.0002)		.0005* (.0003)
Membership in Putnamian groups								-.0002 (.0004)	
Membership in Olsonian groups								.0011** (.0005)	
CECs (Czech Rep. & Slovakia, Hungary, Poland, Romania)	-.0199 (.0164)	-.0263 (.0165)	-.0200 (.0177)	-.0208 (.0182)	-.0195 (.0136)	-.0104 (.0105)	-.0214** (.0102)	-.0211* (.0110)	-.0217* (.0105)
Adjusted R ²	.725	.816	.669	.727	.825	.911	.880	.862	.872
Standard error of the estimate	.0290	.0237	.0318	.0289	.0231	.0165	.0191	.0205	.0198
F statistic	10.072 [.000]	12.465 [.000]	7.952 [.000]	7.864 [.000]	17.277 [.000]	27.566 [.000]	29.540 [.000]	22.524 [.000]	26.438 [.000]
White test for heteroskedasticity	23.028 [.14]	27.611 [.23]	23.316 [.13]	27.278 [.24]	19.830 [.28]	18.897 [.70]	21.317 [.12]	18.881 [.33]	28.049 [.21]
Shapiro-Wilks test for normality	.983 [.872]	.967 [.424]	.977 [.697]	.973 [.593]	.982 [.843]	.975 [.643]	.965 [.380]	.975 [.661]	.956 [.210]

Standard errors are in parentheses. *** 1% level, **5% level, and *10% level of statistical significance. Probabilities are in brackets. Equation 9 includes IV coefficients from 2SLS procedures.

TABLE 9: Principal Component Analysis of Instrumental Variables*

Set of instrumental variables	Component				
	1	2	3	4	5
<u>TRUST</u>					
% of sample that claim to trust others	.800	.075	-.029	.364	.108
<u>GROWTH</u>					
% average GDP growth rate 1990-2003	.019	.820	.083	-.023	.028
<u>R&D</u>					
% of R&D expenditure (over GDP)	.754	.209	-.110	.396	.127
<u>POLITICAL STABILITY</u>					
World Bank indicator for 1996-2004	.396	.644	.028	.223	.469
<u>SOCIAL EXCLUSION</u>					
An index of inequality, poverty and unemployment	-.261	-.020	.057	-.011	-.774
<u>AGE</u>					
1) Youth and elder group members (16-35, 56-85)	.002	.470	-.255	.181	.491
2) Working age group members (36-55)	-.017	-.310	-.737	.053	-.285
<u>SOCIAL GROUPS</u>					
1) Members in social groups for Welfare, Culture, Human rights, Environment, Sports and Peace	.200	-.054	.189	.827	-.011
2) Members in social groups for Community, Youth, Women and Health	.086	.675	.122	.103	.188
3) Members in social groups for Religion, Unions, Parties and Profession	.865	-.114	-.222	-.185	.179
<u>TRUST IN INSTITUTIONS</u>					
1) Trust in institutions such as the Police, Parliament, Civil services, the Justice system and Unions	-.691	-.503	-.114	-.138	.096
2) Trust in institutions such as the Education, the Social security and the Health care system	-.028	-.108	.777	.051	-.218
3) Trust in institutions such as the Armed forces and the Church	.007	.105	.068	.523	.647
<u>REGIONS</u>					
Scandinavia (Finland, Sweden, Denmark and Iceland)	.954	-.007	.010	-.168	.088
Anglo-Saxon (UK, Ireland)	-.017	.659	-.096	-.053	-.474
Continental (BENELUX, France, Germany, Austria)	-.061	.177	-.219	.777	.236
Mediterranean (Portugal, Spain, Italy, Greece)	-.143	.041	.825	.000	-.034
<i>Eigenvalues</i>	3.644	2.667	2.092	2.033	2.002
<i>% of Variance Explained</i>	21.435	15.690	12.307	11.958	11.777
<i>Cumulative % of Variance Explained</i>	21.435	37.126	49.433	61.391	73.168

* The above table depicts results from the rotated component matrix. The rotation method employed is varimax with Kaiser normalisation. Rotation converged in 7 iterations. Results were produced by the software package SPSS 12.0.

We note that four components correspond to one of each of the regional dummies (Scandinavia, Anglo-Saxon, Continental and Mediterranean). The first component appears to be consistent with findings on participatory behaviour in Scandinavia (we have included Iceland on account of similarities in traditions of welfare state systems and participatory behaviour). Particularly, social trust and trade unions stand out as a common factor. The second component includes variables of economic growth and political stability, which could be indicative of the market orientation of Anglo-Saxon countries, relying also on more decentralised forms of voluntary participation at the local level. The third component reveals features of participatory behaviour that are characteristic of the Mediterranean, namely the effect of age and distrust towards welfare institutions. It appears that there are a series of constraints for the working age group that at the aggregate prevent it from participating in social organisations, compared to the extent that younger or older individuals participate. The fourth component, related to Continental Europe, is strongly correlated with members in activist and cultural groups, and to a lesser extent with distrust towards armed forces and the church. However, the smaller proportion of variance explained by this component implies the more diverse patterns of participation amongst countries of the European Continent. Finally, the fifth component is perhaps associated with more general social features, independent of region. It is positively correlated with the participation of younger and older individuals, negatively with the worsening of inequality and unemployment and positively with institutions of the army and the church.