Elite social capital and the regional economy

Dimitris Christopoulos
Modul University Vienna, Austria

Abstract
This article examines elite interaction and its potential to affect local development. A theoretical discussion sets the stage for a systematic exploration of the social capital of regional elites in a comparative study of 12 European Union regions. The working assumption is that elite social capital and trust between elite groups reflect on the regional development record. A survey of experts captures a number of proxy variables on elite social capital. In a cross-sectional study we observe an association between levels of gross domestic product and the propensity of elites to act in concert. Associations are also evident between concerted action and similarity in attitudes between regional elite actors.

Keywords
Social capital, regional elites, expert survey, economic development

Introduction
Elite interaction is often assumed to affect regional development. Elites are considered instrumental to development because their interaction facilitates economic exchange. The creation, preservation or destruction of elite social capital is of comparable importance to other key resources of a regional economy, such as human capital. In this context, elite networks can be seen as the product of the frequent interaction among actors of high socio-political status. These networks crystallise into regular exchange, underpinned by similarity in values that facilitate the creation of stable bonds. Elite transactions when imbued with trust and reciprocity generate elite social capital. Of particular interest is the effect of such social capital on sub-state European Union (EU) regions. This manuscript offers an exploratory analysis of elite interaction. An influential theory on the effects of social capital on economic development is examined in the context of a cross-sectional study of 12 EU regions.

Often, the analysis of regional elite interaction is premised on normative assumptions. There is a well-established body of work offering insights on the role of local elites in the distribution of local power (Mills, 1956; Verba and Nye, 1972; Welsh, 1979). However, empirical work rarely addresses the relevance of elite interaction to local development.

For the purpose of this exposition, we simplify our definition of regional elites to encompass actors capable of having an impact on the regional political
and economic landscape. Lasswell (1950: 3) has produced a strong case for considering elites ‘as influential’. This definition allows transcending formal status when considering who is an elite member. Locating those that have influence implies a focus on transaction flows that lends itself to relational (i.e. network) accounts of agency.

Regional elites deserve our interest because, unlike global or national elites, they are strongly bound to territory. They can be assumed to strongly associate their political and economic interests with specific territorial units. This territoriality distinguishes regional elite members from other elite groups within a nation, and thus, by definition, is exclusive and presumably acts as a cohesive force as it facilitates the interaction between regional elite groups.

It is credible to assume that regional ‘imagined communities’ (Anderson, 1991) can be created as ‘national and subnational identities are reimagined as awareness of external, globalizing “threats” takes place’ (Rosamond, 1995: 401). It is also possible to apply a liberal corporatist perspective, if one accepts that ‘political and economic elites have shared interests in managing their complex environments, which facilitates co-operative elite bargaining’ (Dunleavy and O’Leary, 1987: 197). An interesting element of this debate centres on whether unitary elites actually exist in western liberal democracies (Burton and Higley, 1987), while arguments based on corporatist theory reasoning, after the work of Max Weber and Joseph Schumpeter, assume that ‘elites collude and collaborate rather than compete’ (Dunleavy and O’Leary, 1987: 143). By limiting the sphere of operation in narrower territorial units, regional elite ‘interests’ are more readily ‘shared’ and ‘cooperation’ can be more easily facilitated (see Marks et al., 2008; Rost et al, 2007). Furthermore, it can be assumed that the restricted and biased mental ‘maps of opportunity’ (Gould and White, 1986) of regional elite members would restrict their interaction with others in their region.

The presence of trust and transaction reciprocity is instrumental in ascertaining the relevance of territoriality on behaviour. Social capital, within that context, can be seen as a trait of a social system underwriting actor interaction. The core premise of this article is that the level of social capital and trust among elite groups is associated with regional growth. Social capital (as generalised trust) would therefore be assumed to lead to higher levels of interaction between elite groups. High levels of interaction would breed social capital.1 In the next section theories of social capital are associated with the role of regional elites on economic development.

**Theory: social and human capital**

Since the early 1990s there has been extensive interest in the role of intangibles such as 'social capital' on regional economic growth and development. This is often associated with a realisation that economic processes cannot be divorced from the social and political exchanges in which economic actors are inexorably enmeshed. Interest in this debate owes much to Putnam et al. (1993), who premised what they termed ‘civicness’ on the existence of social capital and trust in a region and to Coleman (1988), who made a case for the role of social capital in economic exchange. Putnam (2000) subsequently presented a distinction between bridging and bonding social capital to indicate that the benefits social capital confer to an actor depend on the type of relationships maintained with other actors (critique in Stolle and Hooghe, 2004). But this was hardly a novel premise. Weber (1947) had considered shared cultural identities to be of paramount importance among social groups while Simmel (1950) talks of reciprocated trust as a synthetic force in society. Bourdieu (1986) has explored social capital as social obligations, which in turn comprise a collective asset. Coleman (1988) sees trust as inextricably tied to the relations of individuals, whereas Brehm and Rahn (1997) claim that interpersonal trust creates social capital. In this vein Coleman (1990) has singled out social networks as an endogenous variable that determines the level of social capital. The concept could also be linked to actors attaining advantages through their location in the network (the structural holes explored by Burt, 2005) or through the organisational positions they occupy (that affect institutional transformation through social capital flows explored by Lin, 2001). This work reflects on an intuitively obvious point,
namely that relations between economic and other elite actors affect economic process. Indeed, social capital can be seen to be underwritten by social trust. For Coleman (1990: 302) ‘social capital is defined by its function . . . [it] is productive making possible the achievement of certain ends that would not be attainable in its absence’. Nan Lin claims that ‘information, influence, social credentials, and reinforcement – may explain why social capital works in instrumental and expressive actions not accounted for by forms of personal capital such as economic or human capital’ (2001: 20; emphasis in original). Some researchers therefore perceive social capital as a resource distinct from human capital that has a direct impact on actor productivity. Most notable is Granovetter (1973, 1985, 2005), who, by developing the ‘strength of weak ties’ thesis, has demonstrated an association between tie strength and economic success. The right combination between strong and weak ties, bridging and bonding ties or brokerage and closure determines the probability of economic success at both the individual and the systemic level (Burt, 2005; Coleman, 1990; Furst et al., 2001).

Other researchers have explicitly theorised social capital as a form of human capital and therefore attempted to model it as an actor resource. Trigilia (2001) has hypothesised that social capital affects human capital by facilitating the effective cooperation between actors.

An obvious deduction is that social capital affects the propagation of knowledge and innovation. This is associated with the impressive body of literature on knowledge transfer and empirical work on innovation dissemination (Rogers, 2003; Valente, 1995). Overall, it seems legitimate to integrate social capital within models of human capital, although operationalising such variables in econometric models presents a challenge. It would be very difficult to distinguish between generalised social capital and generalised trust, for instance.

A further caveat is that the presence of social capital cannot be assumed to lead to universally positive effects. Under certain circumstances trust and social capital underpin anti-social outcomes. Negative social capital has been linked to corruption, clientelism and crime. Putnam (2000) talks about the dark side of social capital, while corporatism and neo-corporatism can be seen as the product of collusion between elite groups that leads to sub-optimal economic and social outcomes (Schmitter and Leibl, 1979). On the one hand, social capital depends on the existence of generalised trust, a presumed positive social trait. But most negative externalities from the use of trust reflect narrowly defined trust within a group or community that is not extended to other groups. What in the literature is conceptualised as the existence of within-group closure (Burt, 2005) and a lack of bridging weak ties to other groups (Granovetter, 1973). So, trust and reputation as an actor attribute can also be directly associated with familialism, parochialism, social fragmentation, corruption and clientelism, all of which can be considered as examples of negative externalities of agent social networks. Generalised trust as a property of systems, however, where social capital diffuses across groups, produces positive externalities. These negative externalities can be also associated with what Welsh (1979) has called local corporatism or Christopoulos (1998) identified as local clientelism.²

But is there any evidence that social capital affects regional economic growth? Schneider et al. (2000) claim that ‘the impact of cultural facets on economic growth is ambiguous . . . [t]his is especially true for the amount of trust that citizens develop in a region towards their compatriots’ (2000: 314). In short, they suggest that trust elements of social capital do not facilitate development in EU regions. Beugelsdijk and van Schaik (2005) confirm that there appears to be no association between trust and growth, but that engagement in voluntary associations does have a positive association with growth. Schneider et al. (2000) advance the Putnam thesis to its logical conclusion and test the hypothesis that regions with an advanced political culture will grow faster. They reject the thesis by claiming that there is a ‘superiority of economic factors over cultural variables in the explanation of growth’ (2000: 314). On the other hand, Whiteley (2000) demonstrates a relationship between social capital and growth that is at least as strong as that between human capital and growth. In both their support and their critique of social capital, most accounts associate it with cultural properties of social groups. The proxy variables that are employed
attempt to capture trust as a cultural variable. But, ideally, social capital should be captured in the presence or absence of relations between individuals rather than as an agent attribute (Coleman, 1990).

Economists, such as Partha Dasgupta (2011), make the argument that social networks between economic agents distort their information and transactions. Agents transact on trust and economic development is associated with high levels of trust. And then there are a number of endogenous growth theory models that attempt to incorporate social capital as a dimension of human capital, which in turn is assumed to affect economic growth prospects. This is achieved through either ‘endogenous innovation models’ or ‘endogenous broad capital models’, both of which perceive such variables to be internal to the production function. Martin and Sunley (1998) suggest that ‘investment in human capital is a local public good’ (Martin and Sunley, 1998: 212) and therefore a determinant of regional variations in growth rates.3 Conceptualising human capital as anchored to a specific location allows economists to model variations in regional development to be premised on this, as well as other intangible variables such as entrepreneurship (Audretsch and Keilbach, 2004).

The well-developed debate on the effects of trust and social capital on regional development has only recently generated attention to the social capital of elites. Escriba-Falch (2011) has examined how the power of local elites affects growth in authoritarian political systems and concluded that there is a positive effect beyond a certain level of industrialisation. Mariano Tommasi (2011) associates success in economic policy with close ties among elites that are integrated as ‘political leaders, business leaders, and intellectual leaders are by and large members of the same circles . . . and have long term bonds’ (Tommasi, 2011: 179). The role of social capital in generating growth at community level is also associated with the efficient supply of local public goods, with social capital guaranteeing compliance (Hayami, 2009).

Social scientists have started to reserve a role for networks when interpreting the interaction of economic and political interests. Whether these networks are construed loosely as a heuristic device to explore policy making (Borzel, 1998; Marsh and Rhodes, 1992) or as a determinant of the policy context of actors (Knoke, 1993; Laumann and Pappi, 1973) they are almost universally considered relevant. Some of the underlying assumptions in deploying networks to explain political action are weak (Christopoulos, 2008). To consider relations among elite actors as instrumental appears intuitively obvious. However, to then suggest that networks constitute a background condition to policy making, that they may determine the distribution of power among actors and are relevant to the dissemination of policy information, does not in itself explain very much. Significantly, a reference to networks alone does not provide an explanation for their formation and operation. Indeed, the substance of the underlying ‘glue’ that gels together a network is often missing. A background variable often unaccounted for is commonality of values. Such values can be broadly defined to encompass agreement on the purpose of political interaction as well as the existence of general trust in the socio-political system.

The principle is simple. Sharing value systems underpins trust among actors (Coleman, 1990; Lin, 2001). By implication, value sharing could be construed to underpin resilient relations among actors.

Most studies stumble on measuring the social capital of elites disaggregated between national, regional and local levels. The obvious choice is between measuring it as a collective resource through a proxy or aggregating it after capturing it in the relations of relevant actors. Pierre Bourdieu (1986) suggests network size and the assets (as economic, cultural or symbolic capital) of those to whom one is connected can offer a reliable indication of ego social capital and, once aggregated, of collective social capital in a community. Lin suggests that social capital could be operationalised as the ‘resources embedded in social networks accessed and used by actors for actions’ (Lin, 2001: 25). This is a nuanced point. Networks per se represent an asset for actors. It is not only transaction within networks but also the size and the value of membership to a network that reflect an agent’s social capital.

To summarise, in order to attain a comprehensive picture of social capital for individual actors it would be desirable to assess a number of parameters. These include their network position; their own assets (economic, cultural, symbolic); assets of those they
are connected to which are available to them; generalised trust in the network; their reputation; and the value of network membership as a resource.

Some of these constitute intangible variables that are notoriously difficult to capture. Collecting comprehensive data for all agents within a network boundary would allow an evaluation of collective social capital. Such a project, however, is beyond the scope of what is attempted here. The presence of social capital in elite interactions is explored through a number of proxies in this study, as demonstrated in the analysis that follows.

Hypotheses: regional social capital

A number of case studies provide evidence that social capital is underpinned by regional institutions (Jackman and Miller, 1998). Conversely, weak social structures are seen to contribute to the unproductive use of social capital (Trigilia, 2001). As stated by Lin, ‘without the legitimation and support of a social and political system and its constitutive members, the economic system based on its symbolic and generalised medium cannot exist’ (Lin, 2001: 164). Indeed, it would make sense to proceed beyond a view of institutions as structural constraints. But informal institutions in particular entail support mechanisms that can be seen to underwrite social cohesion. Collective social capital depends on enforcement mechanisms premised on reputation and inherent in social interaction. It is these support mechanisms that guarantee the collective utility delivered by social interaction.

Nan Lin develops this argument when he suggests that relational and transactional exchanges are ‘complementary and mutually reinforcing’ (Lin, 2001: 162). He proposes a number of hypotheses, some offering rival explanations for the dynamic processes at hand. In cases of scarcity of one type of collective capital (he distinguishes here between wealth and reputation) agents would value either the type of capital that is scarce, say wealth, or the one that is in abundance, say reputation. He suggests that in an alternative scenario ‘a stable community with abundant physical and economic resources, both wealth and reputation [would be] . . . important and complementary’ (Lin, 2001: 163). But, if both are scarce, ‘it is expected that the community will be fragmented and contested in terms of the valuation assigned to wealth and reputation’ (Lin, 2001: 163). So, according to Lin, economic exchange and trust/reputation work in parallel. The socio-economic outcome (fragmented vs. productive societies) would be determined by whether they are in competing or mutually reinforcing modes. An outline of these assumptions is presented in Table 1.

Where high economic and high social capital co-exist, the two act in a mutually reinforcing manner. The claim in the current study is that generic processes, valid at the level of regions, would also be in evidence among the higher echelons of political and economic actors in a region. And although making an inference from a general population to a more narrowly defined sub-set of actors would normally raise reservations on ecological inference grounds, this is not a concern here, as this hypothesis is exploratory and the methodological approach inductive in character.4

The proxy employed to capture elite social capital is concerted action. If elite groups act in concert, experts were asked to determine the intensity of exchange within an elite group for each region. Nan Lin’s hypothesis is, in that respect, refined. We examine here the association between concerted elite action and a number of variables that might intervene or confound the relationship of this action to regional growth. These include the strength of elite regional identity, the similarity of attitudes between elites (concordance) and the support from

| Table 1. Assumptions on the relationship between social and economic capital according to Lin (2001). |
|---------------------------------------------------------------|
|                           | High economic capital | Low economic capital            |
|----------------------------|-----------------------|---------------------------------|
| High social capital        |互惠互补            |互补或对抗性                   |
| Low social capital         |互补或对抗性           |对抗性和断裂                   |

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economic elites for regional political devolution. Two estimates of the relevance of elite actors in a region measure the scope for elite action and breadth of elite power. Regional gross domestic product (GDP) and gross value added (GVA) offer a measure of economic performance. These variables are discussed further in the next section.

The core research question explores whether regional elite social capital is associated with economic performance in a region. As the data collected are limited to 12 cases, the models employed are constrained to tests of association and a multi-dimensional scale analysis of the relation between concepts.

Data: designing an expert survey

Experts have been employed to contribute data on a number of intangible variables that proxy the presence of social capital in a region. The methodology employed in sourcing, sampling and aggregating expert opinion has been further elaborated in Christopoulos (2009). A consistent problem with key informant, elite and expert interviewing is the representativeness of sample populations.

Data from experts were collected in 2005 via a hybrid of the classic snowballing technique. First, a number of informants were asked to nominate field experts. Informants were chosen from prominent authors, following a review of the literature between 2000 and 2004 in key academic journals. This step is designed to eliminate direct researcher bias. Twelve authors published in the field of regional politics with expertise on Poland, Spain and the UK were approached in March 2005 requesting nominations of other experts in their field. The selection of seed nominations was therefore left to experts and was not directly biased by researcher preferences. Those nominated were approached and constitute the first wave of a survey that commenced on 15 October 2005. The survey requested further nominations that cascaded the snowball. The second wave was launched on 10 November 2005. Thirty-five experts in total were contacted, seven of whom were approached twice because they had not returned a completed questionnaire by the time of the second wave. By the cut-off date of 10 December, 20 responses were received. Fifteen of the questionnaires were sufficiently complete to be employed in the final analysis. By the end of what were, in effect, three waves of nominations (seed nomination and two survey waves) there were 56 experts nominated, 16 of whom had multiple nominations. Nominee home institutions were in Poland (24), Spain (18), the UK (eight), Italy (four), the USA (one) and Belgium (one). Nominators are based in academic or research institutions in Poland (five), Spain (four), the UK (four) and Italy (two), while five respondents did not make nominations. All correspondence was conducted by e-mail.

Applying the Frank and Snijders (1994) estimator, it is possible to generate an estimate of the population size to be 58 experts, implying a sampling rate of 34%. Valuable surveys are provided from 26% of that population. While nominations in a snowball are obviously not independent events, a quarter represents a large enough section of the population of experts to provide us with confidence that views expressed can be considered representative. This population estimate can be seen as a pseudo-robustness indicator.

The data that comprise the scales and indexes in this section were collected between October and December 2005. Scales are comprehensively explained in Christopoulos (2006), while aggregated mean values for the variables employed are reported in Table 2.

The relevance of these variables to regional economic governance is substantiated in the work of Keating (2005). Regional governance capacity and policy competence are measures of devolution of the respective regions and capture the scope and capacity of political elites for political action. The scope captures the institutional and legislative framework permitting elite action, while the capacity captures the existence of regional elite actors capable of political entrepreneurship and leadership acts. The acquiescence of key economic actors towards political devolution can be seen as a facilitator of interaction between the political and business elites as it signifies that regional economic elites are supportive of local political elites attaining more power. The degree to which different regional elites take common (concerted) action signifies a sense of common purpose and is a proxy for the existence of trust and social capital in a region.
Table 2. Policy capacity, attitudes, behaviour and regional growth.

| Region          | Scope for political action | Capacity in policy competence | Support for devolution | Strength of regional identity | Concordance in attitude | Concerted action | GDP Rank | GDP Average |
|-----------------|----------------------------|-------------------------------|------------------------|-----------------------------|------------------------|------------------|----------|-------------|
| Galicia         | 7                          | 7                             | 7                      | 7                           | 6                      | 5                | 8        | 84.2        |
| Aragón          | 6                          | 6                             | 6                      | 6                           | 6                      | 5                | 7        | 109.5       |
| Andalucia       | 9                          | 9                             | 9                      | 9                           | 9                      | 9                | 2        | 122.1       |
| Cataluña        | 7                          | 7                             | 7                      | 7                           | 7                      | 7                | 3        | 80.4        |
| North East Wales | 7                          | 6                             | 3                      | 3                           | 3                      | 3                | 2        | 81.2        |
| Scotland        | 2                          | 2                             | 2                      | 2                           | 2                      | 2                | 8        | 96.4        |
| North West Wales| 3                          | 3                             | 3                      | 3                           | 3                      | 3                | 3        | 50.4        |
| England         | 6                          | 6                             | 6                      | 6                           | 6                      | 6                | 6        | 104.2       |
| Mazowieckie     | 3                          | 3                             | 3                      | 3                           | 3                      | 3                | 8        | 92.2        |
| Mazurskie       | 4                          | 4                             | 4                      | 4                           | 4                      | 4                | 2        | 113.3       |
| Pomorskie       | 3                          | 3                             | 3                      | 3                           | 3                      | 3                | 3        | 50.4        |
| North East Scotland | 3                        | 3                             | 3                      | 3                           | 3                      | 3                | 8        | 92.2        |

Note: Scales range from 1 to 10, where 10 signifies a high score. GDP Average is in percentage points.

The strength of regional identity is presumed to affect the attachment of regional actors to their locality and is a measure of territoriality. Christopoulos (2001) has looked at how similarity in values can affect collective decision making in regions. The degree to which political, economic, bureaucratic and cultural elites share similar attitudes can be seen as a measure of regional elite coherence. This is termed attitude concordance. Relative regional GDP (GDP Rank) in 2002 values, is a rank of regional GDP between all regions for each state examined. It was devised in order to eliminate the large disparities of absolute GDP between regions in this sample that belong to different states. GDP Rank is therefore a measure of relative rank in reference to each state’s national economy. Regional GDP against the EU average (GDP Average) is a measure of regional wealth in Purchasing Power Standard units. It has to be acknowledged that any simple aggregate of regional economic statistics provides a crude approximation of economic performance and a rough measure for comparing growth potential.

Evident in this table is a clear separation between those regions with a high political level of influence such as Catalonia and Scotland, followed by the rest of the Spanish regions and Wales and the two English regions and Polish regions at the bottom of the ranking on regional actor capacity and constraints. Wales and the three Spanish regions (bar Catalonia) appeared weakest in assessments of the likelihood of collaboration among regional elites. Most other measurements of regional elite activity or collaboration were low for the Polish and English regions. The exception was Mazowieckie, where regional elites were perceived to have high attitude concordance, and Slaskie, where they appear to have a strong sense of identity.

Case selection: choice of regions

Regions to be analysed were selected from three large EU states. Research expediency limited data collection to Spain, Poland and the UK. Expediency also determined a focus on administratively distinct regional constructs, although, as Jessop (2005) ascertains, governance is multi-scalar and often
transcends over-imposed boundaries. This can be linked to the earlier debates of multi-level governance (Keating, 1998) and cross-border regions (Sohn et al. 2009). Allen and Cochrane (2007: 1172) explore how any region is constantly ‘made and remade by political processes that stretch beyond it and impact unevenly’, whereas Macleod and Jones (2007) consider the merits of conceptualising regions in scalar or relational terms. Selecting the appropriate geographic scale and relevant framework is obviously fundamental in analysing governance, but it is not as significant when determining the role of regional elites.

Both the Spanish and the UK states have a history of a top-down administrative devolution. Well-established regionalist (and often nationalist) pressures from below have culminated in asymmetric institutional settlements (Keating, 1998). These asymmetric arrangements of regional devolution have led to debates on the extent, conflict and range of powers of political elites and regional institutions. In Poland, the state introduced a degree of administrative devolution soon after democratisation without any substantial bottom-up agitation or pressure. The significant variations in economic development and strength of identity amongst different regions in Poland provide the context for a potentially volatile devolution arrangement. In each of the three states four regions are selected to broadly reflect the range of strength of identity, political autonomy and economic significance for the respective states (Christopoulos, 2006).

As could be expected, the recent devolution process has followed different ‘evolutionary’ paths in the three states examined (Loughlin, 2001). In the UK a series of regional referenda has led to the introduction of legislation in 1998 to devolve some regions (Leeke et al., 2003), in Spain variable autonomy arrangements are confirmed in its constitution since 1983, although they remain contested, and in Poland regional elected assemblies were created in 1998 prior to the accession of the country to the EU.

There is an extensive literature on the regional question in all three countries. Literature on the UK focuses on Scottish and Welsh devolution (Keating, 2005), the governance of Northern Ireland, as well as on the failed attempt to create regional assemblies in English regions (Berry and Herbert, 2005; Jeffery, 2005). The academic debate on Spanish constitutional arrangements focuses on the rights of historic nationalities such as the Basques and the Catalans (Genieys, 1998; Heywood, 1995; Morata, 1998), whereas Europeanisation is perceived to have been the primary force in the transformation of the Polish state (Hughes et al. 2002; Kuklinski and Olejniczak, 2002; Zarycki, 2005).

**Evidence: exploring the data**

This analysis is premised on the opinion of experts on elite interaction in a number of European regions. By definition this is subjective and although we consider experts to offer a reasonable representation of reality, our conclusions are subject to an inherent bias. The conceptual map of these variables is generated through a multi-dimensional scale (MDS) algorithm. Figure 1 represents an overview of these concepts for all regions.

Variables in close proximity in this two-dimensional space can be assumed conceptually close. The two dimensions can be conceived as factors on which to categorise the underlying concepts. On dimension 1, similarity of elite attitudes (concordance) has similar values to acting in concert (concerted), while the same is true for strength of regional identity and support of economic actors for devolution. The capacity and scope of regional political elites are proximate on both dimensions. On dimension 2, concerted action and support for devolution have similar loadings as are strength of elite identity and elites having similar attitudes. The underlying factors behind the two dimensions are not readily apparent. But what we can ascertain is that these variables attain positions that do not challenge our understanding of variable proximities. This reinforces our confidence in the analysis that follows.

The equivalent graph of this conceptual space between regions for all variables, depicted in Figure 2, indicates that the Polish and Spanish regions occupy different sectors of this conceptual space, whereas the UK regions span across it. In this case, dimension 1 can be interpreted to approximate the level of regional political devolution and dimension 2 the level of economic performance. Again, this provides confidence in measurement validity and indicates that these two factors are contained within the data examined.
**Figure 1.** Multi-dimensional scale of key variables.

**Figure 2.** Multi-dimensional scale between cases.
This allows us to return to our original question. Is regional elite social capital associated with economic performance in a region? Our first substantive test of this concept is a scatterplot of our measure of economic performance with our measure of elite concerted action. In Figure 3 it becomes evident that these are not linearly related variables and that, indeed, the line of best fit is quadratic.

A scatterplot between concerted action and average GDP lacks linear fit. Concerted elite action appears associated to EU weighted regional GDP per person. But the relationship between elite social capital and regional performance is not uni-dimensional.

Retaining focus on elite interaction, we explore associations among elite behaviour, attitudes and regional economic indicators. Correlations constitute an elementary measure of association between variables. The picture that emerges is of strong and significant correlations between the conceptual variables employed. It should come as no surprise that in regions where regional elites have scope for action there is perceived to be capacity for policy making and vice versa. Similarly, in regions where elite groups have a heightened sense of regional identity, economic elites support devolution. And when elites think alike (concordance) they tend to act in concert. It is less intuitively obvious why in regions where there is similarity in attitudes (concordance) this should be associated with policy capacity. And, inevitably, this points to the possibility that some of these associations are spurious. It is also of interest that neither of our two measures of economic performance significantly associates with the other variables examined (Table 3).

To return to the original research question, on the effects of elite social capital on regional economic development, the evidence for an association is weak. The analysis of the expert opinion data implies that the variation of behaviour and values among political and business actors is related to levels of economic performance, but the strength of that effect cannot be ascertained.

**Conclusion: exploring elite social capital**

The premise that social capital is relevant to economic development has been explored by coupling data from an expert survey with elementary
growth statistics. There is conditional support for Lin’s hypothesis that social capital is related to economic growth. The small number of observations makes any tests of generalisability superfluous. More sophisticated models that could take account of interaction effects, such as two-stage least squares, do not produce significant associations for this sample. A future treatment could test structural equation models to account for the reciprocal and mutually reinforcing relations among these variables, while collecting data from a larger sample.

Not surprisingly, elites appear to take concerted action when they think alike. This is assumed to be directly associated with the presence of trust in their exchange. Indeed, it was possible to associate the sharing of norms and values among regional institutions, with elites having a sense of common purpose and a strong regional identity. Attitudinal concordance was also associated with growth for all cases in the dataset.

At the same time, it is apparent that a number of the relationships examined are mutually reinforcing and most probably reciprocal, and therefore are not amenable to linear causal modelling. And while there is evidence of a relationship between regional elite interaction and economic growth, conclusions are limited by the nature of the data analysed.

The research strategy implications of this exploratory analysis are also instructive. The social capital that elites build can be captured through measuring their actions and attitudes. Acting in concert, the level of interaction and frequency of interactions captures the former. Attitude similarity, existence of generalised trust and belief in collaboration captures the latter. In this manuscript we explored concerted action and attitude concordance as the core determinants of elite social capital. We also captured these variables indirectly, through the opinion of experts. Although desirable to capture such effects directly from elites, fieldwork on regional elites faces the challenge of correctly identifying not only positional but also reputational elite actors. In the present analysis we did not control for the effect of national elites, national policies, global shocks, the structure of regional networks of interaction and the impact of individual political entrepreneurs or leaders. Such controls are desirable but not easy to capture. Measuring all relevant variables and creating a more comprehensive data environment would permit a more conclusive answer to the original hypothesis.

Acknowledgments

The author wishes to thank participants to the expert survey for contributing their knowledge and the Department of Geography, CEPS-INSTEAD, for research support while a Visiting Professor in Luxembourg during 2010.

Notes

1. The opposite direction in this relationship can also be hypothesised. It is also pertinent to point out that as the available dataset is not longitudinal it is not meaningful to examine processes of change here.

2. Variables analysed in this article capture systemic social capital and would make inadequate proxies for personal trust.
3. Education is the most frequently used proxy for human capital, whereas there is no universally agreed proxy for operationalising social capital beyond a common reference to trust.

4. See the work of Gary King (1997) for a definition and some methodological and statistical solutions to the problem of ecological inference.

5. Respondents’ institutional base does not always signify national expertise, whereas most respondents had expertise in regions of multiple countries.

6. Schmitter and Lehmbruch (1979) provide a background discussion to corporatism that is, although relevant, beyond the scope of the present analysis.

7. German ‘Konzertierung’, meaning concerted action, would represent the accurate verb.

8. See Borg and Groenen (2005) and Kruskal and Wish (1978) for restrictions in the interpretation of MDS graphs.

9. Eliminating the obvious outliers does not improve model fit. The linear fit of the data is negligible while the quadratic regression fit is 0.380.

10. Tests of normality, in terms of skewness and kurtosis, are deemed acceptable. Skewness for this set of variables ranges at between −0.40 and +0.96 and kurtosis at −1.78 and +0.96. None of these variables is flagged as significant in the Shapiro–Wilk test of normality.

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