Why Does the Northern Light Shine So Brightly?

Decentralisation, social capital and the economy

Christian Bjørnskov and Gert Tinggaard Svendsen[1]

Abstract

Based on institutional economics, the paper develops a new model pointing at two main reasons why Scandinavia is doing so well in economic terms, namely the level of decentralisation and social capital in its broad sense. The idea in the model is that a political system, which decentralises power, means less lobbyism because access to economically harmful rent seeking is more costly. Consequently, social capital and the trust in other people and the political leadership will increase. This model, suggesting one single social capital measure, is applied to countries in both Western and Eastern Europe. The social capital ranking results indeed show that Scandinavia (Denmark, Norway, Sweden and Finland) is among the seven top ranking countries together with Switzerland, the Netherlands and Iceland.

JEL Codes: D60, H11, P52, Z13

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1: Introduction

Several authors have noted the striking economic performance in Scandinavia. Examples abound where this particular region is emphasized as being exceptional on a wide range of areas, see for example Inglehart and Baker (2000), Uslaner (2001), Fisman and Gatti (2002), Treisman (2000), Whiteley (2000), Svendsen (2003), Bjørnskov (2003) and Paldam (2001). Based on new institutional economics and the empirical model developed by Bjørnskov and Svendsen (2002), we identify two main reasons why the Northern Light shines so brightly, namely the level of decentralisation and, consequently, the level of social capital. Thus, the ambition is to trace one underlying social capital explanation as the answer to the question of why the Scandinavian countries - Finland, Denmark, Sweden and Norway - are doing so well in long run economic terms.

The main element in social capital is the level of trust, which may differ in different countries. For example, an early writer like Adam Smith (1997 [1776]) observed notable differences in trust across nations and found that the Dutch 'are most faithful to their word'. In the same vein, John Stuart Mill (1848) wrote: 'There are countries in Europe … where the most serious impediment to conducting business concerns on a large scale, is the rarity of persons who are supposed fit to be trusted with the receipt and expenditure of large sums of money' (cited from Zak and Knack, 2001). Such differences in the level of trust and social capital across countries survive today.

Section 2 gives a theoretical justification for the model. Section 3 describes our method. Section 4 applies the model by comparing Scandinavia to Western and Eastern European countries thereby investigating what has made Scandinavian one of the most affluent regions in the world. Compressing existing social capital measures into one underlying factor enables us to rank 25 countries in terms of their social capital level. This work is in line of Paldam (2000) and Paldam and Svendsen (2000) who identified the strong need for developing such a single social capital measure. Finally, Section 5 summarises the results.

2: Model

The discipline of New Institutional Economics is basically the study of economic interaction in a world where economic agents do *not* have full information. This is in contrast to the usual assumption of full information in standard neoclassical economic theory. Because agents lack information, extra transaction costs must be added to the exchange of goods and services. As a response to these problems, formal and informal institutions evolve.

Thus, North (1990, p. 54) concludes that the inability of societies to develop effective, low-cost enforcement of contracts is the most important reason for their economic decline. As argued by Svendsen (2003), agents must use resources to protect themselves against non-voluntary transactions such as theft and to screen the market concerning potential buyers and sellers and their financial abilities. Also, resources must be employed for drafting a contract and to enforce it (Coase, 1960). These transaction costs will always be positive when the agents do not possess full information and to support the exchange of goods and services in a world with incomplete information, the agents need to construct 'rules of the game', i.e. institutions (North, 1990). Such rules of the game can both be formal (laws and rules written down) and informal (unwritten rules, i.e. norms and customs). The idea that both formal and informal institutions matter to political and economic outcomes is the starting point of this paper, as well-functioning institutions can minimise transaction costs when dealing with asymmetrical information problems and thereby increase economic growth.

The aforementioned transaction cost idea from New Institutional Economics can be applied to the level of decentralisation and lobbyism within a country. In the extreme case where one institution basically holds all power, a pressure group only has to lobby one place. Note, that lobbying can take place both in a legal form, e.g. by sending expert reports to bureaucrats, and an illegal form, e.g. by bribing a judge. In contrast, when power is decentralised, for example when it is spread out on several institutions such as the parliament and the government, interest groups are forced to lobby many different places. Moreover, decentralising power provides better opportunities for citizens to monitor politicians and authorities by being more transparent, all other things being equal. Thus, the design of the political system, i.e. the degree of power centralisation, is crucial. Power should be

decentralised as happened after the Glorious Revolution in England when the parliament rose to power at the expense of the king (see North and Weingast, 1989 and Svendsen, 2003).

Figure 1: Decentralisation, social capital and the economy.

Decentralisation ⟶ Social capital ⟶ Economy
1) Economic freedom
2) Corruption
3) Civic participation
4) Generalised trust

As shown in Figure 1, we hypothesise that decentralisation will encourage the formation of social capital as measured by four proxies ranging from macro to micro level. This theoretical approach matches the main empirical findings so far, see Bjørnskov and Svendsen (2002). Thus, our model first focuses on economic freedom at the macro level. Second, it addresses corruption and civic participation at the meso level. Thirdly, generalised trust at the micro level is incorporated. These four crude measures are condensated into one crude measure in Section 3.

First, the macro measure of economic freedom addresses the economic policies implemented by the government. As argued above, lower lobbying costs following power centralisation result in distortive and economically harmful policies. Such bad economic policies have been most widespread in centrally planned economies where power is centralised in the hands of bureaucrats. When economically harmful redistribution in a society occurs it will lower the confidence towards the macro economic institutions in the populations. As observed by Doig and Theobald (2000: 4), everywhere the state is active in society presents an opportunity for rent-seeking. Because developing countries have relatively large public sectors compared to developed countries, bad economic policies and looting of the public treasury is much more wide-spread in these countries (Svendsen, 2003). Other studies point to similar results concerning corruption and the resulting low level of trust between citizens and states in Eastern Europe. The annual World Bank report (WDR,

1996: 94) states that government credibility is low in Russia and Eastern Europe in general. Rose and Mishler (1998) found similar results. Their 'battery of questions' about trust in macro institutions of Russian society indicated that most Russians distrust every major institution, especially representative institutions of governance, see also Paldam and Svendsen (2000) and Rose-Ackerman (2001).

Second, the level of decentralisation affects the level of corruption and social capital. Power centralisation and monopoly power in granting permissions for most activities encourage corruption too because the few people that hold power can earn a lot by offering their services in return for bribes. This argument is suggested and investigated in more detail by Svendsen (2003) in the EU setting while Fisman and Gatti (2002) shows empirically in their cross-country studies that more decentralisation leads to less corruption in a society. Corruption in turn affects social capital and vice versa. In the absence of corruption, we may expect a higher level of social capital and hence more economic growth. This is so because a low level of corruption implies strong enforcement of contracts thereby encouraging the voluntary building of trust among trading parties (Paldam and Svendsen, 2002; Rose-Ackerman, 2001). If trading parties know that the formal rules are strictly enforced and everyone is equal to the law, they are more likely to co-operate without cheating and in this way build trust so that more and more informal transactions will take place over time. See also Paldam (2001) and Treisman (2000) concerning institutional quality and the dynamics of corruption, which negatively affects the economy.

To paraphrase Søren Kierkegaard, the 'leap of faith' involved in any transaction becomes shorter and hence more likely when strong and credible institutions are able to punish those who abuse one's confidence. However, causality may run both ways. Uslaner (2001), using generalized trust as proxy for social capital, found that the influence of trust on corruption was substantially stronger than the reverse causal link. For example, trust makes people more willing to engage in transactions with more diverse people that in turn create increased competition for any corrupt practices.

As suggested in the dictatorship theory by Paldam and Svendsen (2000; 2002), we finally hypothesize that decentralisation affects the level of social capital both in terms of civic participation and generalised trust. Power centralisation, as the heavy state intervention in centrally planned economies, meant that the state made almost all decisions and coerced people into doing

certain things. There was no room for entrepreneurship, experiments and voluntary organisation into social groups and great efforts were made to root out independent initiative and organise everybody according to party rules and ideology - even the boy scouts were replaced by party scouts (pioneers). All sports clubs and civic activities, etc., were brought into the system. During the purges people learned to trust nobody, and to restrict all activities to the (relatively) safe one of obeying orders (ibid). This fear resulted both in the abolishment of voluntary civic activities and trust in other people. Thus, we suggest that power centralisation, such as communist dictatorship, destroyed social capital at the micro level because the state made all decisions without leaving room for entrepreneurship and voluntary organizations.

In summary, we hypothesize that the total level of social capital in a society influences economic growth because transaction costs in society are lowered in the presence of trust both regarding general trust and institutional trust (Coleman, 1988); people save costs by undertaking informal transactions and the state saves costs due to lower monitoring and enforcement costs. Moreover, the presence of social capital enables people to cooperate and utilize existing factors more efficiently (Hall and Jones, 1999; Woolcock, 2001). A growing literature confirming the claim that social capital enhances economic growth empirically, e.g. Whiteley (2000), Zak and Knack (2001) and Beugelsdijk et al. (2002) concerning horizontal measures of social capital, and Farr, Lord and Wolfenbarger (1998) concerning a vertical measure. Also, a growing economy may in itself have a positive feed-back on the level of social capital because the economic results will convince citizens that the State is working in their interest (Ibid.). Thus, our model combines decentralisation and a broad measure of social capital into a coherent framework for analysing the economy.

Concerning causality, we do not attempt to prove any direction between decentralisation, the social capital elements and the economy in our model. In fact, causality may run both ways between such variables as argued by Inglehart and Baker (2000). Hence, the aim of this paper is not to disentangle causal relations or provide solid estimates of anything, but to classify the European economies in distinct groups to examine which lessons can be learned from such exercises. The direction of causality is less important in our setting because we are aiming at the total effect on the economy from social capital. If social capital is destroyed due to a poor institutional set-up, for example a heavily centralized state, this can lead to harmful rent-seeking, increased transaction costs and reduced resource sharing, which in turn leads to economic decline as well (Tullock, 1967;

Coleman, 1988; Ostrom, 1990; Olson 1982). By using equivalence analysis in the form of clustering techniques, we sidestep the problems of endogeneity and overcome difficulties in measuring social capital. In the next section, we will apply this model to the institutional set-up of Western and Eastern European countries.

3: Method and indicators

3.1 Cluster analysis

The methodological approach we are taking to shed light on these problems is that of cluster analysis, which is a multivariate technique for grouping elements according to their characteristics on a pre-specified set of parameters. The purpose of the method is to develop a taxonomy where the individual observations are grouped into clusters. This taxonomy should ideally exhibit minimum intra-cluster homogeneity and maximum inter-cluster heterogeneity. To achieve this, we are employing the non-hierarchical k-means technique.[2]

The identification of distinct **clusters**, which is our primary objective, is conducted using indicators for the four main elements in our model. The parameters entering the cluster formation process are measured by: 1) Freedom House index (quality of policy outcome), an index of perceived corruption from Transparency International, and national scores on generalized trust and civic participation (the level of social capital). We present these four indicators in Subsection 3.2 before applying our statistical method in Subsections 3.3, 3.4 and 3.5.

3.2 Indicators

3.2.1 Freedom House

Freedom House (2002) publishes an annual assessment of economic freedom in the world by assigning each country and territory a status of "Free," "Partly Free," or "Not Free" by averaging their political rights and civil liberties ratings. Those with ratings averaging 1-2.5 are generally considered "Free," 3-5.5 "Partly Free," and 5.5-7 "Not Free." The dividing line between "Partly

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[2] For other applications of cluster analysis with more technical descriptions of the method, see the appendix in Diaz-Bonilla et al. (2000). A full technical account can be found in Hair et al. (1998).

Free" and "Not Free" usually falls within the group whose ratings average 5.5. For example, countries that receive a rating of 6 for political rights and 5 for civil liberties, or 5 for political rights and 6 for civil liberties, could be either "Partly Free" or "Not Free." The total number of raw points is the definitive factor that determines the final status. Countries and territories with combined raw scores of 0-30 points are "Not Free," 31-59 points are "Partly Free," and 60-88 are "Free." (ibid.). This index of economic freedom is believed to capture both institutional quality and capacity, although imperfectly.[3] As such, we use it as a fully vertical element of social capital.

3.2.2 Corruption Perceptions Index

The Corruption Perceptions Index (CPI) is used for measuring the level of corruption at national level in the year 2000 (Transparency International, 2001). The score ranges between 10 (highly clean) and 0 (highly corrupt). So, high scores mean low corruption and low scores mean high corruption. Business people, risk analysts and the general public in 89 different countries were interviewed concerning their perceptions of the degree of corruption. Note that the index is based on subjective perceptions (how people think it is), which do not necessarily show how the situation really is. Note also that the CPI index is really an honesty index, as low values show corruption and high values show honesty. The corruption index is used as a partly horizontal, partly vertical element of social capital, as it measures the relative honesty of both individuals and institutions.[4]

3.2.3 Generalized trust and civic participation

A standard way to measure social capital is yet to be established (Paldam and Svendsen, 2000). Thus, in an attempt to catch the trust and network elements of social capital, we use two proxies as indicators.

Concerning the trust element, the first straightforward way to measure the general level of trust in society is simply to ask people directly. This approach was pioneered by the team behind the World Values Survey (Inglehart et al., 1998) who ask people about their generalized trust in the following

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[3] When controlling for economic development (GNI per capita) and horizontal social capital (generalized trust), the correlation between confidence in the system from Inglehart et al. (1998) and economic freedom is an amazing 0.93, which is strongly significant.

[4] By using factor analysis, both Narayan and Cassidy (2001) and Bjørnskov (2003) confirm the validity of including corruption as a proxy for social capital.

way: 'Generally speaking, would you say that most people can be trusted, or that you cannot be too careful in dealing with people?' Here, the national percentage of people that respond confirmatory to the question is recorded. The data are drawn from the European Values Survey (van Schaik, 2002).

A second available way to measure social capital is Putnam's Instrument, i.e. the density of voluntary organisations of any type, which captures the network element. Here, we use the density of civic participation from the World Values Survey with data from 1993 as a rough proxy for Putnam's Instrument (Inglehart et al., 1998). Respondents were asked whether they participated in different civic activities, i.e. voluntary activities, including: (a) social welfare services for the elderly and deprived; (b) education, art and cultural activities; (c) local community affairs; (d) activities related to conservation, environment and ecology; and (e) work with youth. The density of civic participation is measured as the percentage of these civic activities in which an average respondent in a country is involved.

Both measures are relevant and may catch different aspects of social capital. For example, a person may not trust strangers but can still be extremely active in terms of participation in voluntary organizations, where trust is being built by observing the outcome of repeat interactions. However, membership in voluntary organizations means that part of the population is excluded from this process while those included potentially gain access to a variety of resources through the network (Stolle, 2002). The two indicators thereby measure social capital with different degrees of inclusiveness and different mechanisms. Moreover, organizations such as trade unions are built as hierarchical structures, which also serves to distinguish the two indicators on a scale of horizontality / verticality.

3.3 Choosing an optimal taxonomy

The four indicators thus capture different facets of social capital that can be jointly captured by our choice of equivalence analysis. By regressing an underlying factor on cluster membership dummies, Table 1 below provides some statistics on the quality of the potential taxonomies emerging from the use of the indicators. This factor is obtained from a principal component analysis using the four indicators above, which confirms that all elements load powerfully onto the same underlying factor

(see Bjørnskov and Svendsen, 2002). Two out of the potential 25 taxonomies are marked in grey in the table as they are picked as desirable.

Table 1. Taxonomy goodness-of-fit

Clusters	F	Δ F	R-squared	ΔR-squared	Min t-statistic	Ward variance	Δ Ward
2	46.601	40.8	0.655	-5.2	6.826	6577.8	19.4
3	27.588	-158.9	0.689	-30.3	1.872	5301.4	57.9
4	71.425	14.5	0.898	-1.2	5.200	2232.1	20.8
5	61.071	17.8	0.909	-0.2	5.925	1767.9	43.2
6	50.193	-12.9	0.911	-2.4	1.493	1003.9	28.5
7	56.659	-2.0	0.933	-1.1	1.339	717.6	-7.2
8	57.778	-43.4	0.943	-2.3	1.390	769.3	39.5
9	82.873	15.6	0.965	0.2	2.725	465.7	21.6
10	69.940	0.4	0.963	-0.3	2.655	365.1	8.0
11	69.668	13.7	0.966	0.2	2.788	336.0	9.8

Note: column six reports the t-statistic of the last cluster to be added to the taxonomy. All differences are in percentages.

First of all, a taxonomy using only two clusters explains about 66 percent of the variation in the factor scores. The F-value also seems adequate, indicating that it makes sense operating with this taxonomy. Secondly, between nine and eleven clusters explain about 97 percent with a relatively low Ward variance. Specifically, a nine-cluster taxonomy maximizes the F-value, indicating that it is optimal. Moreover, the table demonstrates that moving below nine clusters seems to create a 'bad' cluster, which is not significantly different from one of the other clusters. This could indicate that the cluster is created out of potentially spurious differences in only one of the four parameters that determine the cluster formation process. The appendix therefore reports the results of a series of robustness tests. The next section discusses the properties of taxonomies with either two or nine clusters.

4: Taxonomies

4.1 A two-cluster partition

As is evident from Table 1, the cluster analyses lend substantial support to the hypothesis as approximately two-thirds of the variation in the factor scores can be explained by picking only two clusters, i.e. Europe could meaningfully be divided into two halves, namely North and South as suggested by Bjørnskov and Svendsen (2002).[5] The details of this partition are reported in Table 2 while average characteristics of the clusters are reported in Table A.1. Note that the distance between the cluster centres is 43.9, i.e. the two clusters are quite disparate compared to the average within-cluster distances that are 18.1 in North and 13.4 in South.

The differences in social capital are remarkable: the Northern European cluster scores about double as much as Southern Europe on generalized trust. The former countries score between 30 and 66 percent while the latter score between 15 and 29 percent; the Northern cluster is far less corrupt (7.4-9.9 verses 3.2-7.8) and has populations that participate much more in civic society than in the Southern part of Europe (6-47 versus 3-10). These differences are reflected in the factor scores that are all negative in the Southern cluster while nine out of thirteen are positive in the Northern cluster. The countries in the latter cluster are also richer and score slightly lower scores on the Freedom House index, although all European countries are estimated to be relatively free. What is even more important to note is that people in the countries in the Northern cluster are much more satisfied with their life than those in the Southern. All differences are significant at p<0.01. What all these numbers suggest is that Robert Putnam may be right in asserting that there are two "social equilibria". Specifically, it should be noted that Northern and Southern Italy are placed in different clusters.

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[5] Unfortunately, we lack sufficient data on Greece, Malta, Cyprus and Luxembourg. They are therefore excluded from the cluster analyses. However, all but Cyprus are include in Table 3 below by relying on information from average rankings.

Table 2. A two-cluster taxonomy

Name of country	Cluster	Percentage reformed	Generalized trust	Factor score	Distance
Iceland	1	96.6	41.1	0.93	10.54
Northern Italy	1	0.4	45.4	-0.02	11.94
Netherlands	1	42.5	59.7	1.47	15.32
Ireland	1	4.0	35.2	0.47	15.72
Austria	1	6.5	33.9	0.43	16.15
Germany	1	46.4	34.8	-0.13	16.28
Norway	1	97.9	65.1	1.30	17.82
Spain	1	0.1	38.5	-0.24	18.20
United Kingdom	1	43.9	29.8	-0.15	18.55
Finland	1	93.2	58.0	1.34	18.70
Sweden	1	68.4	66.3	1.37	19.95
Denmark	1	95.3	66.5	1.46	22.19
Switzerland	1	43.4	42.6	1.77	34.33
Lithuania	2	5.0	24.9	-0.87	3.59
Slovenia	2	1.0	21.7	-0.75	4.32
Hungary	2	21.6	21.8	-0.89	4.71
Estonia	2	66.0	22.9	-0.74	7.13
Poland	2	0.1	18.9	-1.06	8.46
Czech Republic	2	4.6	23.9	-1.03	10.34
Slovakia	2	8.4	15.7	-1.22	13.48
Portugal	2	2.1	21.7	-0.08	14.03
Latvia	2	14.1	17.1	-1.22	15.68
Southern Italy	2	0.4	19.8	-1.25	17.25
France	2	2.4	22.2	-0.56	18.05
Belgium	2	0.1	29.3	-0.34	19.34

Note: Germany is divided into two equally large areas. The North is Protestant while the South is Catholic.

The reason for the substantial differences in Table 2 could be centuries-deep roots. For example, Reynolds (1984) provides convincing evidence that there were no substantial regional differences in the strength of communities in Medieval Europe. Hence, it seems acceptable to claim that there were no systematic differences in the strength of local-level social capital at that time. Religious differences are often found to influence the level of corruption (Treisman, 2000; Paldam, 2001). The table illustrates that this relationship may be expanded to cover our broad definition of social capital by showing that the relatively poor South is almost exclusively catholic while the richer

Northern European countries are both social capital-intensive and predominantly Protestant or Anglican.[6] As such, the religious reformation of Northern Europe could be taken as an important historical source of social capital. Potential mechanisms for this very long-term influence include the impact of a specific Protestant work ethic (Weber, 1992) or alternatively an outcome of the decentralisation of religious power, but the question remains open (see also Bjørnskov and Paldam, 2002). The question of decentralisation nonetheless emerges once more when looking at the fine-grained taxonomy.

4.2: A nine-cluster partition

The other partition that seems to explain relatively much consists of nine clusters, reported in table 3. Although the partition becomes quite fine-grained, it is surprisingly stable to the inclusion of other variables in the cluster formation process. For example, including the HDI in the process has absolutely no consequences, while only very little changes if we include the Gastil index or measures of the degree to which the populations have materialist values.

Four countries of interest have missing values on one or more of the parameters entering the cluster formation process. By applying an alternative weighted average to supplement the cluster memberships, we are able to get a fuller picture, which includes three of the four countries. All European countries are thus ranked in Table 3 according to three criteria: cluster, individual factor scores and average factor score within the cluster. The three countries, Greece, Malta and Luxemburg, are thereafter entered in the table according to their weighted average of the three criteria above.[7] What becomes readily apparent in the table is that there are substantial differences between the clusters. Some clusters are fairly similar while others are quite disparate. All inter-cluster distances are therefore reported in table A.1 in the appendix; cluster averages are reported in Table A.2.

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[6] The simple correlation between social capital and the percentage of reformed Christians is 0.72.

[7] The percentage of the sample average is calculated for each country on each indicator; for economic freedom, the average is seven minus the score. The weight in Table 3 is the average of these scores. The normal procedure in cluster analysis to correcting for missing values is to replace the missing value with the average score. As the four parameters entering the formation process are highly correlated , this procedure would nonetheless bias our results, as countries with missing values would occur to be closer to the average than they are when evaluated with the available data.

Table 3. A nine-cluster taxonomy

Cluster number		Generalized trust	Corruption index	Freedom House index	Civic participation	Weight	Factor score
1	Switzerland	42.6	8.4	1.0	46.64	2.243	1.77
4	Netherlands	59.7	8.8	1.0	20.80	1.667	1.47
4	Denmark	66.5	9.5	1.0	11.35	1.484	1.46
4	Sweden	66.3	9.0	1.0	10.94	1.451	1.37
4	Norway	65.1	8.6	1.0	11.74	1.448	1.30
6	Finland	58	9.9	1.0	10.66	1.414	1.34
5	Iceland	41.1	9.2	1.0	11.35	1.273	0.93
	Luxembourg	25.9	8.7	1.0		1.088	
2	Ireland	35.2	7.5	1.0	8.04	1.067	0.47
2	Austria	33.9	7.8	1.0	5.97	1.011	0.43
2	Germany	34.8	7.4	1.5	9.39	1.075	-0.13
2	United Kingdom	29.8	8.3	1.5	7.01	1.005	-0.15
3	Northern Italy	45.4	7.4	1.5	6.00	1.063	-0.02
3	Spain	38.5	7.0	1.5	4.70	0.957	-0.24
7	Portugal	21.7	6.3	1.0	4.07	0.803	-0.08
7	Belgium	29.3	6.6	1.5	10.05	1.019	-0.34
	Malta	20.7		1.0		0.865	
7	France	22.2	6.7	1.5	6.08	0.856	-0.56
9	Estonia	22.9	5.6	1.5	5.45	0.801	-0.74
9	Slovenia	21.7	5.2	1.5	7.7[b]	0.839	-0.75
	Bulgaria	26.9	4.0	2.5		0.762	
9	Lithuania	24.9	4.8	1.5	3.70	0.736	-0.87
	Greece	19.1	4.2	2.0		0.721	
9	Hungary	21.8	5.3	1.5	2.41	0.695	-0.89
8	Czech Republic	23.9	3.9	1.5	3.50	0.687	-1.03
8	Poland	18.9	4.1	1.5	5.0[b]	0.698	-1.06
8	Latvia	17.1	3.4	1.5	4.42	0.640	-1.22
8	Slovakia	15.7	3.7	1.5	3.38	0.612	-1.22
8	Southern Italy	19.8	3.2	1.5	2.60	0.603	-1.25
	Romania	10.1	2.6	2.0		0.543	
	Turkey	10[a]	3.2	4.5		0.423	

Note: [a] the score is estimated from surveys; [b] the figure is from Inglehart et al. (1998).

By using this more subtle taxonomy, we are able to refine some of the thoughts arising from the two-cluster partition. First of all, the table shows that the country with the highest social capital level in Europe is Switzerland. It must, however, be stressed that this result occurs solely as a consequence of the very high level of civic participation due to the Swiss canton system. The

Netherlands and the Scandinavian countries that all score substantially higher values of generalized trust are ranked in the following places. Seven countries all have weights above 1.3 - Ireland first occurs at number eight with a weight of 1.06. Taken together with the finding that these seven countries with the exception of Iceland all receive factor scores higher than one, the table clearly illustrates how markedly Scandinavia, the Netherlands and Switzerland are different from the rest of Europe, a finding underlined by the robustness tests in the appendix. These findings support our model in Figure 1, as its picture is replicated in Figure 2, which plots the scores against GNI per capita and in Figure 3 below that plots the factor scores against a decentralisation index.[8]

At the other end of the scale, cluster number eight stands out as a group of countries appearing to be deficient in social capital. This cluster consists almost exclusively of post-communist countries. The exception is Southern Italy, which serves to underline both Putnam's (1993) conclusions and Banfield's (1958) original findings. Seen in the light of Paldam and Svendsen's (2000) dictatorship theory, their position as the European countries with the lowest level of social capital is hardly surprising as all have or recently had centralised systems that created passive clients. Neither is the fact that these countries are doing relatively poorly in terms of income and the speed of transition.

In that sense, cluster number nine is doing significantly better. This cluster consists of Slovenia, Estonia, Hungary and Lithuania that are often seen as the true front-runners for the European enlargement.[9] They also seem to have more social capital than cluster eight, and are as such positioned remarkably close to cluster seven, which is a group of three Western European countries with special characteristics. Besides illustrating that cluster nine is remarkably robust, the Table A.1 in the appendix also suggests that the only real difference to cluster seven is a slightly lower corruption score. Judged by the available information, this cluster should also include Greece and Bulgaria. The latter only scores 2.5 on the economic freedom index, but seems to have corruption more under control than the countries in cluster eight and moreover exhibits a quite high level of generalised trust.

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[8] The pictures are also clear in the data, as the simple correlation between factor scores and decentralisation is 0.61 and between factor scores and income is 0.76, both significant at $p < 0.01$.

[9] The regular reports on the progress towards accession are in three of the four cases particularly positive (see EU, 2001a,b,d). The exception is Lithuania, which nonetheless has made good progress in the last few years (EU, 2001c). See also EU (2002).

The three countries in cluster seven– Portugal, France and Belgium – stand out in Western Europe as the countries with the least social capital and a very high degree of centralisation. Hence, as we hypothesised above, the centralised systems of these countries seem to have bred corruption and low levels of social capital. Surprisingly, this cluster is joined by Malta.

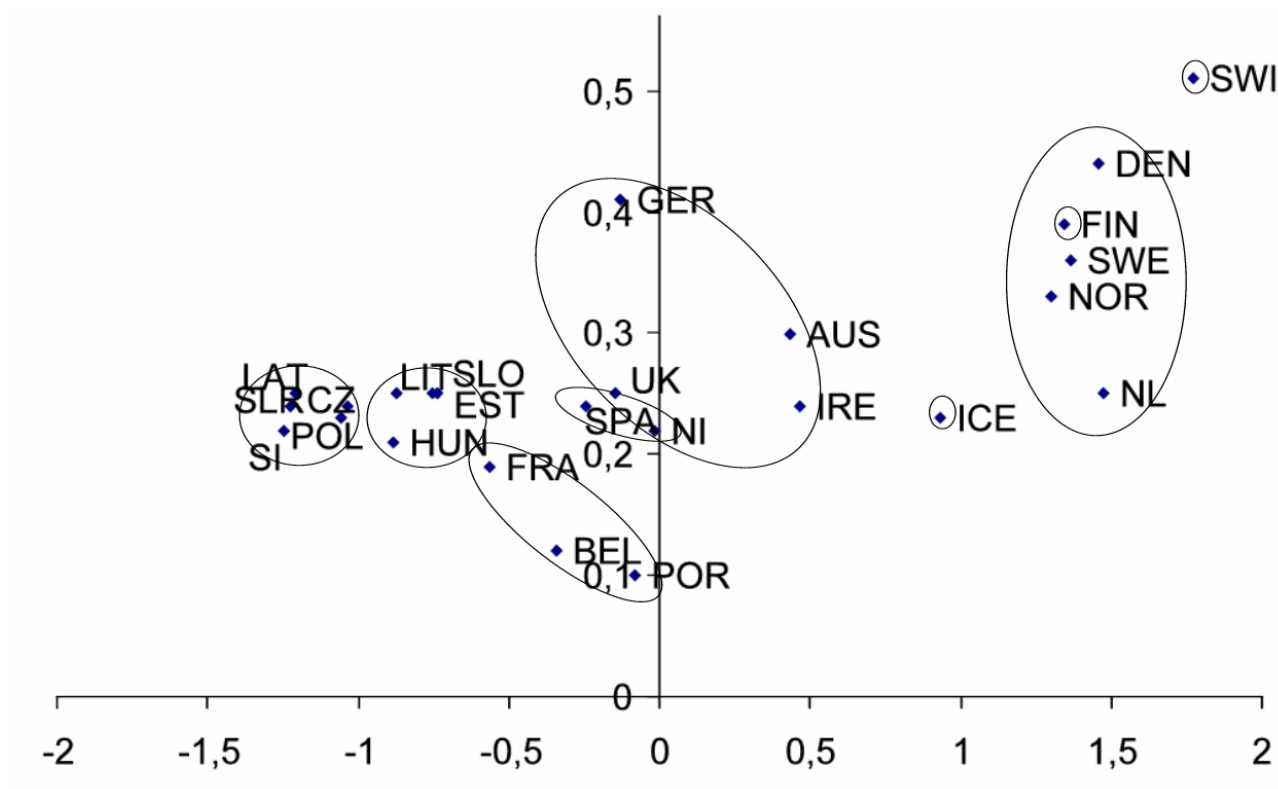*Figure 2: Social capital and income*
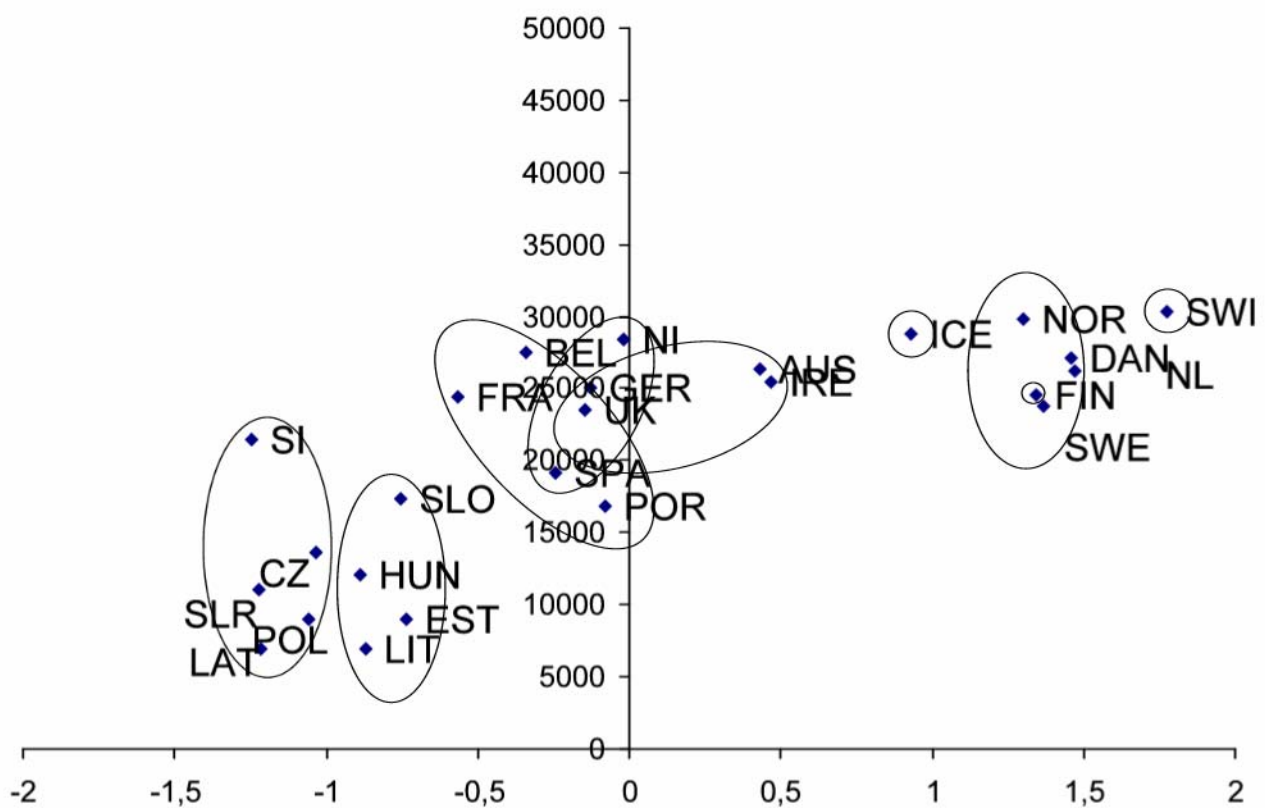
The figures clearly depict the somewhat muddled middle of Europe, where clusters two, three and seven overlap in figure 2 while cluster seven stands out in figure 3.[10] Figure 3 in particular shows how close the Western European cluster seven is to the predominantly post-communist cluster nine. The latter countries are all experiencing a successful transition process and will probably move in a

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[10] The differences become clear in Bjørnskov (2003), which examines the relationship between happiness and social capital. The paper shows the important difference that France and Portugal are less happy than the countries in cluster two due to their deficiency in social capital.

North-eastern direction in figure 2, implying that they move into the 'circle' of cluster seven. In figure 3, the movement will probably be in a straight eastern direction, hence cluster nine will move on top of cluster seven. Such movements should arise because the projected growth of the countries will in all probability lead to less corruption and hence higher levels of social capital (see e.g. Treisman, 2000; Paldam, 2001; Bjørnskov and Paldam, 2002).

Figure 3: Social capital and decentralisation

The pictures painted by Figures 2 and 3 are rather clear. As mentioned above, the link between social capital and growth is currently being established using diverse approaches in e.g. Whiteley (2000), Zak and Knack (2001) and Beugelsdijk et al. (2002). The relation suggested by Figure 3 can be further supported by econometric evidence since about 75 percent of the social capital factor score in the present sample can be explained in a rather simple model. The results are reported below (t-statistics in parentheses). DECENT is the decentralisation measure, REFORM is the percentage of the population belonging to either a Protestant or Anglican denomination and TRANS is a dummy for transition countries.

SC =   -0.819 +   3.714 * DECENT +   0.786 * REFORM -   1.164 * TRANS
          (-2.714)   (2.955)   (2.042)   (-5.004))

Our last remaining problem is that we lack sufficient data on six countries for them to enter the cluster formation process. By using their weight instead, we can place them in about the right position vis-à-vis the rest of the European countries. First of all, Luxemburg should clearly be placed in cluster two with the United Kingdom as the closest country. Secondly, Romania is by far the most corrupt European country while as the only country in the sample Freedom House ranks Turkey as only 'partly free'. Hence, Turkey and Romania do not belong in the picture, as their weights are respectively 0.41 and 0.36.[11]

In summary, we find a number of groups of European clusters when we distinguish between elements of their institutional economy, captured by the concept of social capital. The main result is that Switzerland, the Netherlands and Scandinavia stand out as countries with much more social capital than the rest of Europe. Along institutional lines, these countries shine as bright as the northern light. As indicated by the figures above, this seems to have been achieved through having decentralised systems of government that leave little room for lobbying and corruption. These countries also score highest on measures of macro and micro-level social capital, which makes their economies run more smoothly. Below this leading group, a large group of countries are placed in the middle of the scale. These countries, including Luxemburg, the United Kingdom, Germany, Ireland, Austria, Spain and the northern part of Italy, perform relatively well and thus achieve factor scores around zero. Three Western European countries stick out: France, Belgium and Portugal form their own cluster, joined by Malta. Although these countries belong to the rich half of Europe, they perform poorly when measured along institutional lines. The evidence here indicates that the heavily centralised systems in the countries have contributed to their lack of social capital. It should further be noted that when using the available information, Malta is placed within this cluster.

When turning to Eastern Europe, two (three) clusters occur. Estonia, Slovenia, Lithuania and Hungary perform significantly better than the remaining post-communist countries. This cluster is

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[11] Running the cluster analyses without civic participation, which Turkey and Romania lacks, reveals that these two countries would be placed in their own cluster far removed from all other countries.

joined by Greece and probably also by Bulgaria. Finally, judging by the available data, Turkey and Romania seems almost non-European on these counts. In other words, these countries are furthest away from the Northern.

5: Conclusion

Based on already existing models and insights from New Institutional Economics, the paper has justified a new coherent model pointing at two main reasons why Scandinavia is doing so well in economic terms, namely the level of decentralisation and social capital in its broad sense. The idea in the model was that a political system, which decentralises power, implies less corruption because access to economically harmful rent-seeking is more costly and consequently social capital and the trust in the political leadership increases. Moreover, social capital could also make people share resources and thus raise factor productivity.

The model was applied in ranking countries from both Western and Eastern Europe. Our nine-cluster analysis showed that the country with the highest social capital level in Europe is Switzerland due to its canton system and consequently high level of civic participation. The Netherlands and the Scandinavian countries (Denmark, Norway, Sweden and Finland) all scored substantially higher values of generalized trust. These six countries, followed by Iceland, hit the top in the equivalence analysis and in terms of factor scores, emphasizing how markedly Scandinavia, the Netherlands and Switzerland are different from the rest of Europe.

At the other end of the scale, cluster number eight stands out as a group of countries appearing to be deficient in social capital. This cluster consists almost exclusively of post-communist countries that are doing relatively poorly in terms of income and the speed of transition. The cluster nonetheless also includes Southern Italy, thereby underlining Putnam's original contribution. However, the four-country group of Slovenia, Estonia, Hungary and Lithuania is doing significantly better than other post-communist countries. Judged by the available information, this cluster should also include Greece and Bulgaria. In fact, this group is positioned remarkably close to the group of Portugal,

Belgium and France, which stand out in Western Europe as the countries with the least social capital and a very high degree of centralisation - one accession country, Malta, even joins this cluster. Hence, the centralised political systems of these countries seem, similarly to the former communist countries, to have bred corruption and low levels of social capital. In contrast, the top ranking countries of Switzerland, The Netherlands, Scandinavia and Iceland are all characterized by having the most decentralised political systems and consequently the highest level of social capital and GNIs per capita - no wonder that the Northern light shines so brightly.

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Appendix

A number of tests consisting of excluding one of the parameters entering the cluster formation process were performed on the nine-cluster taxonomy to assess its robustness. The results are reported in Table A.1, where column one reports the taxonomy used in the paper. It should be noted that the cluster numbers may shift between columns.

Table A.1. Robustness tests

	Full process	Without corruption	Without economic freedom	Without generalized trust	Without Putnam's Instrument	Weight
Switzerland	1	7	1	1	5	2.243
Netherlands	4	8	4	3	4	1.667
Denmark	4	4	4	6	4	1.484
Sweden	4	4	4	4	4	1.451
Norway	4	4	4	4	4	1.448
Finland	6	6	6	6	4	1.414
Iceland	5	5	5	4	5	1.273
Luxembourg					10	1.088
Germany	2	1	2	8	1	1.075
Ireland	2	1	2	8	1	1.067
Northern Italy	3	5	3	8	3	1.063
Belgium	7	2	7	7	7	1.019
Austria	2	1	2	8	1	1.011
United Kingdom	2	2	2	8	10	1.005
Spain	3	1	3	7	3	0.957
France	7	3	7	7	7	0.856
Slovenia	9	3	9	5	9	0.839
Portugal	7	3	7	7	7	0.803
Estonia	9	3	9	5	9	0.801
Bulgaria					6	0.762
Lithuania	9	3	9	9	9	0.736
Greece					6	0.721
Poland	8	9	8	9	6	0.698
Hungary	9	3	9	5	9	0.695
Czech Republic	8	3	8	2	6	0.687
Latvia	8	9	8	2	8	0.640
Slovakia	8	9	8	2	8	0.612
Southern Italy	8	9	8	2	8	0.603
Romania					8	0.543
Turkey					8	0.423

Table A.1 clearly documents that the main results are robust to small changes in the cluster formation process. The Northern Lights group – Switzerland, the Netherlands, Scandinavia and

Iceland – always remain together and with the exception of excluding corruption when Northern Italy is clustered with Iceland, the group also remains closed. The same stability can be observed for Southern Italy, Latvia and Slovakia that remain clustered in all cases, and for Estonia, Slovenia, Lithuania and Hungary that remain clustered except one case where Lithuania is removed. Hence, the clusters reported in the paper are satisfactorily robust.

Table A.2. Distances between cluster centres

Cluster	1	2	3	4	5	6	7	8	9
1		40.63	43.01	39.91	**36.22**	41.91	47.67	68.09	56.06
2	40.63		**10.39**	33.87	16.83	32.79	15.17	43.51	27.52
3	43.01	**10.39**		29.82	20.90	31.86	18.83	42.17	27.49
4	39.91	33.87	29.82		23.53	**11.65**	47.38	70.55	56.68
5	36.22	**16.83**	20.90	23.53		18.31	31.80	60.09	44.23
6	41.91	32.79	31.86	**11.65**	18.31		47.73	73.87	58.79
7	47.67	15.17	18.83	47.38	31.80	47.73		29.37	**13.31**
8	68.09	43.51	42.17	70.55	60.09	73.87	29.37		**16.13**
9	56.06	27.52	27.49	56.68	44.23	58.79	**13.31**	16.13	

Note: the average of distances is 36.89. The minimum distance from a given cluster to any other is marked in bold.

Table A.3. Cluster characteristics

Cluster number	GNI per capita	GDP growth	Openness	Generalized trust	Corruption index	Freedom House index	Decentralisation	Percentage reformed	Civic participation	Factor score	Weight	Life satisfaction	Intra-cluster Ward variance	Standard deviation of intra-cluster distance
1	30,350	1.6	63.7	42.6	8.4	1.0	0.51	43.4	46.6	1.77	2.63	86.0	0.0	0.0
2	25,085	4.2	72.2	40.2	7.8	1.3	0.30	25.2	7.6	0.16	1.04	72.3	74.1	1.77
3	23,766	1.8	21.9	40.8	7.2	1.5	0.23	0.3	5.4	-0.13	1.02	33.0	32.6	0.0
4	26,705	2.9	69.8	60.6	9.0	1.0	0.35	76.0	13.7	1.40	1.66	83.3	142.9	2.03
5	28,770	4.8	53.6	43.6	9.2	1.0	0.23	96.6	11.4	0.93	1.34	85.0	0.0	0.0
6	24,610	4.6	60.3	62.7	9.9	1.0	0.39	93.2	10.7	1.34	1.52	79.0	0.0	0.0
7	22,950	2.8	79.5	26.0	6.5	1.3	0.14	1.5	6.7	-0.33	0.85	67.0	63.6	1.27
8	12,411	2.8	69.0	23.9	3.7	1.5	0.23	5.5	3.8	-1.16	0.53	39.4	66.8	0.77
9	11,365	3.2	108.5	25.0	5.2	1.5	0.24	23.4	4.9	-0.81	0.70	45.0	46.0	0.80
South	14,697	2.9	87.8	24.8	4.9	1.5	0.21	10.5	4.9	-0.83	-	48.2	1904.9	5.43
North	26,032	3.3	60.7	48.7	8.4	1.2	0.33	49.1	12.7	0.77	-	72.2	4672.9	5.55
Average	20.042	3.5	76.4	37.6	6.7	1.3	0.26	30.6	9.0	0.00	1.00	65.4	-	-