

The Economic Rationale for Social Cohesion –The Cross-Country Evidence

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While it is intuitive that conflict and poor social cohesion have great economic and social costs, it has been difficult to quantify such costs until recently. This paper estimates the economic benefits of greater social cohesion as well as the correlation between social cohesion and other aspects of development, using a set of social institutional measures covering over 200 indicators from 25 different data sources. The paper also uses these measures to identify case studies in building social cohesion, to which political and social leaders might refer when considering how to tackle social tensions.

In recent decades, there has been a steady current of country-specific studies examining the effects of social institutions - the informal norms that pattern human interaction - upon economic and political outcomes. Among the myriad issues that have been addressed within the 'social capital' literature, notable examples include the finding by political scientists that countries and regions with greater associational life, trust and inter-group cohesion tend to have better public service delivery, financial accountability, and adherence to democratic norms (Putnam et al. 1993, Knack 2002, Coffe and Geys 2005); the finding by psychologists that engagement in community activities has a significant association with measures of health and educational attainment (Berkman and Syme 1979, Coleman 1988, Helliwell 2003); and the finding by economists of a robust association between social institutions and economic wellbeing in the form of both household income and aggregate economic growth (Knack and

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Keefer 1997, Zak and Knack 2001, Narayan and Pritchett 1999, Grootaert 2001, Tabellini 2005, Knowles and Weatherston 2007).

However despite the positive results found in successive regional and local studies, there have been relatively few attempts to test the impact of social institutions at the country comparative level. Few reliable, globally representative data sources exist that would serve as a basis for comparing social norms and practices, while survey data for social trust and community engagement are often fragmented across disparate regional samples (Global Barometer 2000-10). Commonly used proxy and instrumental variables, such as ethnic fractionalization or the proportion belonging to a hierarchical religious tradition, may be only weakly reliable or valid as measures of social institutions, whereas direct behavioral items taken from representative national surveys, such as social trust or civic norms, often cover only a limited sample of countries (Eurobarometer 1970-, Afrobarometer 1997-, Asian Barometer 2000-, International Social Survey Program 1988-).

In order to advance systematic cross-country investigation of the effects of social cohesion upon economic development, this paper presents the initial results of a method for combining indicators from multiple sources, in order to generate better aggregate measures of social institutions, and maximize efficient use of data in country-comparative testing. By generating composite indices it is possible to estimate scores for a much wider number of countries than otherwise possible, and minimize the level of error in the estimates as the addition of successive indicators reduces random variation (Kaufman, Kraay and Loido-Zobaton 1999). The index that is presented in this paper provides an estimate of the level of social cohesion in 155 societies, a far greater number than previously the case, and are reported together with margins of error, reporting the level of confidence in a particular country score. The utility of the new measurement is then demonstrated by conducting several empirical tests which highlight the economic rationale for social cohesion, including the estimate of the “social cohesion dividend” that is delivered when economies are able to fully utilize the resources of their members, without discrimination based on caste, creed, or ethnicity, and without the costs of containing violent conflict between groups. Section I of this paper outlines the empirical basis of the index of social cohesion used throughout the paper, and section II discusses the results. Section III applies the new data to develop concrete estimates of the economic payoff of having greater

social cohesion, using a combination of time-series models, deep determinants (2SLS) and standard growth regressions. Finally, section IV concludes.

I. Forms of Social Cohesion

In order to organize our data selection, it has been necessary to adopt a working definition of social cohesion. We understand a socially cohesive society to be one in which institutions exist that foster norms of cooperation between distinct ethnic, religious, and other identity groups, including non-discrimination, such as in the labour or capital market; and non-violence, whether it be via low-level, spontaneous communal conflict such as riots, assassinations and programs (Varshney 2003, Brass 2006, Wilkinson 2004), or more institutionalized forms of intergroup struggle such as terrorist activities or civil war.

Institutions, meanwhile, we define as the norms and conventions that pattern social behavior, 'the rules of the game in a society [or] the humanly devised constraints that shape human interaction' (North 1990). Formal institutions cover rules that are enforced by third-party mechanisms, such as a police corps, judiciary, or constitutional council, and social institutions generally rely upon tacit norms and expectations. Examples of relevant formal institutions might include discrimination against minorities by police, judiciary, or public service authorities in access to justice or other public goods; examples of relevant informal institutions include the formation of civic ties that bridge members of conflicting communities (Varshney 2003) or simply the willingness to do business with a member of a different religion or ethnic group. We are thus interested in the indicators that demonstrate whether ethnic, religious and other minorities are institutionally enabled to participate in the economy, in education, and in civic and political life.

The Economic Rationale for Social Cohesion

Why might economic theory lead us to expect an economic payoff to greater social cohesion? In the broad literature on institutions and social capital, a range of explanations have been offered (Putnam 1993), though we can subdivide these into four general areas: i) the reduction of

transaction costs, ii) facilitating collective action, iii) prevention of capital disaccumulation; and iv) improvement of allocative efficiency.

The first mechanism by which social cohesion can enhance growth is via reducing transaction costs, that is, the costs incurred in making economic exchanges, such as information gathering, communications, and contract enforcement (Coase 1960). Since Williamson (1981, 1985, 1996) the concept of transaction cost has also been applied to the effects of informal institutions, including trust and non-discrimination. In societies where norms of trust or cooperation between differing ethnic, sectarian, or other identity groups are low, the costs of economic cooperation will be higher, thereby inhibiting economic activity. In addition, where societies are riven by violent conflict between identity groups, the transaction cost of economic enterprise will include the costs of policing, crime prevention, and private security services. Because these costs may be such as to render unprofitable economic transactions at the margin, some deadweight loss will inevitably occur. Generalised social trust is one of the most widespread ways in which 'social capital' has been defined and studied (Fukuyama 1995, Arrow 1974, Knack and Keefer 1997), for, as Fukuyama (1995) argues, where 'people who have to work together in an enterprise trust one another because they are all operating according to a common set of ethical norms, doing business costs less'. Empirical studies have also shown generalized social trust to be a predictor of future rates of economic growth (Knack and Keefer 1997).

A second mechanism via which social cohesion enhances growth is by facilitating collective action, that is cooperation among individuals in pursuit of shared objectives, and specifically (in public choice economics) the demand for and provision of public goods (Olson 1965). While a strand of early theory in public choice laid emphasis upon the potential deadweight losses arising from distributive coalitions targeting rents and transfers (Olson 1965), a more recent current of literature has highlighted the potential positive externalities arising from collective action in the form of providing, monitoring, and enforcing the provision of necessary public goods such as infrastructure, schooling or health (Ostrom 1990). Meanwhile the contribution of social cohesion to collective action has been underlined in much recent social capital literature, as the presence of divisive social cleavages inhibits willingness to contribute to collective funds and public investments. Experimental studies, for example, have shown that groups composed of heterogeneous identities lead to lower participation in voluntary contribution mechanisms

(VCMs), even in the presence of potential positive-sum gains (Alesina and La Ferrara, 2000), while real-world empirical studies have also shown lower levels of public goods provision such as education, roads, sewers and waste removal is weaker in the context of ethnic and religious fractionalisation - both within countries (Alesina et al., 1999, Keefer and Khemani 2004), as well as at a cross-county level (Alesina et al. 2004). Empirical studies have also helped contribute an important refinement to the debate within public choice economics on whether collective action is fundamentally beneficial or detrimental to economic growth, by showing that in regions with strong collective identities based on ethnic or linguistic homogeneity, collective action tends to support universal public goods centred on public investments such as infrastructure, health and education, whereas in the presence of intergroup heterogeneity collective actions favours pursuit of targeted distributive transfers, such as jobs or subsidies (Keefer and Khemani 2004). Thus where social cohesion is greater, public choice is likely to focus on the productive, positive-sum allocation of fiscal resources, whereas in the absence of such ties zero-sum transfers are more likely to prevail.

A third mechanism linking social cohesion and growth is the argument that its absence hinders economic growth via capital disaccumulation. The explanation goes as follows. In one of its definitions, long-run economic growth is defined as sustained capital accumulation; the size of the economy being the sum of goods and services that can be produced within it, and this quantity, in turn, being defined as the productivity of the factors of production land, labour, enterprise and capital. Because, furthermore, all improvements in the productivity in land, labour and enterprise are considered due to some form of capital (e.g. 'human capital') it is only capital accumulation (whether physical or intangible) which enables supply-side economic growth. While any of the mechanisms outlined in this section regarding the relationship between social cohesion and growth entail a *de facto* reduction the rate of capital accumulation, one argument that is particularly salient is the economic cost of intergroup violence: which frequently prompts capital disaccumulation as a result of the destruction of physical infrastructure, and the 'brain drain' (loss of human capital). While the argument is fairly straightforward, empirical studies suggest the economic costs of civil war are phenomenal, with the annual growth rate during war reduced by 2.2% and a 15-year civil war reducing per capita GDP by around 30% (Collier 1999). Time-series analysis often brings such costs into stark focus,

with a number of medium income economies which have been reduced to developing economy status as a result of a deep civil conflict, such as Bosnia, Lebanon, or Algeria.

Finally, social cohesion may enhance or hinder economic growth by its relationship to allocative and productive efficiency. Under its strong definition, allocative efficiency (also known as social efficiency) can be defined as a condition under which resources are assigned so as to maximise total economic welfare, in other words where each unit where the marginal benefit of production exceeds marginal cost leads to the provision of that same good or service (Varian 2003). The absence of social cohesion, however, may lead to allocatively suboptimal outcomes, as a result of social institutions such as group-based discrimination or exclusion. For example, where economic actors refuse to engage in economic transactions with other agents of different ethnic, religious, caste or other identifying groups, then both allocative and productive efficiency will not be attained: if employers refuse to hire qualified members of minority groups based on non-salient attributes such as their social background, a welfare loss will occur to both parties, and a productive loss to the economy as a whole. Similarly, if members of minority groups are prevented from gaining equal access to education, or their communities to vital infrastructure such as transport and communication, then these members will not be able to attain their full human and productive potential, leading to an economic loss for the economy as a whole. While studies that have attempted to estimate the economic losses arising from norms of discrimination encounter obvious accounting problems and are subject to a wide margin of error, all such studies attempted agree that the costs are substantial (Patrinos 2004, Lundahl, M. 1992, Birdsall and Sabot 1991).

II. New Cross-Country Data for Measuring Socially Cohesive Institutions

In recent years, a wide range of new cross-country sources have become available with which to measure the extent of social cohesion in a society. The most widely used quantitative dataset in the cross-country study of social institutions, the World Values Survey, has included questions on ethnic and religious trust for a cumulative total of 90 societies over a period of 28 years. It has recently been complemented by a broad array of regional survey projects: Latinobarometer, founded in 1996, has included items on crime and ethnic discrimination for 18 Latin American

societies; while Afrobarometer, founded in 1999, has asked about such issues in 18 sub-Saharan African societies. Moreover, comparative survey projects are increasingly complemented by numerical ratings based on qualitative assessments of social practices. These include the *International Country Risk Guide*, which includes ratings of ethnic and religious tensions for 140 countries, and the *Minorities at Risk* project, which since 1986 has provided comparative measures of discrimination and exclusion of minority groups in 118 societies across the world. While expert assessment ratings have long been available in the study of formal institutions of governance, their extension to social institutions is a recent addition that provides a valuable additional source of data.

Building on the conceptual schema developed by Woolcock et al. (2004), the social development indicators project at the World Bank has outlined a series of indices, including measures of intergroup cohesion, and a cross-country measure of interpersonal safety and trust, that cover a cumulative total of 165 societies around the globe (Foa 2010). These indices, hosted at the Institute for Social Studies at the Hague, are due to be publicly launched in early 2011 together with their underlying data, and constitute a rich source of cross-country data on social cohesion and exclusion (ISS 2011). The underlying data for the indices span a range of almost 200 indicators, derived from 25 sources, which cover areas ranging from survey data on intergroup discrimination, to the frequency of newspaper reported incidents such as intergroup riots, to expert assessment ratings of ethnic and religious tensions.

For the purpose of the analysis in this paper, we have constructed a modified index of social cohesion based on a selection of the underlying data published on the ISS website, complemented by additional proprietary data from the Gallup World Poll that has been donated for the purpose of this project. In selecting indicators, we have chosen measures reflective of two key aspects of social cohesion, namely, whether there are norms of intergroup discrimination, and whether there are is intergroup violence. By intergroup *discrimination*, we refer to evidence that norms exist which prevent optimal allocation of labour market and other opportunities based on group membership such as ethnic, racial or religious identification. Examples of such indicators include survey items where respondents express objection to cooperation with members of such groups (for example, ethnic minorities), as well as ratings by organisations such as *Minorities at Risk* which estimate the level of economic discrimination

faced by defined minority groups. Second, by *inter-group violence* we mean the extent of routinized conflict between ethnic, religious, or other social identity groups, including reprisals, terrorism, and riots. In total, 30 items are selected from 8 different sources. A full list of indicators used is provided in Appendix I.

III. Methodology

The method used to combine the indicators is an unobserved components approach, as adopted in the generation of the Worldwide Governance Indicators and Transparency International's Corruptions Perceptions Index (Kaufmann, Kraay, and Zoido-Lobaton 1999a, 2006; Lambsdorff 2006). The intuition behind this procedure is that each of a set of indicators represents some latent value of the underlying phenomenon in each society, but on differing scales, with differing country samples, and with varying degrees of measurement error. Assuming that errors are uncorrelated across sources, indicators can be combined to reduce the aggregate level of error level, with the rankings of countries each indicator used to reassign scores across cases. Further documentation on the method, as well as diagnostics and sensitivity analysis showing comparison with other aggregation techniques, can be found in Foa and Tanner (2011) and therefore we provide only an abridged description here.

The method assumes that for each of the 5 dimensions of social development there is some latent value (L_i) representing the objective level of that dimension in country i . Each of the available indicators y_i represents, on a different functional transformation (f) and with varying degrees of measurement error ε_i , level L_i such that:

$$(y_i) = f(L_i) + \varepsilon_i$$

Because we are unable to estimate the functional form f , the aggregation methodology is nonparametric, with no assumptions regarding the linearity or otherwise of the distribution of

the values in y . We merely assume that the relative position of countries on y reflects a better or worse underlying condition with respect to L . The ranks of successive indicators used in the index are then utilized in order to assign values to countries, based on the values assigned to the same sample of countries already in the measure. Thus if a new indicator is added to the index that has a sample of five countries, Botswana (6.8), Nigeria (5.5), Sudan (2.4), Burundi (3.1) and Tanzania (7.2), and the equivalent scores for these countries in the index thus far are 0.55, 0.40, 0.10, 0.11, and 0.35, then Tanzania will be assigned the maximum equivalent value of 0.55, Botswana the second value of 0.40, Nigeria, 0.35, Benin 0.32, Burundi 0.11 and Sudan 0.10. In addition, for the purpose of this index we weight results by the level of ethnic, religious and linguistic fractionalisation (reported in Alesina et al. 2003), so as to reward countries that have achieved a high level of social cohesion in the face of high social heterogeneity.

The matching percentiles method used in this exercise is iterative, such that the indicators to be compiled are first sorted in order of their reliability, relevance, and representativeness, $S_1, S_2 \dots S_n$ for each of n different sources. As successive indicators are added, the standard deviation of the estimate is held constant among affected countries, to prevent their scores from tending toward the mean. The matching percentiles method has several advantages for creating a set of indices of this nature, in that firstly it overcomes the problem of sampling bias, whereby a new source only covers a limited and unrepresentative sample of countries, and second it allows us to keep adding successive waves of indicators, even with very small samples, that can be used to continually 'refine' the country scores simply by using information on relative rankings. Scores are estimated in four waves from 1990 to 2005, using the most timely data for all countries, this yields one or more social institutional scores for a total of 164 countries, from which we filter only the 155 cases where more than 3 independent sources could be used to estimate a country score. The average number of indicator per country estimated ranged from 7.7 to 17.3 items, depending on the institutional cluster, and scores are rescaled from 0-1, whereby higher scores represent greater advancement on that dimension of social development.

IV. Results

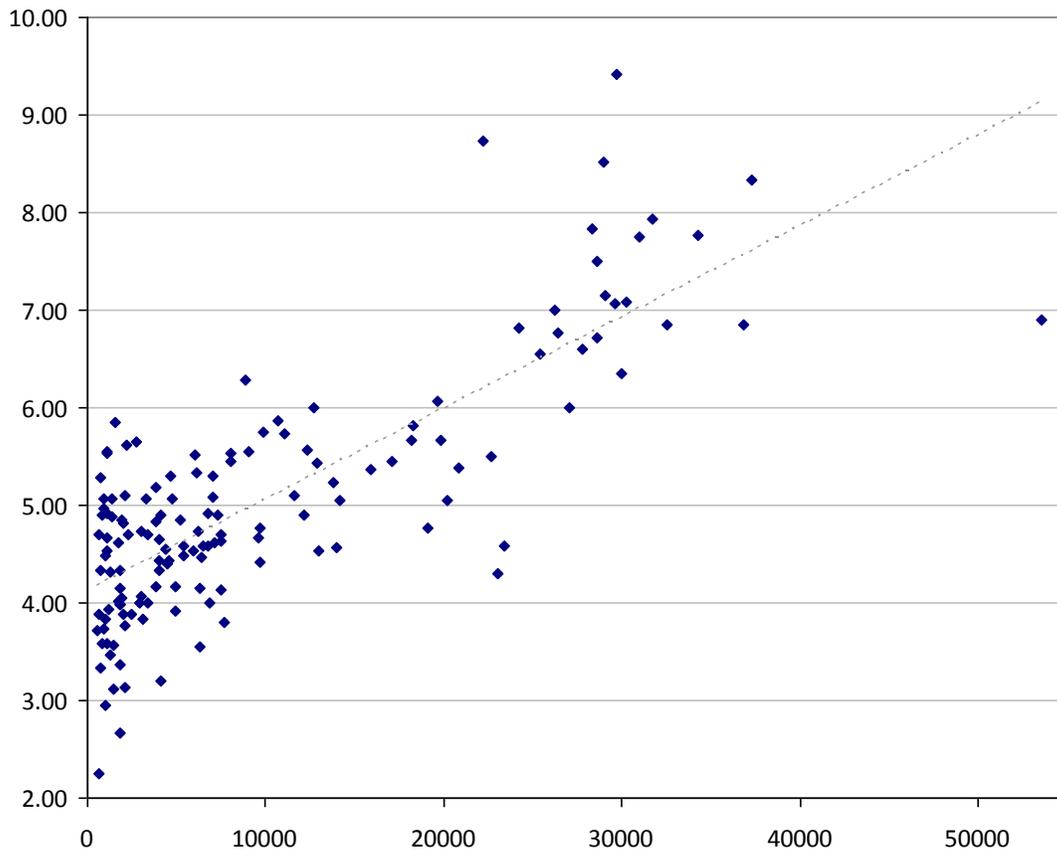
Results of the aggregation procedure are shown in Table 1.0. Also reported the number of distinct sources used in the calculation of each country score, based on the sources detailed in Appendix I.

Table 1.0 Index of Social Cohesion, Country Scores

rank	country	index	items	rank	country	index	items	rank	Country	index	items
1	Canada	9.42	11	53	Niger	5.28	6	105	Macedonia, FYR	4.46	8
2	New Zealand	8.73	11	54	Estonia	5.24	8	106	Morocco	4.43	8
3	Sweden	8.51	10	55	Cuba	5.18	6	107	Philippines	4.43	8
4	United States	8.34	11	56	Jamaica	5.18	5	108	Russian Federation	4.42	12
5	Switzerland	7.93	7	57	Croatia	5.11	9	109	Azerbaijan	4.40	7
6	Australia	7.83	11	58	Guinea	5.10	6	110	Sierra Leone	4.33	6
7	Ireland	7.77	7	59	Kazakhstan	5.08	7	111	Zimbabwe	4.33	9
8	Hong Kong, China	7.75	6	60	Mali	5.07	10	112	Guatemala	4.33	10
9	Finland	7.50	10	61	Albania	5.07	7	113	Uganda	4.31	12
10	Netherlands	7.15	10	62	Togo	5.06	7	114	Israel	4.29	8
11	Denmark	7.08	7	63	Nicaragua	5.06	10	115	Liberia	4.28	6
12	United Kingdom	7.06	12	64	Slovak Republic	5.06	8	116	Jordan	4.17	8
13	Germany	7.00	12	65	Cyprus	5.04	11	117	Ecuador	4.16	11
14	Luxembourg	6.91	6	66	Zambia	4.97	11	118	Bangladesh	4.16	8
15	Norway	6.86	6	67	Kenya	4.92	9	119	Algeria	4.15	8
16	Iceland	6.85	6	68	Panama	4.91	10	120	Turkey	4.13	9
17	Spain	6.82	10	69	Madagascar	4.90	6	121	Georgia	4.06	6
18	Singapore	6.77	8	70	Latvia	4.90	8	122	Djibouti	4.05	5
19	Belgium	6.71	7	71	Dominican Republic	4.90	10	123	Comoros	4.02	4
20	Taiwan, China	6.69	6	72	Paraguay	4.89	10	124	Suriname	4.00	4
21	Japan	6.60	11	73	Nepal	4.88	5	125	Lesotho	4.00	5
22	Italy	6.55	12	74	Cape Verde	4.86	5	126	Syrian Arab Republic	4.00	7
23	Austria	6.35	7	75	Mongolia	4.84	6	127	Moldova	3.99	7
24	Uruguay	6.29	10	76	Egypt, Arab Rep.	4.84	9	128	Uzbekistan	3.98	8
25	Korea, Rep.	6.07	12	77	Cameroon	4.82	7	129	Tajikistan	3.93	5
26	France	6.01	11	78	Bahrain	4.77	7	130	Lebanon	3.91	8
27	Argentina	6.01	13	79	Malaysia	4.76	9	131	Cambodia	3.89	6
28	Chile	5.87	13	80	Honduras	4.74	11	132	Burundi	3.89	5
29	Senegal	5.85	9	81	Gabon	4.73	5	133	Mauritania	3.88	5
30	Czech Republic	5.81	9	82	Tunisia	4.71	6	134	Eritrea	3.84	4
31	South Africa	5.74	11	83	Papua New Guinea	4.70	6	135	India	3.83	9
32	Botswana	5.73	10	84	Indonesia	4.70	9	136	Thailand	3.81	9
33	Portugal	5.67	8	85	Tanzania	4.69	8	137	Angola	3.77	7
34	Slovenia	5.67	11	86	Serbia and Montenegro	4.68	8	138	Ethiopia	3.73	9
35	Vietnam	5.64	10	87	Mexico	4.67	12	139	Malawi	3.72	8
36	Ghana	5.61	13	88	Rwanda	4.66	7	140	Turkmenistan	3.64	4
37	Poland	5.56	10	89	Guyana	4.64	6	141	Congo, Rep.	3.58	6
38	Costa Rica	5.55	9	90	Brazil	4.63	10	142	Yemen, Rep.	3.58	6
39	Mozambique	5.54	8	91	Libya	4.63	6	143	Haiti	3.56	5
40	Romania	5.53	12	92	Gambia, The	4.62	4	144	Bhutan	3.56	5
41	Burkina Faso	5.53	7	93	Iran, Islamic Rep.	4.61	8	145	Chad	3.46	5
42	China	5.52	10	94	Kuwait	4.59	6	146	Solomon Islands	3.36	3
43	United Arab Emirates	5.49	6	95	Fiji	4.58	4	147	Guinea-Bissau	3.34	4
44	Bulgaria	5.45	9	96	Colombia	4.58	12	148	Iraq	3.22	7
45	Malta	5.44	6	97	Namibia	4.58	9	149	Sri Lanka	3.20	9
46	Lithuania	5.43	7	98	Saudi Arabia	4.56	9	150	Myanmar	3.20	9
47	Greece	5.39	9	99	Armenia	4.55	5	151	Pakistan	3.13	8
48	Hungary	5.36	8	100	Central African Republic	4.54	4	152	Cote d'Ivoire	3.12	7
49	Qatar	5.34	6	101	Venezuela, RB	4.54	10	153	Nigeria	2.95	10
50	Ukraine	5.33	9	102	Trinidad and Tobago	4.53	6	154	Sudan	2.66	7
51	Belarus	5.31	7	103	Bolivia	4.49	11	155	Somalia	2.44	5
52	El Salvador	5.30	9	104	Peru	4.48	10				

In addition to reporting raw scores, we can also report basic summary statistics, including scatterplots against relevant variables. Figure 1.0 reports the relationship between GDP per capita and the social cohesion index, with the inclusion of a bivariate line of fit.

Figure 1.0 Relationship between GDP per capita and Social Cohesion Index



IV. Quantifying the Cost of Weak Social Cohesion – Is there a ‘Social Cohesion Dividend’?

Figure 1.0 shows that per capita GDP and social cohesion are strongly, and positively, related. As good social scientists, we know that this may be due to one of two potential reasons: first, it may be that more robust social institutions are the outcome of processes of sustained economic development. For example, as societies become more affluent, individuals are empowered materially, educationally, and socially, and this may lead to higher levels of social cohesion as a result of greater tolerance (Inglehart 1996, 2000) or because surplus wealth can be invested to support cohesion-enhancing welfare programmes. Alternatively, it may be that sustainable long-run economic growth is in fact *dependent* upon the prior existence of what Hall and Jones (1999) call ‘social infrastructure’ - the norms, precedents, and cultural expectations that

accumulate over the course of a country's history and help sustain capital accumulation. Institutions distort or protect the pattern of economic incentives, depending upon whether they protect property rights, encourage work, and reduce transaction costs. Such a view is the cornerstone of the new institutional economics (NIE), according to which formal institutions (courts that protect property rights and enforce the rule of law) and informal institutions (social trust, cohesion, and voluntary activity) constitute long-run determinants of sustained capital accumulation, that is, economic growth (North 1991, Hall and Jones 1999). This relationship between social institutions and growth has been empirically tested in a range of studies within the econometric literature upon social capital (Helliwell and Putnam 1995, Zak and Knack 2001, Beugelsdijk et al. 2004).

We are able to replicate such tests using the new social cohesion aggregate. Two forms of econometric analysis are found within the study of economic growth: i) proximate and ii) deep-determinants determinants models. *Proximate determinants* are variables that appear in the aggregate production function, such as physical and human capital per worker, and can be investigated through time-series models using the rate of economic growth as the dependent variable, and such factors as average years of worker education as independent variables. *Deep determinants*, by contrast, are the variables that explain differences in the proximate determinants; they are the underlying, or deep determinants of development, for example geography, trade, or institutional quality (Rodrik 2002). Because present income per capita is simply the cumulative result of long-run average growth, this can be used as the dependent variable in such regression equations.

We present here a proximate determinants model. Among the most widely cited studies the relationship between social institutions and growth is Knack and Keefer (1997), which showed a strong positive effect of social trust across a sample of 27 countries. This result can be replicated, using the much enlarged sample of countries that is made possible by the new social development indices. As the dependent variable, the models take the average annual rate of economic growth from 1990 to 1999, and as independent variables, the levels of primary and secondary school enrolment in 1990, the price level of investment goods, real GDP per capita in 1990, a dummy variable for whether the country is a former Eastern bloc regime undergoing transition, and each of the five social institutional variables, estimated around a base year of

1990. By including such controls, we fulfill the requirement, suggested by Levine and Renelt (1992), that commonly identified determinants always be included in growth regressions to ensure robust coefficients. The model specification is the same as that of Knack and Keefer (1997), except that the dependent variable covers the decade of the 1990s rather than that of the 1980s, and that a dummy variable has been included to take account of the transition process in former Eastern bloc economies during this period.

Table 2.0 Regression Models, Economic Growth 1990-9

	Model 1	Model 2
Price level of investment goods, 1990	0.005 (0.009)	-0.006 (0.005)
Real GDP per capita, 1990	-0.081 (0.066)	-0.037 (0.050)
Primary School Enrollment, 1990	0.042 (0.025)	0.025 (0.029)
Secondary School Enrollment, 1990	-0.032 (0.019)	0.003 (0.020)
Former Eastern Bloc Country, 0-1	-2.043 (1.016)*	-2.951 (0.922)***
Social Cohesion Index	7.104 (2.896)**	4.812 (2.305)*
Sub-Saharan Africa		-0.376 (1.235)
Latin America and Caribbean		-0.426 (0.783)
Constant	-7.881 (3.861)	-1.645 (2.968)
N	45	64
adj. r ²	0.42	0.23

Dependent Variable: Per Capita Economic Growth Rate, 1990-9

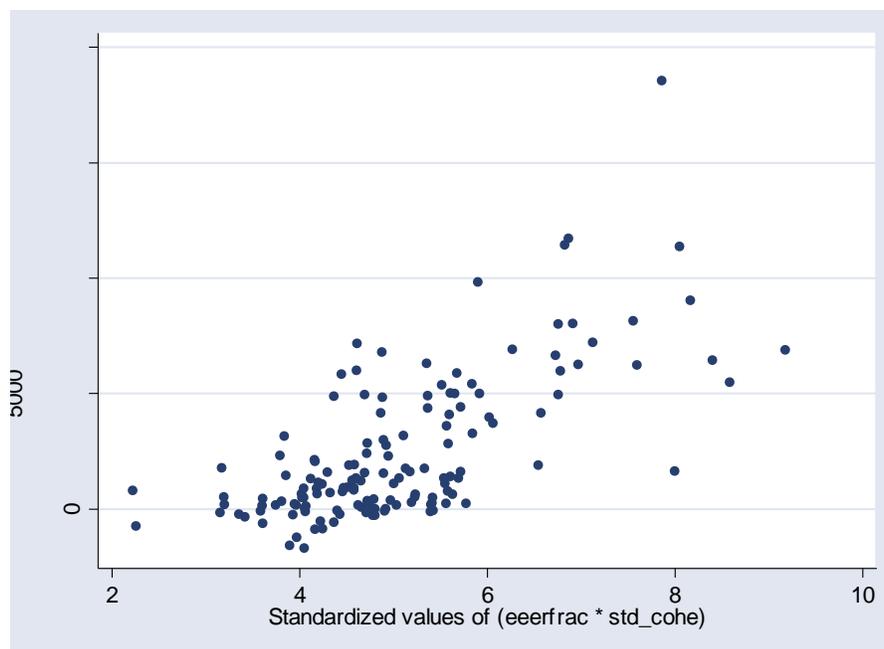
* significant at the 0.05 level; ** significant at the 0.01 level; *** significant at the 0.001 level

Results are shown in Table 2.0. Reassuringly, the models produce similar findings using the 1990s growth data as was found by Knack and Keefer (1997) using data from the 1980s, in particular regarding the significant coefficient for the social cohesion variable. The finding that social cohesion functions similarly to the social trust variable included in the Knack and Keefer models can be subject to the same interpretation, namely, that security of property rights and

reduced transaction costs are essential and independent determinants of economic growth. Using the new indicator series however allows us to estimate this effect for a much larger sample of countries than was previously possible: whereas 29 countries are included in the Knack and Keefer (1997) specification, model n here ranges from 45 to 65 cases. Given the sensitivity of regression models to minor outliers where the sample size is low, the ability to replicate similar findings across a more representative sample is reassuring evidence of the validity of the initial claims.

It is also possible to see the relationship between absolute increase in GDP since 1990, and the level of social cohesion at the outset of the time period. This bivariate relationship is reported in Figure 2.0.

Figure 2.0 Increase in GDP from 1990-2010 and Level of Social Cohesion at the Outset



These findings also help shed light on other aspects of the growth literature. For example, it is commonplace in some growth regressions, such as those of Alesina et al. (2003) or Easterly and Levine (1997), to include dummy variables for Latin America and Sub-Saharan Africa, on account of their regionally weak growth performance. The need for such variables stems from the endemically slow growth of the respective regions during the periods under consideration, yet a convincing reason needs to be supplied for why these countries should experience a long-run

equilibrium growth rate that is inferior to others. The inclusion of variables which proxy for security of property rights, such as the level of violence or trust, provides something in the way of an answer. Both regions perform poorly on this indicator, and when dummy variables are included for each of these respective regions (Models 3 and 4), neither are robust to the presence of a social cohesion variable. Sub-Saharan African countries in the sample score on average about two-thirds of a standard deviation below the global mean on interpersonal safety and trust, while Latin American and Caribbean countries score a full standard deviation below this mean. These results support the view that growth may be endogenous to the institutional structure of a society, including the social institutions that ensure protection of property rights. Because Sub-Saharan Africa as well as the Latin America and Caribbean region fare poorly in this regard, it may constitute one factor that has restrained long-run equilibrium growth.

From Weak Social Cohesion to Violent Conflict

One of the most intuitive findings in the research on the economic costs and benefits of social cohesion is that, where ethnic, sectarian and other tensions lead to the outbreak of civic hostilities, this has a large and deleterious effect upon the absolute income and prospects for income growth in a country. Estimates by Collier (1999), for example, suggest that the annual growth rate during war reduced by 2.2% and a 15-year civil war reducing per capita GDP by around 30%. One avenue to quantify the costs of ethnic and religious tensions is therefore to first estimate the independent effect of social cohesion upon the likelihood of conflict outbreak, and then separately calculate this cost upon growth.

Such an effort is timely, as a recent wave of theories predicting the outbreak of conflict have laid emphasis upon short-term economic factors as the central determinant of inter-group warfare, while de-emphasizing endemic group tensions and hatreds (Fearon and Laitin 2003, Collier and Hoeffler 2004). However, researchers have failed to find a reliable and non-endogenous measure of inter-group tensions, such that researchers have instead resorted to proxies such as the 'legacy of a previous conflict' (Harff 2003). By using our measure of social cohesion, it is possible to demonstrate that both economic shocks and group hatred matter, with the effect of

economic crisis upon political stability being more severe in countries where the existing state of intergroup relations is frayed.

The intergroup cohesion index measures the extent or absence of routinised tensions and conflicts between ethnic, religious, or other social identity groups. However, rather than focus on macro-level conflict such as civil warfare, the social cohesion measure instead looks at ongoing, everyday 'social' violence such as terrorism or riots, which typically occur in the absence of open warfare, in addition to surveys of religious and ethnic tensions, and expert assessments which examine the state of intergroup tensions. Essential to the definition of cohesion deployed by the indices of social development are that the indicators track acts of conflict that are i) conducted by non-state actors and ii) perpetrated by and directed against individuals of specific identity groups, without, however, there necessarily being organised armies opposing one another.

In econometric analysis, this measure of intergroup tensions provides a better predictor of the duration and intensity of conflict than either economic variables such as income per capita, or social-structural variables such as ethnic, linguistic, or religious fractionalization. The predictive power of our cohesion variable is robust to the inclusion of a lagged variable for past conflict duration and intensity. As the cohesion variable is based, in part, upon expert risk assessments of the state of intergroup relations across various societies, it is perhaps unsurprising to find that such assessments do, after all, reflect the likelihood of a future conflict breaking out, yet it is nevertheless reassuring.

Table 3 shows the results of two multivariate models, in which the dependent variables are the duration and intensity, respectively, of post-1990 conflicts. As our measure of the duration of post-1990 conflict we take the number of years, from 1991-2008 inclusive, in which a civil conflict was occurring in that country. For our measure of the intensity of conflict, we take the log number of deaths in civil conflict occurring during the 1991-2008 period. Data on both conflict deaths and duration are taken from the International Peace Research Institute (PRIO) Armed Conflict Dataset (PRIO 2009). These estimates provide a high and low estimate for the number of conflict deaths by year, and we use the sum of the mean of the high and low estimate across all years from 1991 to 2008.

We take as our first independent variable the social cohesion index estimated for 1990, the first year for which we have available data. Our intention is to see whether the social cohesion index functions as a useful predictor of conflict outbreak. The social cohesion variable is based on coded risk assessments of ethnic and religious tensions, newspaper coded social tension events (e.g. riots or terrorism) and survey data on mistrust and resentment between ethnic and religious groups. To minimize potential endogeneity, no data from future periods (1995, 2000, 2005) were used in the aggregation of this composite score.

As control variables in these regressions, we include variables which are more commonly used to predict conflict outbreak. Extensive research has established a relationship between low income and conflict outbreak, and therefore a variable is included for GDP per capita (Fearon and Laitin 2003, Collier and Hoeffler 2004). This variable is taken from the World Development Indicators, and lagged to 1990 to prevent endogeneity with conflict. Researchers have in recent years also worked extensively on measures of ethnic, linguistic, and religious fractionalization, and shown association between these indicators and measures of corruption, absence of the rule of law, and state failure (Alesina et al. 2003, Fearon and Laitin 2003). The estimates published by Alesina et al. (2003) for each of these three forms of fractionalization are separately included in this regression, and reported below². Finally, obviously a key predictor of group violence in future is whether there is an existing, ongoing conflict, or has been an unresolved conflict, in the recent past (Gurr and Harff 2003). In theory, it is difficult to separate this from the measure of intergroup tensions - given that this is the means by which a previous unresolved conflict gives rise to future violence - nonetheless, to guard against the accusation that the coefficients report merely a spurious correlation, we include a 'lagged dependent variable' in the form of the years of civil conflict and log civil conflict deaths, respectively, during the prior decade (1980-1990 inclusive). These variables are also taken from the PRIO dataset (PRIO 2009).

² A combined variable (not reported) of ethnic, religious, and linguistic fractionalization, was found not to be significant when included in place of the three separately.

Table 3. Cohesion and Conflict**Dependent Variables: Years of Civil Conflict (1991-2008), Civil Conflict Deaths (1991-2008)**

	Years in Conflict, 1991-2008	Log Civil Conflict Deaths, 1991- 2008
Social Cohesion, 1990	-4.42 (1.450)***	-3.727 (1.851)*
Log Deaths in Conflict, 1980- 1990	-	0.58 (0.156)***
Years of Conflict, 1980-1990	-80.242 (173.59)	-
Ethnic Fractionalization	2.498 (2.032)	0.708 (2.77)
Linguistic fractionalization	4.372 (1.68)*	5.411 (2.269)*
Religious fractionalization	-4.325 (1.565)**	-5.432 (2.064)*
GDP per capita	-0.031 (0.054)	0.006 (0.072)
Constant	67.215 (16.623)***	56.681 (26.971)*
n	91	93
Model r ²	0.49	0.53

* significant at the 0.05 level; ** significant at the 0.01 level; *** significant at the 0.001 level

The coefficients shown in Table 3 suggest that, whether it is predicting future conflict duration or future conflict deaths, the measure of social cohesion proves a better predictor than either income per capita or social fractionalisation. The relative weakness in predicting the rate of conflict deaths is largely due to the fact a number of extraneous factors determine the rate of deaths in conflict, such as terrain, population density, and urbanization; for this reason, the most significant predictor of future conflict deaths turns out to be rate of deaths during the previous period (Fearon and Laitin 1999). That social cohesion proves a more powerful predictor of conflict duration than the duration of conflicts in the recent past suggests, a priori, that group-based attributes such as the depth of intergroup resentments, may determine the ease or difficulty with which political elites are able to negotiate an end to armed conflict. It may also be

because in situations where group-based resentments are particularly intense, this reduces the cost of new recruits, as well as increasing the political payoff to ethnic or religious leaders that take a 'hard line' refusal to compromise, and because where resentments are intense, politically negotiated ceasefires may be violated by radicals on either side of a conflict who conduct spontaneous attacks in defiance of more moderate leaders.

Figure 3.0: The Relationship between Social Cohesion (1990) and Future Conflict Deaths (1991-2008), $r = 0.57$

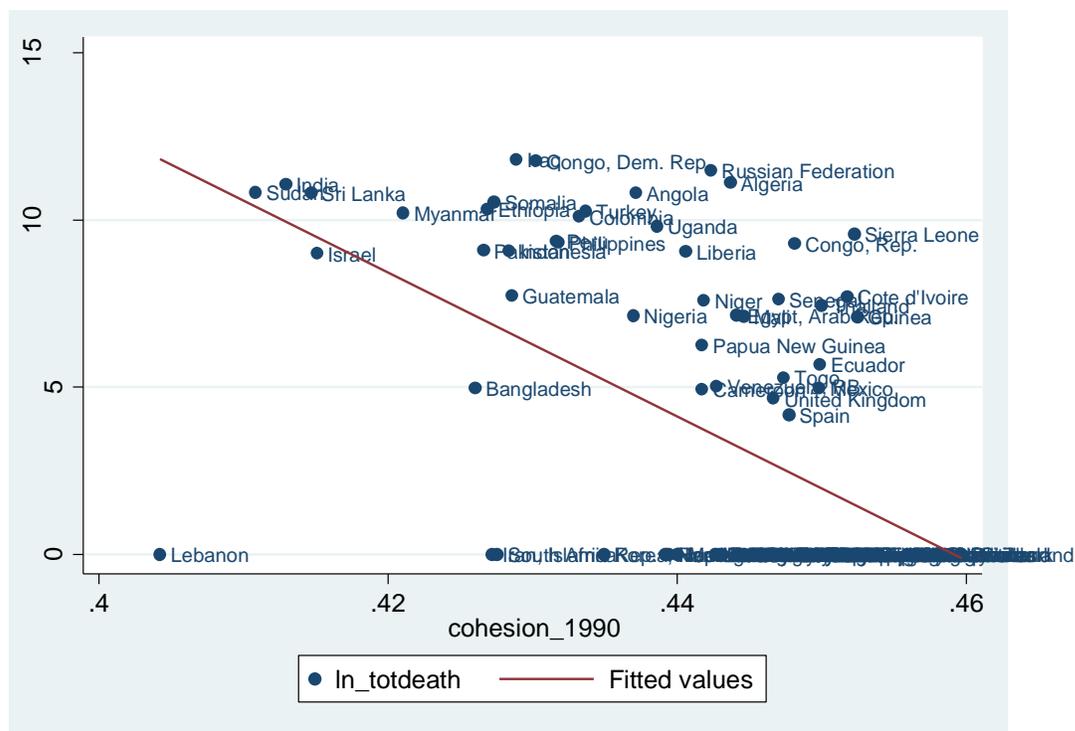
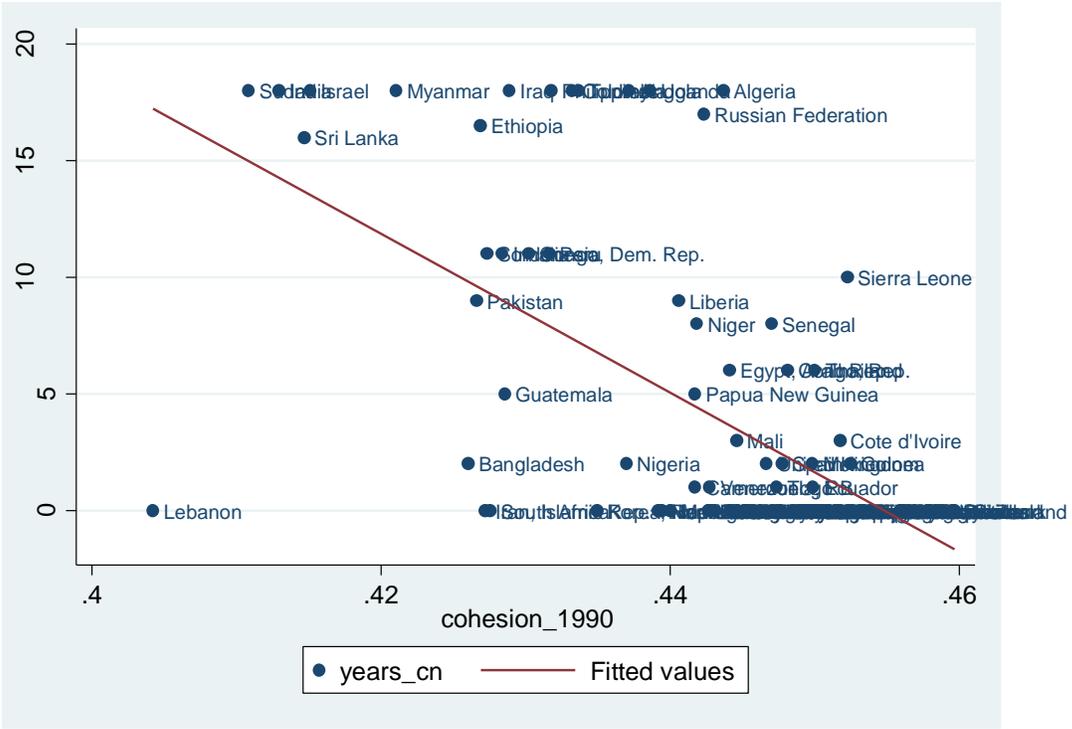


Figure 4.0: The Relationship between Social Cohesion (1990) and Future Conflict Duration (1991-2008), $r = 0.62$



What of the concomitant effect upon economic development? The estimates in Table 3 suggest that a one-point increase in social cohesion reduces the number of war years by 6.62 over an 18-year period. If we follow Collier's estimate of an average 2.2 per cent reduction in the rate of economic growth during war, this implies a roughly 14 per cent (depending on the timing of conflict and the compound effect during the period) reduction in potential GDP for each point reduction in the index, or 28 per cent for a 2-point gap – equivalent to the distance between Botswana and Angola, between Sweden and Italy, or between the United Arab Emirates and Yemen. Compounded over a longer period of time, such as thirty or forty years, the disparity is sufficient to cause a fifty to one-hundred per cent difference, potentially making the difference whether a country achieves economic development or remains a medium or low income economy.

III. Identifying Case Studies of Fostering Social Cohesion

In the social sciences, important lessons can often be learnt via case selection. For example, we may wish to ask: which countries perform better or worse than we might expect, and what policies have contributed to these outcomes? Likewise, when we examine changes in social cohesion over time, where and why have countries succeeded in reducing tensions and building stronger intergroup ties?

As argued by Rogowski and Collier (1991), in order to avoid bias, case selection is best pursued via statistical identification, rather than ad hoc decision. Several basic tests can fulfill this purpose. For example, at the most basic level, we are able to use the standard deviations of the variables to identify cases that are clearly outside of the range of a normal distribution. Of course, this approach, while satisfactory for an initial summary of the data, fails to highlight whether the presence of such outliers has undue effect in the estimation of regression coefficients. Second, therefore, social scientists typically supplement such an analysis with tests of both leverage and influence. This enables us to better determine which values for each of the indicators are outliers, due to either misreported data or measurement error, and therefore constitute candidates for deletion.

A more rigorous approach to identify outliers is to use calculations of statistical leverage and influence. Points which have high leverage are those with unusual x -values; more specifically leverage for a point i is the distance of the i th observation from the center of the x -space, and obtained using the principal diagonal of the “hat” matrix as $h_{ii} = \mathbf{x}_i'(\mathbf{X}'\mathbf{X})^{-1}\mathbf{x}_i$. The average of distance from the center of the x -space is given as $\bar{h} = p/n$ where p is the number of parameters in the regression including the intercept (here p is 2 for our bivariate regressions) and n is the number of observations in the regression. A point with distance from the x center greater than a cutoff $h_{ii} > 2p/n$ is considered a leverage point. High leverage points mark a potential for influencing regression coefficients but may not affect the coefficient at all (e.g. if it lies directly on the regression line, even though isolated in x -space from the rest of the data). Though points with high leverage alone do not affect the estimates of regression coefficients, these may affect the values of model summary statistics such as goodness-of-fit and standard errors of coefficients. For example, in figure 5.0 below showing the bivariate relationship between GDP per capita and social cohesion, both Israel and New Zealand have high leverage due to their outlier position, though neither case has much influence on the slope due to their proximity to the mean of the dependent variable (here assumed to be income per capita).

High influence, meanwhile, exists where a case has disproportionate effect upon measures of statistical association such as correlation or the linear regression coefficient on one variable upon another. It is typically measured by indicators such as Cook’s Distance, which takes into account both leverage (distance from the estimated value of x) and the distance from the mean of y . Leverage points are also easily identified by examination of the bivariate scatterplot of two variables, or, in a multivariate context, the component-plus-residual plot following estimation of regression coefficients. A simple bivariate scatterplot of income per capita and social cohesion is shown in Figure 5.0.

Figure 5.0 – Identifying Outliers and Leverage Points

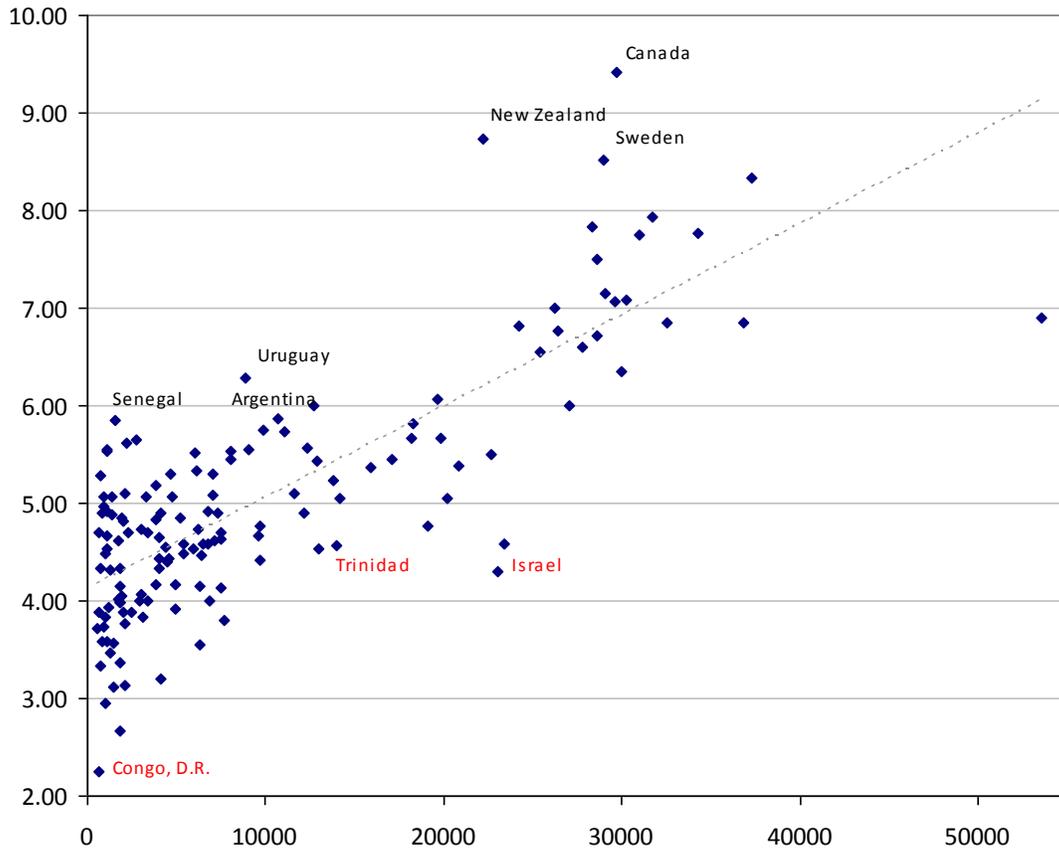
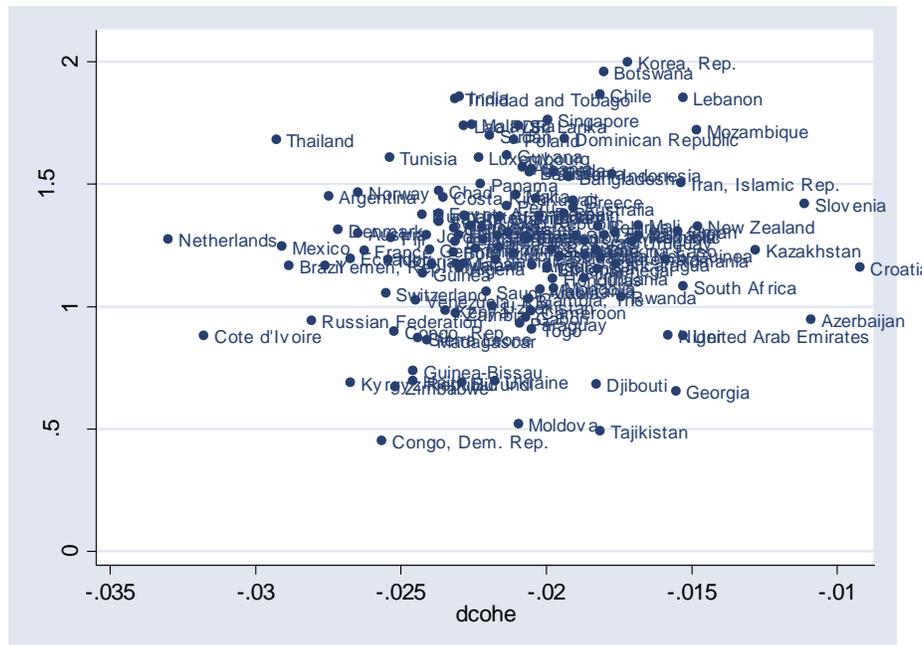


Figure 5.0 shows the bivariate relationship between GDP per capita and social cohesion (note with cohesion on the x-axis, though we might consider it as the independent variable). Leverage points are labeled: Canada, New Zealand, Sweden, Trinidad, Israel and Congo.

An alternative to using estimates of leverage and influence is to seek to identify changes over time, and relate these to changing policy conditions in a country. In order to do this, we have estimated the social cohesion scores into the past, and identified the countries with the largest improvements in their cohesion score over the two decades from 1990 to the present date, relative to their changes in GDP per capita.



Countries such as Mozambique, New Zealand and Slovenia were able to see an increase in both cohesion and economic growth, while countries such as South Africa or Rwanda saw an increase in cohesion despite weak growth over the period as a whole. A number of countries, including the Netherlands, France and Thailand saw a deterioration in their level of social cohesion over the period since 1990, despite steady economic growth; others, such as Russia or Cote d'Ivoire, saw a deterioration in both cohesion and per capita incomes.

New Zealand

New Zealand scores very highly on our measure of social cohesion, and in particular relative to country income per capita (Figure 5.0). In addition, data from New Zealand show a steady improvement in social cohesion over the past two decades (Figure 6.0). In large part, this has been due to the steady incorporation of the Maori population, which constitutes 14.6 per cent of total population, into mainstream New Zealand life.

For a long time levels of social exclusion among the Maori community have been especially elevated, with particularly high susceptibility to poverty, incarceration, unemployment, suicide and poor educational attainment (New Zealand Department of Health 2006, New Zealand

Department of Corrections 2007, Ferguson et al. 2004). However, since the mid-1970s, however, ethnic relations have improved as the Government of New Zealand has taken pro-active measures to incorporate Maori communities into a broader set of economic and social opportunities. Most importantly, conflicts over land rights have been settled via the establishment of the Waitangi Tribunal, which since the Treaty of Waitangi Act of 1975 has investigated and made recommendations upon claims brought by Maori communities against the British Crown and, *de facto*, the Government of New Zealand. While the Tribunal does not have binding authority, its recommendations have largely been implemented and led to the return of Maori land that was previously taken into the public realm. Through its inclusive structure, the Tribunal offers a direct form of political representation to the Maori, as approximately half of its 20 appointed members are from the indigenous population. The chairperson is either a judge or a retired judge of the High Court or the chief judge of the Maori Land Court, and the deputy chairperson is a judge of the Maori Land Court.

By creating the Waitangi Tribunal, the Government of New Zealand has been effective in dealing with many outstanding land disputes. More significant, however, is that this mechanism has been more effective than if redress had been sought through the judicial process, as members of the indigenous community would have been unlikely to effectively press their claims via this channel. In addition, at the outset Maori were weakly represented in mainstream political institutions, making redress of claims unfeasible by direct policy interventions that did not attempt to mobilise Maori voices into the fold.

Bosnia-Herzegovina

In Bosnia-Herzegovina, the level of social cohesion at the outset (1990) was extremely low, and high levels of intergroup tensions were both reflected in and exacerbated by a brutal civil conflict which was resolved by the Dayton Agreement of 1995. Today, levels of social tensions in Bosnia remain at an elevated level, and the country continues to score poorly on social cohesion. However, steady improvement has been registered as a result of the policies taken to bring groups from the country's 3 major ethnic and religious communities - Bosniac Muslims,

Serbs and Croats - to form a coalition government within the context of consociational institutions (Lijphart 1996).

Under the terms of the Constitution of Bosnia Herzegovina, which is a classic consociational design (cf. Bose 2002, Belloni 2004), political representatives are elected on a proportional representation basis, thereby making majority rule by any political party unlikely, and forcing power-sharing and brokering between the representatives of different groups. The requirement for power sharing is reinforced by the fact that the Chair of the Presidency of the country rotates among members of the three groups every 8 months. This has resulted such that since 1995 no party has had a consistent working majority in parliament, and coalition deals involving members from diverse ethnic and sectarian groups is the norm. While intergroup tensions remain present in Bosnian society, regular interaction within the political system is helping to foster functional ties between elites, and provides a basis to voice and settle intergroup disputes and conflicts.

Canada

While Canada, like New Zealand, has an important indigenous population, the high degree of social integration in the country largely reflects success in incorporating successive recent waves of immigration - including not only immigration for economic reasons but also migrants who have entered for reasons of political asylum. Since the early 1990s, Canada has received a large flow of newcomers, with the total of new arrivals in 2009 alone equivalent to around 0.75 per cent of Canada's total population. On a comparative basis, a similar rate of immigration to China would entail almost 10 million newcomers each year, or to the European Union, almost 4 million newcomers on an annual and repeat basis.

While the rate of immigration to Canada is high, empirical evidence suggests no tension or resentment among existing Canadian citizens. In public opinion surveys the proportion of Canadians saying that they would object to having neighbours who are 'immigrants' or who are from a different ethnic or religious group are among the lowest in the world, and have remained consistently so (World Values Surveys 1981-2007).

Why has the Canadian migration system been so successful at integrating newcomers? Most commentators agree that it largely reflects the pragmatic nature of the Canadian immigration system, which clearly demarcates three categories of application: for economic reasons, for political asylum, and for family reasons. Because a clear avenue is offered for economic migration, this discourages use of other channels for this purpose, as well as discouraging illegal immigration. The widely acclaimed 'points-system' enables authorities to encourage immigration of those individuals most likely to succeed to rapid integration: for example by rewarding English or French language competency, of the possession of skills that make the attainment of paid employment more likely. Finally, Canada has averted the problem of having a large 'floating' population of unclear migration status by ensuring that progress from an economic 'working status' to full citizenship is almost automatic, because under Canadian Nationality Law all Canadian residents can apply for citizenship after living in Canada for 1095 days in any 4 year period (Government of Canada 2006).

As a result of the comprehensive design and facility of the legal avenues within the Canadian immigration system, levels of *illegal* migration to Canada are exceptionally low. While few reliable estimates exist for clandestine migration, available figures suggest that the total number stands at just 35,000-120,000, a very low figure for a country of 33 million, less than comparable estimates for a single city in the United States such as New York. Because illegal migration to Canada has been largely averted via the establishment of formal channels of integration, many of the associated problems of marginalisation and exclusion have been averted. Newcomers are fully integrated into the tax and welfare system, and, as working age arrivals, typically form net contributors to the Canadian social safety net. Moreover, as full citizens newcomers are also encouraged to identify as Canadian, and as a part of Canadian society. As a result the integration of both first and second generation migrants into the mainstream of Canadian society is typically fairly rapid.

Case Study Conclusions

Evidence from these case studies suggests three principle conclusions. First, it is essential to ensure universal access to public services, including justice and fair policing. Where lack of social trust is the problem, demanding 'more social trust' is not the answer. The answer is to build the institutional framework in which individuals feel comfortable trusting and interacting with members of other groups. As examples of this policy in practice, we consider the comparative success of Kerala over states such as Gujarat in India (Wilkinson 2004, Varshney 2001), as well as the successful policies implemented in countries such as New Zealand, to integrate the previously marginalised Maori community.

Second, it is critical to ensure the representation of minority groups, to the point of establishing new institutional avenues where necessary. For example, though New Zealand is a parliamentary democracy governed by the rule of law, nonetheless Maori communities felt at a disadvantage in mainstream political parties and the court system; thus the establishment of a new mechanism, in the form of the Waitangi Tribunal, allowed for the effective voicing of communal concerns that might have otherwise emerged in less peaceful forms. In Bosnia-Herzegovina, the establishment of consociational institutions has forced representatives from across the major ethnic groups to negotiate with one another and reach agreement on key issues, even while intergroup tensions persist among the population at large. In addition, it has ensured that structural minorities such as the Serbs and Croats have remained involved in the political process, rather than be systematically marginalised as might have occurred under a more majoritarian framework.

Finally, in the long run it is important for countries to build encompassing identities into which marginalised groups are able to identify. A growing body of research is now grappling with the awkward finding that ethnic diversity negatively affects social cohesion. Chaim Fershtman and Uri Gneezy (2001) and Edward L. Glaeser et al. (2000) present experimental evidence on a negative relationship between ethnic heterogeneity and trust, while Robert Putnam (2007) finds a negative association between ethnic diversity and elements of social capital, such as social trust or voluntary activity. The conclusion is not that ethnic heterogeneity is to be avoided, but rather that ethnic categories themselves have to be redefined in more encompassing terms. Examples of such collective 'redefinition' in the world today include cases such as South Africa, where the white minority is adjusting to find itself part of a new 'African' identity, and Rwanda,

where the 'One Rwanda' policy has since 1995 insisted that all ethnic groups, whether Hutu, Tutsi or Twa, identify foremost as Kinyarwanda and attempt to forget their ethnic categorisation. Within the developed world, the clear avenues within the Canadian system for obtaining full citizenship, and the associated rights and responsibilities that this entails, has clearly averted the problems of group-based marginalisation and exclusion that has occurred among communities where newcomers have arrived under temporary work permit schemes, such as the first generation of Turkish immigrants in the Federal Republic of Germany, or have arrived as illegal immigrants, as remains the case for a substantial proportion of Hispanics in the United States.

Conclusion

This paper has presented a quantitative, cross-country index of social cohesion using a set of social institutional measures covering over 200 indicators from 25 different data sources, and estimated its economic benefits across a global sample of countries. Based on the Collier conflict estimates, we predict that a two-point increase on the index, equivalent the gap between Botswana and Angola, between Sweden and Italy, or between the United Arab Emirates and Yemen, is sufficient to produce a 28 per centage point different in cumulative economic growth over a period of just under two decades. In this paper we have also used the index to identify case studies in building social cohesion, to which political and social leaders might refer when considering how to tackle social tensions. Based on the cases identified, we suggest that the policy priorities for leaders wishing to enhance social cohesion should be to ensure representation of marginalised groups, ensure universal access to public goods such as policing and secure property rights, and to build collective identities into which marginal groups are able to identify.

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Appendix I

Data Sources Used

<u>Variable Name</u>	<u>Survey Question or Data Description</u>	<u>n</u>	<u>Source</u>
e_tens	Level of ethnic tensions, International Country Risk Guide rating	140	International Country Risk Guide
reli_tens	Level of religious tensions, International Country Risk Guide rating	140	International Country Risk Guide
mar_disc	log minority size, * average levels of economic discrimination	118	Minorities at Risk
mar_diff	log minority size, * average economic disparity	118	Minorities at Risk
v129_s_1	"I now want to ask you how much you trust various groups of people. Using the responses on this card, could you tell me how much you trust people of another religion?" Percentage who trust "not very much" or "not at all"	22	World Values Surveys
v35_sd_1	"On this list are various groups of people. Could you please sort out any that you would not like to have as neighbors." People of a different race, percentage mentioned	84	World Values Surveys
v37_sd_1	"On this list are various groups of people. Could you please sort out any that you would not like to have as neighbors." Immigrants or foreign workers, percentage mentioned	84	World Values Surveys
v39_sd_1	"On this list are various groups of people. Could you please sort out any that you would not like to have as neighbors." People of a different religion, percentage mentioned	50	World Values Surveys
v42_sd_1	"On this list are various groups of people. Could you please sort out any that you would not like to have as neighbors." People of a different language, percentage mentioned	28	World Values Surveys
ethnic_econ	economic situation of ethnic group is 'same' as other groups	16	Afrobarometer
ethnic_pol	political position of ethnic group is 'same' as other groups	4	Afrobarometer
never_unfair	ethnic group 'never' treated unfairly	16	Afrobarometer
vengeance	Fund for Peace rating on the "legacy of vengeance-seeking group grievance or group paranoia"	176	Fund for Peace

disc	Fund for Peace rating on: Uneven Economic Development along Group Lines	176	Fund for Peace
Gwp_imm	Survey assessment of condition of country for immigrants	140	Gallup World Poll
Gwp_min	Survey assessment of condition of country for religious minorities	140	Gallup World Poll
Gwp_rac	Survey assessment of condition of country for racial/ethnic minorities	140	Gallup World Poll
nocit	Proportion of long-term residents without citizenship	165	National Statistics
lb_disc1	"As far as you know or have heard, which of the following groups is most discriminated against in this country - or are there no such groups?" Combined percentage citing: blacks, indigenous peoples, mulattos, mestizos, Asians, Arabs, Jews, immigrants, the	17	Latinobarometer
lb_indig_work	"On a scale of 1 to 10, where 1 is 'there is no discrimination' and 10 is 'there is a lot of discrimination', could you tell me if there is or is not discrimination against indigenous people in [this country] in the workplace?" Average level, among all re	17	Latinobarometer
lb_indig_school	"On a scale of 1 to 10, where 1 is 'there is no discrimination' and 10 is 'there is a lot of discrimination', could you tell me if there is or is not discrimination against indigenous people in [this country] in schools and the university?" Average level,	17	Latinobarometer
lb_indig_political	"On a scale of 1 to 10, where 1 is 'there is no discrimination' and 10 is 'there is a lot of discrimination', could you tell me if there is or is not discrimination against indigenous people in [this country] in political parties?" Average level, among al	17	Latinobarometer
lb_indig_police	"On a scale of 1 to 10, where 1 is 'there is no discrimination' and 10 is 'there is a lot of discrimination', could you tell me if there is or is not discrimination against indigenous people in [this country] by the police?" Average level, among all respo	17	Latinobarometer
lb_indig_courts	"On a scale of 1 to 10, where 1 is 'there is no discrimination' and 10 is 'there is a lot of discrimination', could you tell me if there is or is not discrimination against indigenous people in [this country] by the judiciary?" Average level, among all re	17	Latinobarometer

lb_black_work	"On a scale of 1 to 10, where 1 is 'there is no discrimination' and 10 is 'there is a lot of discrimination', could you tell me if there is or is not discrimination against blacks in [this country] in the workplace?" Average level, among all respondents i	17	Latinobarometer
lb_black_school	"On a scale of 1 to 10, where 1 is 'there is no discrimination' and 10 is 'there is a lot of discrimination', could you tell me if there is or is not discrimination against blacks in [this country] in schools and university?" Average level, among all resp	17	Latinobarometer
lb_black_political	"On a scale of 1 to 10, where 1 is 'there is no discrimination' and 10 is 'there is a lot of discrimination', could you tell me if there is or is not discrimination against blacks in [this country] in political parties?" Average level, among all responden	17	Latinobarometer
lb_black_police	"On a scale of 1 to 10, where 1 is 'there is no discrimination' and 10 is 'there is a lot of discrimination', could you tell me if there is or is not discrimination against blacks in [this country] by the police?" Average level, among all respondents in c	17	Latinobarometer
lb_black_courts	"On a scale of 1 to 10, where 1 is 'there is no discrimination' and 10 is 'there is a lot of discrimination', could you tell me if there is or is not discrimination against blacks in [this country] by the judiciary?" Average level, among all respondents i	17	Latinobarometer
lb_disc2	"Of all the reasons people are not treated equally, which of the following most affect you?" Percentage citing "discrimination due to skin color" and "discrimination against immigrants"	18	Latinobarometer
lpop_lassassinations	Log assassinations per log capita	189	Cross-National Time-Series Data Archive
lpop_lguerrilla	Log instances of guerrilla conflict per log capita	189	Cross-National Time-Series Data Archive
lpop_lriots	Log riots per log capita	189	Cross-National Time-Series Data Archive
lpop_lterrorist	Log terrorist acts per log capita	121	Cross-National Time-Series Data Archive
demonstrations	Economist Intelligence Unit rating on likelihood of violent demonstrations	121	Economist Intelligence Unit
terrorist	Economist Intelligence Unit rating on potential for terrorist acts	121	Economist Intelligence Unit
deathsinorganizedconflict	Economist Intelligence Unit rating on deaths in organized conflict	121	Economist Intelligence Unit
distrust	Economist Intelligence Unit rating on social distrust	121	Economist Intelligence Unit

