

Indices of Social Development

Handbook

Roberto Foa¹

Indices of Social Development, ISS The Hague ²

¹ foa@fas.harvard.edu. Department of Government, Harvard University, 1737 Cambridge Street, Cambridge, MA 02138, USA.

² isd@iss.nl

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Index of Questions

How does what you call ‘social’ development relate to the concept of ‘human development’?	2
How does social development relate to ‘basic needs’?	3
What are the economic benefits of social institutions?	4
What is the difference between ‘social institutions’ and ‘social capital’?	5
How do ‘social institutions’ differ from ‘political institutions’ and governance?	5
How can you claim to measure social institutions?	8
How reliable are perceptions-based indicators as measures of social institutions?	9
How can you avoid the perception that the Indices of Social Development, by rating social institutions, are judging countries based on their ‘culture’?	9
Why do you use so many variables rather than selecting one or two ‘key indicators’?	9
What does ‘Matching Percentiles’ mean?	10
References	12

Why are they called indices of ‘social’ development?

In recent years, there has been a proliferation of attempts to account for the role of ‘social’ factors within broader processes of economic and human development. Whether couched in the language of social capital, institutions, or culture, economists and social scientists in related disciplines have made strenuous attempts to quantify the presence of certain informal norms and practices, or institutions, and demonstrate their impact upon the development process (Putnam 1993, Knack and Keefer 1997, Helliwell 2004).

We have opted for the term ‘social’ development as a means of distinguishing our measures as a component within the broader paradigm of human development, as well as a means of distinguishing our study from related concepts such as ‘political’ development, social cohesion, or social capital. These differences are explained in more detail below.

How does what you call ‘social’ development relate to the concept of ‘human development’?

During the 1990s, the concept of human development was promoted as a complement to existing income-based approaches to international development. Rooted in the capabilities literature of Amartya Sen and adopted by the Human Development Reports of the United Nations Development Programme (UNDP), the primary aim of the human development paradigm was to focus development thinking more upon the enhancement of people's freedoms, capabilities, and wellbeing. Specifically, the human development approach sought to achieve three goals: i) to make people the ends and not the means of development; ii) to refocus attention on what people can be or do rather than what they can produce; and iii) to ensure that development policies are aimed at improving people's quality of life, including their health, security, and overall flourishing (Sen 1989).

While the theory of human development has been successful in refining the objectives of development intervention, however, there has been a running tension between its conceptualization and its measurement (Sen 2003, Fukuda-Parr 2004). As a concept, the theory of human development proposes a series of general objectives that can encompass all development aims: ensuring that people are empowered, that people are able to achieve their goals, and that people can live well. As a measurement, however, human development is typically monitored using the Human Development Index (HDI), which accounts only for levels of income, health and education. Consequently, 'human development' is often misconceived narrowly in terms of human capital, that is, the physical and mental properties that people can translate into economic rewards in the marketplace, rather than their overall wellbeing and empowerment (Sen 1997).

Within the broad canvas of the human development concept, however, there remains room for many smaller vignettes, corresponding to the other dimensions along which human flourishing can be attained. The human development index, as an initial sketch, paints particular emphasis upon individual capabilities such as health or knowledge. Yet as many have remarked, this leaves aside both the 'elementary' prerequisites for human security and survival (absence of poverty, undernourishment, and shelter) and the so-to-speak 'higher' ends such as political rights and freedoms, engagement in a community, and social cohesion (Trabold-Nubler 1991, Dasgupta and

Weale 1992). The authors of the Human Development Reports have attempted to fill in for the missing dimensions by adding measures of human poverty (HPI-1 and HPI-2), gender empowerment (GEM and GDI), and, tentatively, political rights and freedoms. The social development concept is a useful vehicle for introducing yet further key dimensions, including civic engagement, inter-group cohesion, interpersonal safety and trust, inclusion of social and ethnic minorities, gender equity, and strength of families and community ties.

How does social development relate to ‘basic needs’?

If we think about human development in terms of a series of concentric circles, each corresponding to a sphere within which individuals attain their personal wellbeing, then we are better able to understand how social development relates to this broader development process, according to the various means through which individuals become empowered. This is illustrated in figure 1.1. The use of concentric circles is not meant to indicate any prioritization or ‘hierarchy of needs’, but rather the preconditions for sustainable achievements in each domain. Poverty reduction, for example, is requisite upon giving individuals the knowledge, skills, and human capital that enable investment and growth, but building human capital in an equitable fashion in turn requires institutions that are inclusive of women and minorities, that foster trust and cooperation, and deliver accountability in governance.

The first circle then concerns the accumulation of sufficient material resources to alleviate physical hardship, meet basic needs, and address the burden of poverty. Economic development, or a sustained increase in average incomes, is critical in this process. Early efforts to measure development progress, including GNI per capita, GDP at purchasing power parity, data on income distribution, poverty, and basic needs, were largely targeted at this level.

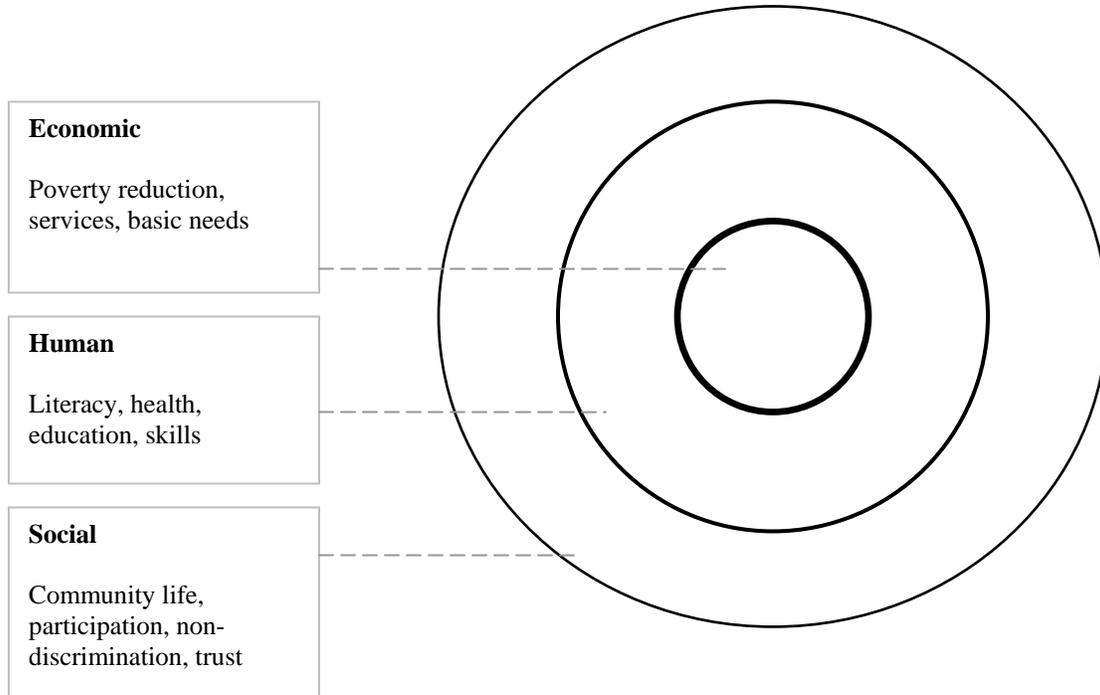
A second circle surrounds the mechanism via which individuals gain control of their lives, through accumulation of nonmaterial assets, including physical health, education, and skills. The term human capital is often used to capture the individual resources which people may use in order to accomplish a longer and more productive life: when individuals possess knowledge, are physically able, and are well-informed, they stand a better chance of achieving their personal objectives and their personal wellbeing. Measures such as the Physical Quality of Life Index (PQLI) and of course the Human Development Index (HDI) are largely targeted at this level.

Finally, there is a third circle concerning how individuals become empowered through the norms, networks, and civic commitments that enable collective action, inclusion, and social accountability. Specific examples include norms of non-discrimination based on caste, ethnicity, or gender; absence of the frictions between social and ethnic groups that generate conflict, criminal violence, and insecurity; collective norms of trust and cooperation that ensure efficient provision of public goods; and the informal civic institutions that ensure accountability in local government.

Our indices of social development concern this third, institutional aspect of development. These institutions constitute the enabling environment that allows individuals to translate their economic and human assets (material resources, education and skills) into personal welfare. For example, an individual living in a society characterized by extreme physical insecurity and conflict may find it impossible to start a business or attend college, regardless of their personal initiative, skill,

and tenacity. Security and safety, therefore, constitute part of the enabling environment which allows the agent to realize their objectives.

Figure 1.1 Spheres of Development



What are the economic benefits of social institutions?

Certain social institutions are a form of public good, that is, a good which is open for consumption by all and whose access cannot be restricted. To take an example: the consequence of the institution of ethnic discrimination, whether practiced informally in the labor market and in local government, or formally in state-level institutions, is to deny individuals the opportunity to make the most of their education, health, and skills, regardless of how much education, health, or skill they have. By contrast, the norm of non-discrimination is enabling, as it allows individuals from otherwise disadvantaged social groups to take their skills, determination, and information, and translate these into concrete opportunities for themselves and for others. Other social institutions, including the strength of civil society, the existence of social trust and cooperation, and cohesion between prevalent ethnic, linguistic, or religious groups, similarly enable individuals to pursue their goals and ambitions.

Naturally, these social institutions do not exist in isolation, but are complemented by and indeed complement a parallel set of formal institutions at the level of governance, for example rule of law, quality of regulation, or mechanisms for popular representation, which both stem from these informal norms and, to a substantial degree, reshape them over time.

What is the difference between ‘social institutions’ and ‘social capital’?

If social development is about levels of engagement in civil society, social trust, and community ties, how is it related to its close cousin, social capital? A number of the features that we measure as social development, including civic engagement and social cohesion, are frequently analyzed under this rubric, as they consist in the norms and networks that enable people to act collectively (Woolcock and Narayan 2000). A fuller discussion of the relationship between social development and social capital is therefore required.

In talking of social development, it is possible to talk in equal measure of expanding and enhancing the quantity and quality of social capital that counties possess. However, our use of the term social capital here must be placed with very specific parameters. First, while terms like human and social capital are used to refer to the means to growth, human and social development are also ends in themselves. Second, social development includes not just institutions enabling collective action but any social institution with beneficial effects for governance, growth, and wellbeing. Third, unlike social capital social development refers not simply to interpersonal institutions but also ‘quasi-formal’ mechanisms such as local governance, labor markets, and traditional dispute mechanisms.

More specifically, insofar as it relates to social development, we understand social capital as follows. First, social capital must be *social* - it must refer to collectively held norms, expectations, and informal institutions, that is, those norms shared between a defined group of individuals who interact routinely in the course of their daily lives. Because social capital is social, it determines the structure of human interaction, including whether there is cooperation or non-cooperation, collective action, or action failure. Second, social capital must be *capital* - it refers not to all norms and networks, but only to those which contribute to a production function without themselves being exhausted in that process. It is possible in some circumstances that a given norm or network may be productive while it is not in another; a former students’ association may be functional when it reduces employer search costs by facilitating access to talented individuals, but inefficient when hires are made for nepotistic reasons.

Social development intersects with social capital where it produces welfare gains, but not where collective action leads to welfare losses, also referred to as ‘perverse’ social capital, such as that existing in criminal or monopolistic networks (Rubio 1997). In our understanding, ‘perverse’ social capital cannot be considered capital, even if it rests on the same inter-group mechanisms that in other contexts produce welfare gains. To understand this point, one may consider the analogy with a knife. When a knife is used to carve furniture for sale, it constitutes capital, but when the same knife is used to threaten and steal, it ceases to be so. There is no contradiction here, even though in both instances the use of the knife brings material benefit to the possessor, and in both instances the knife remains the same knife. The first instance is production, the latter theft. Likewise, collective action constitutes social development where it leads to productive social institutions, enabling better dissemination of information, reducing search and transaction costs, and improving allocative efficiency, but not when the resultant social institutions are dysfunctional, as in the case rent-seeking via a producers’ cartel or criminal organization.

How do ‘social institutions’ differ from ‘political institutions’ and governance?

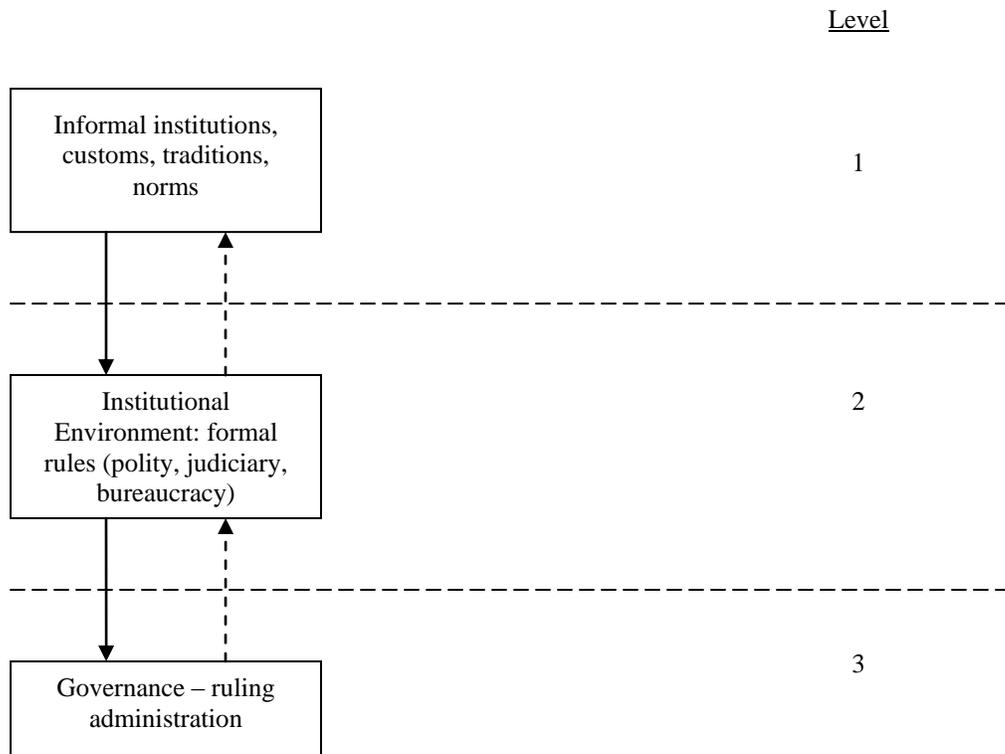
Social institutions are a subset of the broader universe of institutions. Institutions, in turn, must be distinguished from organizations, though organizations often arise out of these. Institutions refer to rules or norms of behavior that constrain human action along a certain path. They consist of

both informal constraints (sanctions, taboos, customs, traditional, and codes of conduct), and formal rules (constitutions, laws, property rights) (North 1991). Thus, the norm of holding elections to allocate positions of public office is an institution, as is the norm of having the male head of household work while the female remains at home, as is the norm of writing and adhering to contracts. Institutions are therefore what have traditionally been understood in sociology as 'social facts', that is, external constraints within the realm of collective beliefs which are internalized by individuals and inevitably constrain their behavior (Durkheim 1894). Institutions are often embedded in organizations, i.e. the set of roles and responsibilities that a group of individuals enact regularly for a common end, as can be found in a parliament, family, or courthouse.

Social institutions are distinguished from other (political, economic) institutional forms by virtue of two main features: the first is that they are usually outside of the sphere of the state, the centralized monopoly of legitimate force within a country (that is, the sphere of governance); the second is that they are usually informal, meaning that they rest on shared expectations between two or more parties without third-party enforcement, via a legal contract or regulatory agency. This is not to say that informal institutions do not establish a pattern of incentives, but rather that those incentives are delivered via the sanction or approval of peers who (unlike, say, a judge or policeman) are not necessarily under institutional constraint *themselves* to apply sanction. Thus, if an unelected local official ignores the request of a minority community for fair access to water or sanitary services, he may not be at risk of any formal sanction from above, as he may be within his remit, but sufficient informal pressure in the form of demonstrations, petition, and the attention of the local or national media may nonetheless leverage a change in policy. The act of a local community mobilizing in order to exert influence on local leadership is an informal institution, which may be distinguished from formal rules which determine the allocation of fiscal flows and transfers.

The informal institutions that we refer to under the rubric of 'social development' and the formal institutions usually described as 'governance' are closely related. Criminal violence, for example, may be considered an informal institution insofar as it is a behavioral norm which becomes more widespread or diminishes over time; yet it does so in clear relation to the incentive structure established by formal institutions, such as police enforcement and judicial sanctions, that ensure rule of law. Meanwhile, engagement in civil society may be a critical precondition for more accountable local governance, yet government behavior, including negation of political rights and civil liberties, can drastically reduce engagement in the 'third sector' over time. Both are analytically separate, in that one set of institutions is local, informal, and tacit whereas the other is national, formal, and explicit. However, they are causally endogenous. We therefore consider measures of social development and governance as revealing separate but related dimensions of the institutional environment: for example, if a country has open-access formal institutions but very weakly developed civic capacity, this may highlight a potential cause for concern in future years; just as it is possible for ethnic instability at the state-level to be concurrent with low levels of ethnic tensions at the local level, indicating that conflict is instead being driven by inter-elite competition only.

Figure 1.2. Social, Legal, and Governance Institutions



Source: adapted from Williamson (2000), “The New Institutional Economics”.

Figure 1.2 illustrates the relationship between social, legal, and governance institutions, adopting the distinction made by institutional economists between ‘level-1’ commitments (social institutions), ‘level-2’ norms (legal rules) and ‘level-3’ rules (governance) (cf. figure 1.2, Williamson 2000). Norms of friendship, engagement in the local community, or marital and family relations, are generally subsumed under the first category. They are distinguished by their informal and interpersonal nature, and their absence of a third party enforcement mechanism. Formal institutional rules, however, may affect these institutions, such as laws governing marriage, divorce, taxation, or civil liberties. In practice, therefore, most social institutions straddle the domain between level-1, the informal sphere, and level-2, the domain of legal rules. Discrimination against marginal groups, for example, is usually practiced informally by employers, administrators, and local communities, but legislative means such as quotas, compulsorily blind applications, and fiscal transfers have been employed to redress the situation. Social institutions are therefore endogenous to rule of law and governance, and rule of law and governance are endogenous to social institutions.

How can you claim to measure social institutions?

The institutions which drive social development are by nature difficult to detect, given that they rest upon tacit norms, beliefs, and practices which lack explicit formalization. The measurement of social institutions has therefore largely relied upon two strategies. The first is to infer the existence of institutions from their causes or consequences: for example, using daily newspaper circulation as a proxy for the extent to which citizens take an active interest in local politics, or a measure such as linguistic fractionalization, as a proxy for cohesion or otherwise between social groups. Most early studies of social capital, for example, investigated the phenomenon on this basis. For example in their classic study of civic engagement and local government performance in Italy, Putnam, Nanetti and Leonardi operationalized social capital using newspaper readership, the availability of sports and cultural associations, turnout in referenda, and the incidence of preference voting (Putnam et al. 1993). Studies of the effects of ethnic cohesion, meanwhile, have often used measures of heterogeneity as a proxy for distributional conflict among groups, with the assumption that all groups possess an equal tendency to cooperation or non-cooperation (e.g. Easterly and Levine 1997).

As the study of social institutions has gathered greater interest, researchers have begun collecting original data using respondent surveys, in order to get a better handle on the extent to which particular social institutions are present in given country cases. This has been facilitated greatly by the development of cross-country investigations such as Eurobarometer, the World Values Survey, Afrobarometer, Latinobarometer and Asiabarometer. Knack and Keefer (1997), for example, use a series of items from the World Values Surveys as measures of trust, community engagement and civic cooperation, to test the effect of these variables upon growth and development at the national level, with the finding that higher trust societies experience faster growth in real per capita incomes (Knack and Keefer 1997). Narayan and Pritchett (1999) also used survey data to replicate a similar effect of social trust on differences in household outcomes among villages in rural Tanzania (Narayan and Pritchett 1999).

Survey items used in the analysis of social institutions can be behavioral or attitudinal, though often a combination of both is applied. Behavioral items are those which ask directly regarding the activities of a respondent – for example, whether a given individual has recently taken part in a demonstration, attends a business or credit organization, or participates in community meetings. Because behavioral items concern actual acts rather than stated beliefs, they are sometimes considered a better measure of whether a given social institution can be said to exist. Attitudinal items concern the values, beliefs, and general outlook of a respondent, and often function as effective proxies for behavioral norms. Research has shown, for example, a very high correlation between statements of social trust (‘Would you say people in your society can be trusted’) and actual instances of trustworthy behavior, such as the return of experimental lost wallets or cooperation in positive-sum games (Glaeser et al. 2000, Knack and Keefer 1997: 1257). Other commonly used attitudinal statements include items on discriminatory attitudes, both against women and ethnic or religious minorities, to infer the existence of discriminatory norms and preferences.

In order to generate estimates for as wide a sample of countries as possible and to reduce measurement error, in our measures of social institutions we combine proxies based upon outcomes, behavioral items, and attitudinal survey responses.

How reliable are perceptions-based indicators as measures of social institutions?

Because the institutions which drive social development are by nature difficult to detect, previous quantitative studies of social institutions have largely relied upon using either proxies based upon causes or consequences (such as using daily newspaper circulation as a proxy for the extent to which citizens take an active interest in local politics, or linguistic fractionalization as a proxy for cohesion or otherwise between social groups), or survey responses to questions regarding social attitudes. Not all survey data is perceptions-based, however, and can often be behavioral, as when respondents are asked whether they have been the victim of crime, whether they have signed a petition, or whether they have contacted a local representative.

Both proxy variables and survey items are used in these indices, and both correlate to an exceptionally large extent. For example, a country's reported level of social trust is strongly predicted by a country's homicide rate, while the correlation between the proportion of managers who say men have a greater priority than women to a job, and the ratio between male and female labor force participation, is likewise high. To some extent, this reflects the fact that perceptions and attitudes are not simply the result of social institutions, but *are* the institution, to a substantial degree.

How can you avoid the perception that the Indices of Social Development, by rating social institutions, are judging countries based on their 'culture'?

Culture refers to the whole of a people's historical identity, language, literary tradition, spiritual beliefs, aesthetic practices and values. The social institutions which we have highlighted in our indices may be a part of that, but, we would contend, only a small portion. Consequently, it is possible to change one's social institutions while remaining one and the same culture. To take a concrete example, China, Taiwan, and Hong Kong all have very different scores on the five dimensions of social development, with Hong Kong SAR ranking toward the top of most measures, while mainland China rank toward the middle. This disparity cannot be the product of culture, but it is the result of the divergent historical-institutional trajectory of these territories. For example, civic capacity is markedly higher in Hong Kong while mainland China scores similarly well on one indicator, that of gender equity, despite its lower level of economic development. These differences are the legacy of authoritarian repression in hollowing out civil society, on the one hand, and an official policy of promoting women's empowerment, on the other.

Why do you use so many variables rather than selecting one or two 'key indicators'?

First, there are few data sources that cover a fully representative range of the world's countries, and thus without combining indicators, it would be impossible to gain scores for more than a small sub-sample of nations.

Second, we assume that every indicator has some amount of error. Error can be due to several causes: observational error may exist because of unreliability in the instrument used to record a

particular phenomenon: surveys, for example, may be subject to reporting biases or sampling error, while official statistics on the other hand may have been compiled using different methodologies. There is also error that is attributable to the use of indicators with low concept validity, that is, when the selected indicator, however reliably gathered, only imperfectly corresponds to the latent variable under consideration.

One way to reduce error is to employ greater scrutiny in the selection and consideration of indicators. Yet this presumes a high degree of knowledge on the part of the analyst: it can be difficult to assess the reliability of any given measure in isolation, especially in the absence of familiarity with the method used to generate those values. Validity is easier to determine, though here again we often have to rely on complex assumptions regarding the causal relationship between what we are measuring and what we seek to measure. For example, it may be open to contention whether civic capacity is best measured by features of the institutional environment (the number of media organizations, freedom of information), features of citizen behavior (engagement in local civic groups, participation in voting, petitions and demonstrations), or some other feature of that society (e.g. the number of international NGOs). Moreover, with social phenomena we often face a trade-off between reliability, validity, and representativeness: a given indicator, such as the income ratio between different ethnic groups, may be a valid and reliable measure of social exclusion, but available for very few countries; a survey item on attitudes toward other ethnic groups is certainly valid and may be widely available, but subject to survey response bias. There is, in short, rarely a single indicator that adequately measures the concept we are trying to quantify.

Combining multiple indicators, on the other hand, is another means to reduce aggregate error. If one assumes that errors are uncorrelated between data sources and that the size of the error is constant across items, then the combination of multiple sources will progressively reduce error as the number of indicators increases. We supplement these estimates with the calculated margin of error for each country, which is based on how many sources there were and the extent to which these sources agreed.

What does ‘Matching Percentiles’ mean?

For ISD, we use the matching percentiles method, as deployed by Lambsdorff (2007) in their Corruptions Perceptions Index, whereby values are matched across cases based on country ranking. The ranks of successive indicators included in the index are used to assign equivalent values to countries based on their position on each additional measure. Variables are iteratively added to produce the index.

The basic assumption behind this methodology is that for each of the 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 utilised 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.

The matching percentiles method is iterative, with each indicator being added to the index in successive rounds which progressively refine the country scores (cf. Lamsdorff 2007). The indicators to be compiled are first sorted $S_1, S_2 \dots S_n$ 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 brings with it several advantages for creating a set of indices of this nature. First, the matching percentiles method overcomes the problem of sampling bias. This is pervasive when a new data source only covers a limited and unrepresentative sample of countries, as country scores on the new indicator will reflect not only a difference in scaling (β) but also a difference in the constant (α). A further advantage of the matching percentiles technique is that 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. Whereas regression based techniques of aggregation encounter difficulties in incorporating small sample sources due to difficulties estimating α and β when the sample size is very low, no such difficulties affect the matching percentiles technique. This is critically important for a set of indices of this nature, where the present data remain incomplete, such that it will be necessary to keep adding new indicators in future years as successive data source become available, even where such sources cover relatively few countries.

Why combine indicators? The basic rationale is that all indicators have some level of measurement error. Observational error may exist because of unreliability in the instrument used to record a particular phenomenon: surveys, for example – the means used to gather many development indicators – may be subject to reporting biases or sampling error; official statistics on the other hand may have been compiled using different methodologies. There is also error that is attributable to the use of indicators with low concept validity, that is, when the selected indicator, however reliably gathered, only imperfectly corresponds to the latent variable under consideration. The percentage of women in employment, for example, is a weaker indicator of gender empowerment than the percentage of women in managerial occupations, as the former includes employment in subordinate positions.

We can deal with measurement error in several ways. The first and perhaps most obvious precaution is to employ greater scrutiny in the selection and consideration of indicators.

This however presumes a high degree of knowledge on the part of the analyst: it can be difficult to assess the reliability of any given measure in isolation, especially in the absence of familiarity with the method used to generate those values. Validity is easier to determine, though here again we often have to rely on complex assumptions regarding the causal relationship between what we are measuring and what we seek to measure. For example, it may be open to contention whether civic activism is best measured by features of the institutional environment (the number of media organisations, freedom of information), features of citizen behaviour (engagement in local civic groups, participation in voting, petitions and demonstrations), or some other feature of that society (e.g. the number of international NGOs). We often face a trade-off between reliability, validity, and representativeness: a given indicator, such as the income ratio between different ethnic groups, may be a valid and reliable measure of social exclusion, but available for very few countries; a survey item on attitudes toward other ethnic groups is certainly valid and may be widely available, but subject to survey response bias. There is, in short, rarely a single indicator that adequately measures the concept we are trying to quantify.

The second strategy for mitigating measurement error, besides simply exercising rigor in selection, is to combine multiple indicators. Combining indicators does not eliminate measurement error, but if one assumes that errors are uncorrelated between data sources and that the size of the error is constant across items, then the combination of multiple sources will progressively reduce error as the number of indicators increases. The intuition here is simple: if error ε is randomly distributed around mean 0, asymptotically the sum of ε over repeated draws n will tend to this zero mean. Combination of multiple indicators has therefore become a standard means of quantifying concepts whose presence or absence is difficult to tap directly, as has recently been pioneered in studies of corruption and other dimensions of governance (Lambsdorff 2007; Kaufmann et al. 1999, Kaufmann et al. 2006).

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