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New development: the challenges of designing municipal governance indicators

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The Challenges of Designing Municipal Governance Indicators

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Abstract:

The accentuated interest in the quality of governance along with the idea that 'what is measured is what matters' has been endorsing the deployment and use of quantitative governance indicators. Moreover, decentralization and public policies emphasising localism are putting the focus on local governments. This article addresses the challenges of developing indicators and using the information for governance in particular municipal contexts. If measuring local governance is going to be a priority, we argue that multi-criteria decision analysis might provide the suitable body of knowledge.

Keywords: informing citizens; local governance; measuring governance; multi-criteria analysis; providing incentives.

The modern political discourse and the burgeoning academic literature both seem to support the claim that 'governance matters' (Kaufmann *et al*., 2010) and that good governance is crucial for protecting the public interest. Although there is no definitive definition for governance, it is widely acknowledged that it relates to several key aspects, such as the transparency of transactions, the participation of stakeholders and the accountability of decisions. The concept of local governance recognizes that local governments no longer hold the exclusive power to shape and implement public policies and outcomes; these responsibilities are now shared by a complex network of stakeholders. Nevertheless, the local governance model 'retains a strong role for local government as a coordinator in order to join up and steer a complex set of processes' (Stoker, 2011, p. 17).

Despite the growing interest, trying to measure governance empirically is a controversial research topic. Doubts regarding the feasibility and meaningfulness of this pursuit are widespread among specialists (Arndt, 2008). Indeed, several challenges arise: What should be measured? How can it be measured? Who should carry out the assessment? And, finally, what steps must be taken so that decision-makers and citizens may make sense of and use the generated information (which, according to Wilson *et al*., 2011, should be the main focus)?

Taking into account existing approaches, this article discusses the challenges of developing a model for assessing governance systematically in particular municipal contexts (in a given country, state or region). After surveying the current state of the art, the authors propose a framework that uses multi-criteria decision analysis to design a model for assessing the 'governance level' of a municipality.

There are several advantages in using a multi-criteria model to assess good governance. By adopting this approach, it is possible to: (1) actively involve stakeholders in the design of the model, (2) determine how local governments are faring in each criterion and/or dimension of municipal governance, and (3) gauge the municipal governance 'overall score'. Therefore, decision-makers might be able to develop a sense of common purpose and know 'where to act' in order to improve globally. This is in line with Perri 6's concept of e-governance of 'using digital technologies to support political judgment' (6, 2004, p. 2). Nevertheless, and in accordance to recent empirical evidence, this author shows that the successful implementation of such decision support systems is confluent with how well the tools fit the dominant goals of the decision-makers.

Current methods for measuring governance

If one accepts that good local governance is important and should be encouraged, then devising methods to assess it seems a reasonable undertaking (Bovaird and Löffler, 2003). However, assessing the quality of governance of local authorities would only be truly useful if, while meeting the theoretical, conceptual, political and practical requirements, the method is also able to inform local priorities (Wilson *et al*., 2011).

The first consistent efforts to measure various aspects of governance sprouted in the mid-1990s. The Worldwide Governance Indicators (WGI) developed by the World Bank during this decade represented the main methodological advance. These indicators are still widely used and discussed (the latest indicators were calculated for 212 countries and use 2008 data from 35 different sources). In simple terms, the WGI

methodology consists in the aggregation of several perceptions-based data sources (including surveys, expert coding and other subjective assessments) into six broad dimensions of governance (Kaufmann *et al*., 2010). To construct the six aggregate WGI measures, Kaufmann *et al*. (2010) use a complex statistical model that rescale the data from each source and delivers indicators that range from -2.5 to 2.5 (higher values indicate better governance outcomes). For countries with more data sources the 'margins of error' are smaller. According to many critics, this procedure lacks transparency and practical significance (Arnd, 2008).

Many indicators and methodologies to measure certain aspects of good governance have been carried out at the local level (often contributing to an information overload, Wilson *et al*., 2011). Frequently, the assessments have a main environmental scope (e.g. the 'European Green City Index' conducted by the Economist Intelligence Unit and sponsored by Siemens) or the focus is on the quality of life (e.g. the Mercer's 'Quality of Living Worldwide City Rankings'). One key issue is that virtually all these methods use a mix of survey, expert coding and hard data that are later aggregated to bring about a single number or value (to be easily ranked in league tables). The aggregation techniques commonly adopted (most of the times, simple weighted averages) lack both theoretical and practical significance.

The Urban Governance Index (UGI) was developed by the United Nations Human Settlements Programme (UN-HABITAT) and thought to evaluate how accountable, effective, equitable and participatory local governments are. It was expected that the UGI would 'demonstrate the importance of good urban governance in achieving broad development objectives' and 'catalyse local action to improve the quality of urban governance' (UN-HABITAT, 2004, p. 3). The index is solely based on hard data and the indicators that compose it were produced with significant and active input from local stakeholders. This bottom-up approach is likely to increase the acceptability and practical significance of the measurement model. However, the UGI was intended to compare major cities from different countries. This necessarily implies a trade-off between universal applicability and 'capacity to develop truly local knowledge' (Wilson *et al*., 2011).

To avoid over-generalizations and the lack of theoretical foundations for aggregating different indicators, several mainly descriptive assessments have been established. The International IDEA Framework, for instance, proposes to measure the quality of democracy (IDEA, 2008). More closely related with local governance, the assessment of the Local Integrity Systems of a few cities has also been carried out (Huberts *et al*., 2008). These

'tailored-to-fit' analyses are usually initiated by external agencies and carried out by local (national) teams. The results have been somewhat successful in contributing to public debate regarding the need for reform. However, the subjective and descriptive nature of these assessments and the fact they are not usually suitable for systematic and continuous monitoring, might be of little consequence on the long run.

Structuring the problem

Decision Analysis is often described as the discipline that 'promotes the development and use of logical methods for improving decision-making in public and private enterprises'. Within this discipline, multi-criteria decision analysis is especially suitable to evaluate options or alternatives (or, in our case, municipalities) that are characterized by or subject to many aspects that are seen as fundamental to attain the ultimate objective (in our case, good governance). Regarding the design of a multi-criteria model for assessing governance, a constructive approach (which requires the active participation of the decision-maker) should be preferred to normative or prescriptive approaches (the traditional consultation frameworks). Otherwise, the multi-criteria approach would be a technocratic process and could be regarded as a 'technology fix'.

Hence, to achieve a 'requisite' assessment model, that is to say a model sufficient in form and content to resolve the issues of concern (Bana e Costa and Oliveira, 2012), one must identify the appropriate/legitimate decision-maker. Regarding the current 'issue of concern', this would be a decision-making group (DMG) composed by representatives from the entities with some sort of responsibility or competencies over local governance (i.e. the complex network of stakeholders). Depending on the institutional framework of each country, the group might include associations of municipalities, the ministry of local government, the court of auditors, external regulators, national NGOs, citizenship associations, experts and academics, among others. After the identification of the DMG, the assessment model should be structured through iterative and consultative interaction between specialists and key stakeholders. These interactions usually consist of 'decision conferences' facilitated by impartial analysts (for detail, see Phillips, 2007).

To determine 'what should be measured', the DMG should agree on a definition of governance. As an example, we consider an adaptation of the World Bank-WGI definition. Hence, governance is defined as the traditions and institutions by which authority in a country, region or municipality is exercised. This includes (Kaufmann *et al.*, 2012, p. 4):

(a) The process by which governments are selected, monitored and replaced (namely, 'Voice and accountability' & 'Political stability');

(b) The capacity of the government to effectively formulate and implement sound policies (namely, 'Government effectiveness' & 'Regulatory quality');

(c) The respect of citizens and the state for the institutions that govern economic and social interactions among them (namely, 'Rule of law' & 'Control of corruption').

The fundamental points of view of the DMG are usually represented in diagrams known as value trees in order to organize the elements according to a logical framework. Figure 1 shows an example of a value tree containing the six dimensions of governance defined by the WGI. However, complete and validated value trees should contain all criteria and sub-criteria regarded by the DMG as being pertinent for good municipal governance. The criteria must effectively differentiate between municipalities and be exhaustive, preferential independent, non-redundant and as simple as possible. Naturally, several other 'pragmatic' constraints arise while selecting the criteria or sub-criteria (mainly related to data collection and availability).

Figure 1 – Example of a generic value tree for designing a Municipal Governance Indicator

After the identification of all relevant criteria, the corresponding indicators (or performance descriptors) must be selected. For example, assuming that 'Public participation' is one criterion, the DMG should approve the proper proxy for its measurement (e.g. voter turnout, civic participation on municipal meetings, etc.). Performance descriptors can either be quantitative or qualitative (where some categorical levels are defined). After the structuring phase, the conceptual agenda for the multi-criteria model is quite straightforward:

Given a set 'M' of 'k' municipalities, $M = m_1, m_2, \ldots, m_k$, and a set 'C' of 'n' criteria reflecting certain aspects of good governance, $C = c_1, c_2, \ldots, c_n$, evaluate all municipalities considering all criteria.

Application of multi-criteria decision analysis to measure local governance

After the designation of the fundamental criteria, which is the corner-stone of any multi-criteria assessment model, the definition of the 'scales of attractiveness' or value functions for each criterion is required. Usually, the score in each criterion varies within a pre-established interval (e.g. from 0 to 100, where higher scores represent better outcomes). The value functions transform performance (measured by the descriptors) in scores (or value) for each criterion. In many cases, one can assume a linear relationship between 'performance' and 'value' (see curve B in figure 2); nevertheless, this should be validated by the DMG. For instance, consider the example in figure 2. It could be the case that the DMG attributes more value to a change from 40% to 50%, than to a change from 80% to 90% regarding voter turnout (curve A). There are several theoretically sound methods to construct value functions (von Winterfeldt and Edwards, 1986).

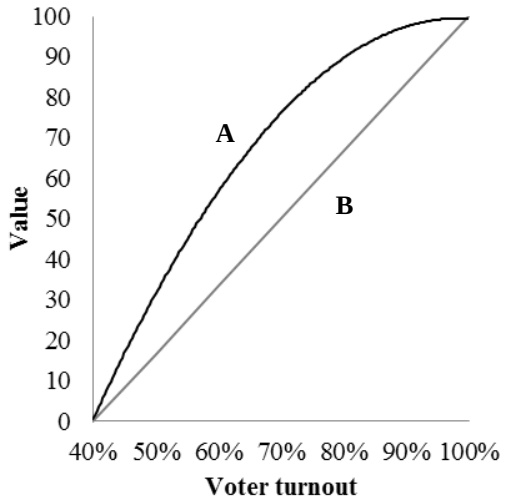

Figure 2 – Illustrative example of a value function for the performance descriptor 'voter turnout'

Multi-criteria decision analysis uses a simple additive evaluation model, aggregating several indicators or measures that may otherwise lead to information overload. In equation 1 below, the governance indicator of municipality 'm_i', '$G(m_i)$', is obtained by multiplying the weighting coefficient of criterion 'c_n' by the value of the municipality 'm_i' on that same criterion. The weighting coefficients are obtained through an iterative process

with the DMG. There are, once again, several methods to calculate the weights. We point out, however, that it is possible to obtain these parameters mainly through qualitative judgements elicited by the DMG. For instance, with the MACBETH approach stakeholders are asked to state their preferences when comparing two criteria at a time (Bana e Costa and Oliveira, 2012). To develop a common understanding and a sense of ownership, the decision conferences should promote structured debates over each step of the process.

$$G(m_i) = \sum_{n=1}^{J} c_n \times G_n(m_i) \qquad \text{with} \qquad \sum_{J} C_j = 1 \tag{1}$$

Concluding note

While researchers discuss the benefits and drawbacks of different assessment frameworks at the local level, they are already being implemented (and, with the shifts on local needs and priorities, the current focus is on governance). Primarily, these assessments are being triggered by central governments and NGOs (note, for instance, the recent call for 'Consultancy on developing a Local Integrity System Assessment Tool' commissioned by Transparency International in early 2012). Nevertheless, there are also some local stakeholders trying to demonstrate a pro-active behaviour and willing to engage in such initiatives (e.g. several quality of life rankings). If measuring local governance is going to be a priority, then in the authors' opinion, the focus should be on incentives and on informing local decision-makers about what can be done to improve governance outcomes. The 'Decision Analysis' toolkit may help in accomplishing these objectives.

Provided that the pertinent decision-makers are effectively involved in the designing process (Walsh *et al*., 2012), the use of comprehensive Municipal Governance Indicators could promote good practices, raise awareness and increase the 'governance literacy' of citizens at little or no (financial) cost. The assessment model should be tailored-to-fit each specific country or region that wishes to apply it. This reduces complexity, avoids over-generalization and allows taking into account the laws, institutions and forms of government (or, in general, the political economy) that define a more or less 'homogeneous' group of municipalities.

Preferably, governance assessments should be validated by local governments, transparent, and draw on open data (sources and raw data should be accessible, allowing observers to access disaggregated information). Regarding the disclosure of the information retrieved from the municipal governance assessment model,

recurrent choices such as ranking in league tables may not be the best system to inform local priorities (Wilson *et al*. 2011) and might lead to controversy and rejection by local decision-makers (Downe *et al*., 2008). Presenting results using outcome ranges (or governance rating categories) for each dimension of governance and for the overall score could curb these risks, although other frameworks can also be devised. Finally, the approach briefly described in the current study could also be complemented with other, less systematic but more detailed, analyses (for instance, success stories or other descriptive assessments).

References

6, P. (2004), *E-governance: Styles of Political Judgment in the Information Age Polity* (Palgrave, New York).

Arndt, C. (2008), The politics of governance ratings. *International Public Management Journal*, *11*, 3, pp. 275-297.

Bana e Costa, C. and Oliveira, M. (2012), A multicriteria decision analysis model for faculty evaluation. *Omega*, *40*, 4, pp. 424-436.

Bovaird, T. and Löffler, E. (2003), Evaluating the quality of public governance: indicators, models and methodologies. *International Review of Administrative Sciences*, *69*, 3, pp. 313-328.

Downe, J., Grace, C., Martin, S. and Nutley, S. (2008), Best Value audits in Scotland: winning without scoring? *Public Money & Management*, *28*, 2, pp. 77-84.

Huberts, L., Anechiarico, F. and Six, F. (2008), Local integrity systems analysis and assessment. In Huberts, L. *et al.* (Eds), *Local Integrity Systems: World Cities Fighting Corruption and Safeguarding Integrity* (BJu Publishers, The Hague), pp. 271-295.

IDEA (2008), *Assessing the Quality of Democracy: An Overview of the International IDEA Framework* (IDEA, Stockholm).

Kaufmann, D., Kraay, A. and Mastruzzi, M. (2010), *The Worldwide Governance Indicators: Methodology and Analytical Issues* (World Bank, Washington, DC).

Phillips L. (2007), Decision conferencing. In Edwards, W. *et al.* (Eds), *Advances in Decision Analysis: From Foundations to Applications* (Cambridge University Press, Cambridge), pp. 375–99.

Stoker, G. (2011), Was local governance such a good idea? A global comparative perspective. *Public Administration*, *89*, 1, pp. 15-31.

UN-HABITAT (2004), *Urban Governance Index: Conceptual Foundation and Field Test Report* (UN-HABITAT, Nairobi).

von Winterfeldt, D. and Edwards, W. (1986), *Decision Analysis and Behavioural Research* (Cambridge University Press, New York).

Walsh, S., Wilson, R., Baines, S. and Martin, M. (2012), 'You're just treating us as informants!' Roles, responsibilities and relationships in the production of children's services directories. *Local Government Studies*, *38*, 5, pp. 661-680.

Wilson R., Cornford, J., Baines, S. and Mawson, J. (2011), Information for localism? Policy sense-making for local governance. *Public Money & Management*, *31*, 4, pp. 295–300.