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A COMPOSITE INDICATOR OF REGULATORY CAPACITY

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Public policy and growth

Improving the quality of institutions, public policy and public governance is a crucial factor to achieve a steady and sustainable growth. At the same time, recent economic literature focused on institutions and governance to investigate the links between institutional capacity, public policies and economic outcomes[1].

A survey of the existing economic and econometric literature about the relationship between public policy, institutions and growth is carried out in the first section of the thesis, to provide a general framework of the problems to be investigated. This aspect is surveyed to understand the relationships between quality of institutions, regulation or governance, and economic outcomes, such as *per capita* incomes or growth.

The index of regulatory capacity

The aim of this thesis is to set the theoretical framework to develop an indicator that allows a cross-country comparison of regulatory capacity and highlights which countries need to build up more capacity in which areas, and through which instruments. The target of the index is to complement the existing studies and indicators about regulatory quality, to build a tool which is

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[1] Cf. *i.a. Kauffmann D., Kraay A. (2002)* Growth Without Governance – The World Bank Policy Research Working Paper 2928; *Glaeser E. L., La Porta R., Lopez-de-Silanes F., Shleifer A. (2004)* Do institutions cause growth? – Journal of Economic Growth, 9, 271-303; *Butkiewicz J.L., Yanikkaya H. (2006)* Institutional quality and economic growth: Maintenance of the rule of law or democratic institutions, or both? – Economic Modelling 23 (2006) 648-661; *Jalilian H., Kirkpatrick C., Parker D. (2007)* The Impact of Regulation on Economic Growth in Developing Countries: A Cross-Country Analysis – World Development, Volume 35, Issue 1, January 2007, Pages 87-103; One of the key messages in recent literature is that trade openness and product market liberalization boost growth only if backed by a correspondingly sound design of law and institutions, cf. *i.a. Desroches B., Francis M. (2006)* Institutional quality, trade, and the changing distribution of World Income – Bank of Canada/Banque du Canada Working Paper 2006-19; *Borrmann, A., Busse, M., Neuhaus S. (2006)* Institutional Quality and the Gains from Trade – HWWA Discussion Paper No. 341;

context-aware and represents an "actionable" instrument for institutional design.

The analysis of regulatory capacity draws on both the concepts of "institutional/regulatory quality" and "regulatory capacity", which have been used in the international debate over the past few years. The index of regulatory capacity is composed of information which has already been used to define and measure those concepts as well as of new features. The analysis of regulatory capacity complements studies on the quality of governance or regulation by focusing on the features of the institutional environment more than on performances or outcomes.

In addition, special attention is paid to the attempt to overcome some of the drawbacks of the existing indicators of regulatory quality and governance, such as the World Governance Indicator (WGI, also known as Kauffmann index)[2], and the Doing Business project[3], both developed by the World Bank. The Kauffmann index has been criticized, since it relies on sources whose errors could be correlated, and its weighting scheme is biased in favour of experts' and businesses' opinions.[4] As concerns Doing Business, it is the most widespread publication about regulatory quality, but it is heavily debated. The index of regulatory capacity will make an effort to avoid the shortcomings

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[2] The last edition is *Kauffmann D., Kraay A., Mastruzzi M. (2008)* Governance Matter VII: Governance Indicators for 1996-2006 – The World Bank; cf. also *Kauffmann D., Kraay A., Zoido-Lobaton P. (1999)* Aggregating Governance Indicators – The World Bank Policy Research Working Paper 2195; *Kauffmann D., Kraay A. (2007a)* Governance Indicators: Where are We, Where Should We Be Going – The World Bank Policy Research Working Paper 4370.

[3] *The World Bank (2007)* Doing business 2007 – The World Bank Washington, D.C., USA.

[4] Cf. *Kauffmann D., Kraay A., Mastruzzi M. (2007b)* The Worldwide Governance Indicators Project: Answering the Critics – The World Bank; *Arndt C., Oman C. (2006)* Uses and abuses of governance indicators – OECD Publishing; *Knack S. (2006)* Measuring Corruption in Eastern Europe and Central Asia: A Critique of the Cross-Country Indicators – The World Bank Policy Research Working Paper 3968; *Thomas M.A. (2007)* What do the worldwide governance indicators measure – Draft; *Kurtz M. J., Schrank A. (2007)* Growth and Governance: Models, Measures, and Mechanisms – The Journal of Politics, Vol. 69, No. 2, May 2007, pp. 538–554.

pointed out by the literature and the World Bank itself.[5] The methodology of the index of regulatory capacity is designed to avoid pro-business bias and, most importantly, "one-size-fits-all" policy indications. In particular, the index follows "state of the art" literature on how to capture regulatory context in our analysis.[6] Finally, the index does not only look at the content of the laws on the books, but also at how laws are formulated and enforced through different institutions, trying not to limit itself to a formal evaluation of the institutional context.

The indicator allows **a cross-country comparison, both at national and sectoral level**. The general index of regulatory capacity aims at assessing and comparing the level of regulatory capacity each state is endowed with. It is designed to be horizontal, that is it will cover the whole policy spectrum. It provides a general, but "actionable", picture of the regulatory capacity of a country. Another type of indicators, sectoral indexes of regulatory capacity, focuses on a specific policy area, giving a more detailed picture by adapting the theoretical framework to the characteristics of each sector. The index is able to capture sector-specific features by adapting its design to each sector. The general and sectoral versions of the index are complementary. Using exclusively a horizontal and general approach would result only in drawing a picture of the existing situation, without providing hints and indications for improvements; likewise, relying only on a sectoral approach would

[5] Cf. *World Bank Independent Evaluation Group (2008)* Doing Business: An independent Evaluation – Taking The measure of the World Bank-IFC Doing Business Indicators –The World Bank Washington, D.C., USA.

[6] Cf. Cherchye L., Moesen W., Rogge N., Van Puyenbroeck T. (2007) An Introduction to 'Benefit of the Doubt' composite indicators – Social Indicator Research (2007) 82: 111-145; Cherchye L., Moesen W., Rogge N., Van Puyenbroeck T., Saisana M., Saltelli A., Liska R., Tarantola S. (2008) Creating composite indicators with DEA and robustness analysis: the case of the Technology Achievement Index – Journal of the Operational Reseach society (2008) 59, 236-251; Mahlberg B., Obersteiner M. (2001) Remeasuring the HDI by Data Envelopment Analysis - Interim report IR-01-069 International Institute for Applied Systems Analysis, Laxenburg, Austria; Storrie D., Bjurek H. (2000) Benchmarking European Labour Market Performance with Efficiency Frontier Techniques – Discussion Paper FS I 00 – 211, Wissenschaftszentrum Berlin fur Sozialforschung

underestimate the influence that overall institutional capacity of a given political system exerts on the economy.

The index of regulatory capacity enables **context-aware benchmarking**, as opposed to the current practice of numerical comparative analysis, which entails the use of indicators that attach limited importance to national peculiarities. Although the feasibility of summing up information through composite indicators is often questioned in the literature, the index is based upon the guidelines found in the most recent literature, mostly provided by the Joint Research Centre of the European Commission and the OECD, to design a sound, transparent and robust measurement tool, supported by in-depth uncertainty and sensitivity analysis.[7]

The composite indicator allows a detailed analysis of the "public black box", that is of the institutional characteristics allowing a country to have an effective and efficient public sector, therefore being conducive to a more informed and evidence-based formulation of public policy. This approach does not merely look at the effect of public institutions on the economy, as most of the existing literature does, but **goes deeper inside the existing institutions**, exploring the individual competence, organizational capabilities, assets and relationships that enable a political entity to perform effective interventions through high-quality policies.

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[7] *Nardo M., Saisana M., Saltelli A. Tarantola S., Hoffman A., Giovannini E. (2005)* Handbook on constructing composite indicators: Methodology and User Guide – OECD Statistical Working Paper; *Saisana M., Tarantola A. (2002)* State-of-the-art Report on Current Methodologies and Practices for Composite Indicator Development – Joint Research Center, European Commission; *Saisana M., Saltelli A., Tarantola S. (2005)* Uncertainty and sensitivity analysis techniques as tools for the quality assessments of composite indicators - Journal of the Royal Statistical Society series A (2005) 168, Part 2, pp. 307-323.

Focus: what is regulatory capacity and what the index measures

The term "regulation" is used in a wide sense, to indicate a normative intervention of the state in a sector, both through incentive-based mechanisms and command-and-control, in market and non-market sectors. Regulatory capacity, therefore, is relevant not only for the institutions which are usually called "regulators", but also for other administrative bodies which formulate, monitor or enforce public policy.

Regulatory capacity is defined as the combination of individual competence, organisational capabilities, assets and relationships that enable a political entity to formulate, monitor and enforce regulation, in both market and non-market sectors. The level of regulatory capacity of a given system depends on the presence (or absence) and on the features of certain inputs and processes to be employed in formulating, monitoring and enforcing regulation.[8]

Five factors have been identified as being the basis of regulatory capacity and they will be detailed and combined differently in the general and sectoral indexes:

1) *Resources and competence*[9]

a. human capital (amount, quality and salaries);

b. financial and other resources

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[8] Cf. *OECD (2007) Towards Better Measurement of Government* – OECD Working Papers on Public Governance, 2007/1, OECD Publishing. *Baser H., Morgan P. (2008)* Capacity, Change and Performance, Study Report – European Centre for Development Policy Management; *Bach D., Newman A. L. (2007)* The European regulatory state and global public policy: micro-institutions, macro influence – Journal of European Public Policy 14:6;

[9] Cf. *De Panizza A. (2007)* Composite & Decomposable Indicators for evaluating RIA systems in practice – ENBR Working Paper No. 09/20007; *Wu I. (2005)* Traits of an independent communications regulator: a search or indicators with teaching module on ethics and corruption - TPRC Programs and Papers , School of Information, University of Michigan; *Wallsten S., Clarke G., Haggarty L., Kaneshiro R., Noll R., Shirley M., Colin Xu L. (2004)* New Tools for Studying Network Industry Reforms in Developing Countries: The Telecommunications and Electricity Regulation Database – AEI-Brooking Joint Center Related Publication 04-05. March 2004.

2) *Degree of independence*

Independence is intended from both the political system and the private parties. A high degree of independence limits the risk of the regulator being captured, either from the political system or from private parties. The independence of regulators is relevant when they cannot rely primarily on coercion to implement their policies and when they have to deal with a high degree of complexity. Both features are often present in market-based regulation processes. The independence of the regulator is less crucial when it deals with non-market sectors, such as education.

As for independence from the political system, the index will evaluate:[10]

a. the status of the regulator's head and management board (e.g. who is appointed by and for how long, rules for removal)
b. the relationships with the government and with the Parliament
c. the financial and organizational autonomy
d. the extent and nature of delegated regulatory competence.

As regards independence from private parties, the index will evaluate laws and facts about:[11]

a. lobbying;
b. conflicts of interests;
c. restrictions for revolving doors between public administration and private parties.

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[10] Cf. *Majone G. (1996)* Temporal Consistency and Policy Credibility: Why Democracies Need Non-Majoritarian Institutions - European University Institute, Working Paper RSC No 96/57; *OECD (2000)* Telecommunications regulations: institutional structures and responsibilities – report discussed by the Working Party on Telecommunication and Information Services Polices in November 1999; *Gilardi F. (2002)* Policy credibility and delegation to independent regulatory agencies: a comparative empirical analysis – Journal of European Public Policy 9:6.

[11] Cf. *OECD (2008)* Lobbyists, governments and public trust: building a legislative framework for enhancing transparency and accountability in lobbying – Public Governance Committee OECD August 2008; *OECD (2003)* Managing Conflict of Interest in the Public Service: OECD Guidelines and Overview – OECD Publishing

3) *Regulatory Governance*

This area encompasses the norms covering the regulatory process, that is the formulation, implementation and enforcement of regulation. Within this area, the index will measure the presence (or absence) and the features of mechanisms such as:[12]

a. consultation;
b. communication, publicity and access mechanisms;
c. alternatives to regulation:
d. regulatory impact analysis;
e. tools for regulatory burdens;
f. ex-post evaluation;
g. simplification and stock-related measures.

4) *Coherence*[13]

a. the presence (or absence) and the features of regulatory oversight body;

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[12] Cf. *Radaelli C. M. (2006)* Better regulation and the Lisbon Agenda – paper delivedered to European Evaluation Society Conference "Evaluation in society: critical connections", London, October 4th-6th 2006; *Jacobzone S., Choi C., Miguet C. (2007)* Indicators of regulatory management systems – OECD Working Papers on Public Governance 2007/4: *Renda A. (2006)* Impact Assessment in the EU – The State of the Art and the Art of the State – Center for European Policy Studies; *OECD (1999)* Regulatory Reform in the United States – Government Capacity to Assure High Quality Regulation – OECD Publishing; *Pollitt C., Bouckaert G. (2002)* Public management reform: a comparative analysis – Oxford University Press; *Mandelkern Group on Better Regulation (2001)* Final report – Bruxelles, 13th November 2001; *Department of Industry, Tourism and Resources of Australian Government (2003)* Regulatory Performance Analysis, a guide for departments and agencies – Canberra, Australia; *Cecot C., Hahn R., Renda A., Schrefler L. (2007)* An evaluation of the Quality of Impact Assessment in the European Union with Lessons for the U.S. and the EU – AEI-Brookings joint center for regulatory studies, Working Paper, December 2007

[13] *Coglianese C. (2002)* Bounded evaluation: Cognition, Incoherence and Regulatory Policy – Stanford Law Review, Vol. 54 N. 2; *Sunstein C. R., Kahneman D., Schkade D., Ritov I. (2002)* Predictably Incoherent Judgement - Stanford Law Review, Vol. 54 N. 2; *OECD (2004)* Regulatory performance: ex-post evaluation of regulatory tools and institutions – Draft Report by the Secretariat, working Party on Regulatory Management and Reform; *Radaelli C. M. (2008)* Evidence-based policy and political control: what does regulatory impact assessment tell us? – Paper delivered to the European Consortium for Political Research – Joint Sessions of Workshops, University of Rennes, France, 11-16 April 2008; *Lonti, Z., Woods M. (2008)* Towards Government at a Glance: Identification of Core Data and Issues related to Public Sector Efficiency" – OECD Working Papers on Public Governance, No. 7, OECD Publishing.

b. the degree of formal and factual compliance among laws governing the institutional system and the actual procedures;
c. the degree of the perceived independence of the regulator;

A measure of the coherence of the regulatory system may also include an evaluation of the general institutional structure, such as the features of the representative Houses and the legislative process, the stability of governments and their political composition etc. The general institutional structure will be included in the index for policy areas where it is more relevant, either in a qualitative or quantitative way.

5) *The judicial framework*[14]

In some sectors, the judicial system is a relevant actor in monitoring and enforcing regulation, either on a stand-alone basis or together with the regulator body. It is therefore important to look at:

a. the existence of specific courts and or sections, with specific procedures, for the review of administrative acts;
b. timeliness;
c. right to have standing;
d. availability of instruments during the proceedings;
e. availability of alternative dispute resolution mechanisms:
f. degree of scrutiny.

[14] *Buscaglia E., Dakolias M. (1999)* Comparative International Study of Court Performance Indicators – The International Bank for Reconstruction and Development / The World Bank, Washington D.C., USA; *De Petris D. (2005)* La tutela giurisdizionale amministrativa in Europa fra integrazione e diversità – Rivista italiana di diritto pubblico comunitario, 2005, 1-33; *Siclari D. (2007)* Costituzione e autorità di vigilanza bancaria – CEDAM, Padova; *Stone B. (1995)* Administrative Accountability in the 'Westminster' Democracies: Towards a New Conceptual Framework – in Governance, Vol. 8, No. 4, pp. 505-526; *Cornall R. (2007)* Effectiveness and efficiency of administrative law: how do we measure it – AIAL 2007 Administrative Law Forum Adrress; *De Lise P. (2006)* L'esperienza dei tribunali amministrativi – paper delivered to "Unione Avvocati Europei: Nuove frontiere per la costruzione dell'Unione Europea – l'effettività e l'efficacia del sistema di giustizia", Venezia, Fondazione Giorgio Cini, 23-25 novembre 2006.

Main Conclusions

The six most important issues to be extracted from the thesis are:

1) Current indicators of governance and institutional quality have many strengths and some weaknesses. To build a high-quality indicator of regulatory capacity, strengths are to be imported and used accordingly to the aim of the new index. Weaknesses have to be acknowledged and a coherent strategy to overcome them, or limit their impact, has to be put in place. This has to be done transparently, highlighting each critical point and the adopted solution.

2) A carefully constructed indicator of regulatory capacity would be useful for the following reasons:
   a. synthesis;
   b. reduction of measurement errors;
   c. showing explicit margins of errors;
   d. communicability;
   e. comparison among countries and benchmarking;
   f. neutrality;
   g. "actionability";
   h. use of subjective and objective data.

   Statistical and ontological difficulties have to be overcome to construct the index. The former relate to data selection and measurement process, to weighting and aggregation techniques, and to the relationships between the index and other relevant variables. The latter relate to the extent and plurality of the concept to be measured, to the differences among regulatory systems, and to the definition of what is "good" regulatory capacity.

3) Efficiency is a criterion, but not the only one, to assess a regulatory system. History, culture, politics and the legal system matter and must be considered by the index.

4) Diversity must be included in the index, since it is designed to deal with the assessment of (very) different regulatory systems. Diversity must be taken into consideration because regulation and regulatory capacity are open, uncertain, multi-scale and multidimensional complex concepts and cannot be over-simplified. This complexity is typical of the normative and descriptive aspects of the phenomena are concerned by this complexity. Furthermore, diversity allows the achievement of a consensus on the definition of regulatory capacity and on the indicator. Without consensus, the indicator of regulatory capacity would remain a theoretical unused instrument. A crossword-style modelling and the use of the Development Envelop Analysis (also called Benefit Of Doubt) approach are recommended.

5) Regulatory capacity is defined as the combination of individual competence, organisational capabilities, assets and relationships that enable a political entity to formulate, monitor and enforce regulation, in both market and non-market sectors. The level of regulatory capacity of a given system depends on the presence (or absence) and on the features of certain inputs and processes to be employed in formulating, monitoring and enforcing regulation. An index measuring this phenomenon is needed to complement the existing indicators, focusing on institutional features, such as inputs and processes of regulation, and employing fact-based data in the measurement.