COMPARING REGULATORY DECISION-MAKING IN THE ENERGY SECTOR

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Both the economic literature and international organizations like the World Bank and OECD have devoted many efforts to the assessment of the relationship between the quality of the regulatory framework and the performance of markets. The prevailing wisdom relies on the construction of synthetic indicators, which should describe the main institutional variables. These indicators are then employed to run econometric regressions and rank each national regulatory system according to their results.

In this paper I argue that the currently available synthetic indicators do not capture the institutional complexity of regulatory systems. While there is an urgent need to measure the quality of rules and institutions, this task cannot be accomplished without first developing a better understanding of their origins, complementarities and implementation mechanisms. To advance this goal, I propose to use regulatory decision-making processes as the unit of analysis and as a common ground for the dialogue between legal scholars, economists and political scientists. How such processes are organised directly affects the relationship between markets and institutions.

Two theoretical approaches offer a more realistic explanation of regulatory decision-making. Firstly, comparative law helps detect those institutions, sources of law or legal ideas most relevant for the workings of each national or supranational regulatory system. Secondly, Behavioral Law and Economics helps understand the decision costs regulators must face and provides a standard of reference to set forth concrete proposals for improving the regulatory design.

After a general description of this new approach, the paper applies it to a specific regulatory problem, namely the development of network rules which support the transition of energy systems to large-scale deployment of renewable energy sources. The European and American regulatory systems are compared to find out how each legal tradition deals with the conflicts between traditional and new energy players and copes with technological and institutional uncertainty.

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TABLE OF CONTENTS

1. INTRODUCTION: THE EMPIRICAL ANALYSIS OF REGULATORY SYSTEMS

The relationship between regulation and market performance is not a new research topic. It was already explored in the era of monopolistic utilities. The debate was reinvigorated by the beginning of the liberalization process in the network industries. In many countries, sector-specific regulators were created. Further, technological constraints and economic interdependencies made it inevitable the development of a large body of rules, both to ease coordination among market players and to monitor market power. Thus, the impact of regulation looms large in any assessment of the liberalization process. On a more general level, interest in the regulation of network industries is connected to the broader debate on the relationship between long-run economic growth and the quality of institutions.

Economists, political scientists and legal scholars seem to agree that the measurement of the quality of regulatory systems is one of the their most pressing tasks. Apart from theoretical relevance, in the last years both policy-makers and investors have exponentially increased their demand for reliable

information on institutions. This demand often involves a comparison among countries or regions. However, how the above mentioned disciplines try to accomplish this comparative task is not free from criticisms. On the economists' side, synthetic indicators are proposed as a reliable and accurate proxy for the efficiency and effectiveness of regulatory systems. But even when those indicators enable researchers to conduct large-N studies and provide impressive rankings of countries, it is by no means clear that they capture the most important dynamics of national or supranational regulatory systems. Most importantly, synthetic indicators cannot provide the detailed knowledge which is needed to design meaningful institutional reforms tailored to the characteristics of a specific country or industry. On the legal scholars' side, there is a traditional reluctance in comparative studies to express value judgements on specific rules or branches of a legal system. As a consequence, comparative law is often left out of debates on regulatory reforms.[1]

The weaknesses of current approaches to the measurement of regulatory quality can be overcome with new types of indicators. They should include information from two different sources. Firstly, comparative law offers a wealth of data on the legal context in which regulatory systems are embedded. These data should be used to establish who are the relevant public and private actors in a specific regulatory settings, what powers they can exercise, what kind of reasoning they follow, whom they are accountable to, what is the nature of the relationship among them, how large is the difference between law in the books and law in action.

However, comparative law studies are usually of a descriptive character and do not allow direct measurement of regulatory quality. For this reason, a second strand of literature can be deployed, that is Behavioral Law and Economics (BLE). Thanks to its focus on decision-making processes, it can supply an evaluative standard for a cross-country comparison of regulatory activities. Blending comparative law with BLE suggests a research strategy which promises to combine a detailed knowledge of the regulatory environment with an assessment of the costs each decision-maker has to face. The proposed approach can build a bridge between comparative economics, comparative politics and comparative law.

Section 2 provides a brief description of the debate on the use of indicators for assessing the quality of institutions. Two of the best known examples, the Law and Finance (L&F) approach and the World Bank Doing

[1] I will briefly discuss the criticisms against political science studies on regulation in section 2.3.

Business reports (DB) are critically reviewed. With specific reference to the regulation of network industries, I discuss the institutional indicators proposed for the energy sector, one of the network industries where liberalization programs proved more difficult to implement. Section 3 explains in detail the new approach, centered on the comparison of regulatory decision-making processes. Section 4 applies the new approach to a specific case, i.e. the American and European policies aimed at integrating renewable sources in transmission networks. Section 5 summarizes the arguments.

2. PITFALLS OF SYNTHETIC INDICATORS

This section briefly describes the debate on indicators of institutional quality. Many for profit and not for profit organisations devote their resources to this endeavour.[2] Since the end of the nineties, the L&F literature has opened the way to the quantitative analysis of differences among national legal systems. Its most interesting (and controversial) claim is that such differences can be traced back to the distinction between common law and civil law. Moreover, the influence of common law is generally associated with better economic outcomes. The empirical results of the L&F literature laid the ground for the wider theoretical framework of the New Comparative Economics,[3] which in turn provided the scientific background for one of the most successful World Bank initiatives, the DB project. Because of the purposeful attempt to use legal variables which draw on comparative law studies, L&F and DB are the best examples to explain the strengths and weaknesses of synthetic indicators. In subsections 2.1 and 2.2 I describe both approaches and the criticisms they attracted. I then turn to the description of indicators of regulatory quality for the energy sector (subsection 2.3). The aim is to assess whether in the latter case, too, the methodology for empirical measurement is liable to the same criticisms levelled at L&F and DB.

2.1 THE QUALITY OF INSTITUTIONS IN LAW AND FINANCE

The empirical methodology of the L&F literature started from the idea that legal rules affecting financial development can be collected for a large

[2] For critical reviews see M.M. Shirley, *Institutions and Development*, chapter 5 /2008); A. Williams and A. Siddique, *The Use (and Abuse) of Governance Indicators in Economics: A Review*, in Econ. of Governance, 131 (9, 2008); S. Haggard et al., *The Rule of Law and Economic Development*, in Ann. Rev. Pol. Sc., 205 (11, 2008).

[3] S. Djankov, *The New Comparative Economics*, in J. Comp. Econ., 595 (31, 2003).

number of countries. This information is then used to measure the differences among countries, for example from the point of view of the strength of investor protection. Econometric regressions show two broad patterns: first, the quality of legal rules affects financial development and, possibly, aggregate economic growth; second, financial development is correlated to the legal heritage of each country.[4]

In pursuing its own research agenda, the L&F literature chose to borrow from comparative law the distinction between common law and civil law for reasons entirely dependent on the needs of empirical analysis. The foremost problem to address was reverse causality or institutions' endogeneity: was financial development a consequence of high-quality institutions, or were the latter a consequence of financial development? The usual way empirical analysis solves this problem is through instrumental variables, that is factors or events which affect the dependent variables only through the independent variables.[5] According to the original papers in the L&F approach, the interesting aspect of legal families is that their dominant features were transplanted in most of the world through conquer or colonization. Because of this involuntary character, they could be considered an exogenous constraint not directly affected by economic development. Hence, legal families are used as instrumental variables to establish the direction of causality from the institutional context to economic outcomes. The opposite direction, from economic to institutional development, is less probable once we account for the lasting influence of common law or civil law.

The scholarly debate prompted by the L&F approach greatly contributed to the development of an empirical literature with a comparative flavour. Criticisms of L&F can be grouped under two headings: a) doubts on the quality of the legal materials employed to build the indices; b) doubts on the causal inferences which can be drawn from the empirical analyses of the L&F literature.

As far as the quality of legal materials is concerned, it is clear that few comparative legal scholars would agree with the stark dichotomy between a flexible common law and a rigid civil law so frequently employed by the L&F approach to explain the better economic performance of countries belonging

[4] R. La Porta et al., *Legal determinants of external finance*, in J. Fin., 1131 (52, 1997); R. La Porta et al., *Law and finance*, in J. Pol. Econ., 1113 (106, 1998); R. La Porta et al., *The Quality of Government*, in J. L. Econ. & Org., 222 (15, 1999).

[5] For an introductory discussion of instrumental variables see R.M. Lawless et al., *Empirical Methods in Law*, 357-361 (1st ed. 2010).

to the Anglo-American legal tradition. In searching for a way to overcome the endogeneity problem, the L&F approach came upon the traditional classification of legal families. However, it put such a classification to an entirely different use, and one for which it was not suited. Legal families have never been much more than a taxonomic exercise. Their descriptive character prevents any attempt to draw major theoretical implications on the direction and intensity that the influence stemming from the peculiar traits of each family might have on the wider economic and social structures. Moreover, no legal family displays uniform characteristics across the different branches of a legal system. Even within the same branch, it is not uncommon to observe that the relevance of factors generally associated with a legal family (e.g. the role of judges) increases or decreases in different historic periods.[6] For these reasons alone, the attempt to find out a causal mechanism linking legal heritage to economic performance seems to rely on a shaky ground.

To be sure, the L&F approach cannot be blamed neither for believing that legal families are important, nor for borrowing freely from comparative law studies. The common law-civil law distinction has been much emphasized by traditional comparative law textbooks. Unfortunately, it is not accompanied by a clear indication of its purposes and limits.[7] Most importantly, it is not explicitly stated that the whole classificatory exercise based on the concept of legal family provided the starting point for understanding similarities and differences, but at the price of omitting much empirical detail.[8]

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[6] For a critical discussion of the use of legal families by L&F see R. Michaels, *Comparative Law by Numbers? Legal Origins Thesis, Doing Business Reports, and the Silence of Traditional Comparative Law*, in Am. J. Comp. L., 765, 780-783 (57, 2009). Overviews of the debate on the meaning and scope of legal families are provided by J. Husa, *Legal Families*, in J. Smits (ed.), *Elgar Encyclopedia of Comparative Law*, 382, 389 (1st ed. 2006) (the taxonomy did not generate empirical knowledge); H.P. Glenn, *Comparative Legal Families and Comparative Legal Traditions*, in M. Reimann and R. Zimmermann (eds.), *The Oxford Handbook of Comparative Law*, 437 ff. (1st ed. 2006) (failure of the taxonomic exercise to provide meaningful descriptions of complex normative phenomena); W. Twining, *General Jurisprudence* 76-77 (1t. ed. 2009) (notion of legal families lacks an organizing concept and downplays the importance of history).

[7] See J.Q. Whitman, *Consumerism Versus Producerism: A Study in Comparative Law*, in Yale L. J., 340, 351-352 (117, 2007) (the classifications employed in the comparative law literature cannot provide answers to the policy questions posed by economics, sociology and political science).

[8] See N. Jansen, *Comparative Law and Comparative Knowledge*, in Reimann and Zimmermann, above note 6, 315-318 (analogizing legal families to Weberian ideal types). As observed by

No less problematic for the L&F approach is the fact that many coding mistakes were found in the original versions of the indices. There were ambiguities in index components definitions and inconsistencies in coding across countries. Moreover, data were collected from secondary sources without the involvement of lawyers. New and more accurate indices, with detailed coding protocols and questionnaires compiled by local lawyers, have been proposed. In no case they confirm a strong correlation between legal families and the quality of rules. Moreover, they point to the many problems which the L&F approach has overlooked: how to take into account the distinction between mandatory and default rules, how to avoid the oversimplification of binary variables, how to include in the index the situations in which the law is uncertain or indeterminate legal concepts like fiduciary duties should be applied.[9]

From the point of view of the description of causal mechanisms, the attempt of L&F to link legal origins, financial development and economic growth does not seem to be supported by available evidence. For example, it has been suggested that colonial policy, human capital and geography are better predictors of growth than legal origin.[10] Alternatively, political economy and the willingness of governments to protect investors have been shown to be much more relevant than legal origin for the development of financial markets.[11]

G. Goertz, *Social Science Concepts: A User's Guide*, 83 (1st ed. 2006), "the principle meaning of ideal type is that the concept has zero extension" and "it never or rarely can be found in practice."

[9] See H. Spamann, *The "Antidirector Rights Index" Revisited*, in Rev. Fin. Stud. 467 (23, 2010); id., *Legal Origin, Civil Procedure, and the Quality of Contract Enforcement*, in J. Inst. & Theor. Econ., 149 (166, 2010); J. Armour et al., *How Do Legal Rules Evolve? Evidence from a Cross-Country Comparison of Shareholder, Creditor, and Worker Protection*, in Am. J. Comp. L., 579 (57, 2009); J. Armour et al., *Law and Financial Development: What We Are Learning from Time-Series Evidence*, in BYU. L. Rev., 1435 (2009); M. Siems and S. Deakin, *Comparative Law and Finance: Past, Present, and Future Research*, in J. Inst. Theor. Econ., 120 (166, 2010).

[10] See D. Klerman et al., *Legal Origin and Economic Growth*, Working Paper, 30 April 2009, available at http://lawweb.usc.edu/contact/contactInfo.cfm?detailID=227. An econometric comparison of mechanisms for institutional development shows that Western European influence is more relevant than legal origins: see G. Hansson, *What Determines Rule of Law? An Empirical Investigation of Rival Models*, in Kyklos, 371 (62, 2009).

[11] See M.J. Roe, *Legal Origins, Politics, and Modern Stock Markets*, in Harv. L. Rev., 460 (120, 2006); M.J. Roe and J.I. Siegel, *Finance and Politics: A Review Essay Based on Kenneth Dam's Analysis of Legal Traditions in the Law-Growth Nexus*, in J. Econ. Lit., 781 (47, 2009); U. Malmendier, *Law and Finance "at the Origin"*, in J. Econ. Lit., 1076 (47, 2009).

Even more important is the fact that L&F does not provide a plausible explanation of the process leading to legal transplants and of their consequences. It has been argued that the success of a transplant depends on its adaptation to local conditions and on familiarity of the population with the transplanted law. When both conditions are present there will be a strong public demand for institutions enforcing such law. Conversely, when both conditions are lacking there will be a weak demand and the transplanted legal order will function less effectively. Statistical evidence supports the view that the transplanting process is more relevant than the specific legal family being transplanted.[12] If one shares the view, commonly held in comparative law studies, that transplants are the most frequent source of legal change, L&F reliance on the static concept of legal families prevents it from investigating the dynamics of such a process.

Over time, the L&F literature has progressively modified or refined its early positions. The indices proposed in the pioneering articles have been abandoned and replaced. The new indices include more accurate legal data provided by law firms located in the countries included in the sample.[13] The concept of legal family is no longer considered a valid instrumental variable because improvements in the quality of rules might be due to market development and not to legal origins. Still, it is maintained that legal origins are an exogenous constraint which clearly affects economic outcomes. Moreover, the comparative law concept of legal family is replaced with the idea that legal origins are associated with a style of social control of economic life, more supportive of markets in common law countries and of state regulation in civil law countries. However, neither superiority of one style over

[12] D. Berkowitz et al., *The Transplant Effect*, in Am. J. Comp. L., 163 (51, 2003). H. Spamann, *Contemporary Legal Transplants – Legal Families and the Diffusion of (Corporate) Law*, in BYU L. Rev., 1813 (2009) provides preliminary empirical evidence that transplants usually happen from core to periphery countries along family lines. This means that legal policies are not influenced by intrinsic differences between common law and civil law, but by a host of factors easing access to legal materials from countries belonging to the same family. For a different view see J.M. Ramseyer, *Mixing-and-Matching Across (Legal) Family Lines*, in BYU L. Rev., 1701 (2009) (countries do borrow from different legal families, hence family membership cannot affect economic outcomes).

[13] See, e.g., S. Djankov et al., *The Law and Economics of Self-Dealing*, in J. Fin. Econ., 430 (88, 2008). For criticisms of the coding choices in the new index see Spamann, *The "Antidirector Rights Index"*, above note 9, 474-477.

the other in all circumstances, nor exclusive recourse to only one style in each country, is hypothesized.[14]

Even with these revisions, the L&F approach displays many weaknesses. Two are most relevant for the purposes of this paper. Firstly, it is not clear how demonstrating the relevance of legal origins could help design better institutions. Although L&F says that each country should find the institutions compatible with its level of economic development and legal tradition,[15] this general statement is not very useful for legislators and regulators grappling with the details of complex legal problems. A related point is that the search for perfectly exogenous factors capable of explaining all the variation in world's legal systems has been unfruitful so far and distracted the attention from more productive efforts on specific institutional problems.[16]

Secondly, L&F misses the relevance of important phenomena like institutional complementarities, functional equivalence and disharmony among legal formants. Institutional complementarities explain why institutions are usually interlinked and cannot be studied in isolation. If the impact of each institution on economic outcomes is determined by the type of relationship among them, indices focusing only on some aspects of the legal environment overlook its real dynamics.[17] Functional equivalence is well documented in

[14] See R. La Porta et al., *The Economic Consequences of Legal Origins*, in J. Econ. Lit., 285 (46, 2008). If styles of legal intervention can be modified over time or across sectors, legal origins should be less binding than assumed by L&F: for discussions of this point see C.A. Whytock, *Legal Origins, Functionalism, and the Future of Comparative Law*, in BYU L. Rev. 1879, 1902 f. (2009); K. Pistor, *Rethinking the "Law and Finance" Paradigm*, in BYU L. Rev. 1647, 1654-1656 (2009).

[15] See Djankov et al., *The New Comparative Economics*, above note 3, 614 f.; La Porta et al., *The Economic Consequences*, above note 14, 323-326.

[16] A. Dixit, *Evaluating Recipes for Economic Success*, in The World Bank Res. Obs. 131, 137 (22, 2007), put it bluntly in a discussion of econometric models which try to explain economic growth: "Whether geography or history have a direct effect or an effect through institutions, the recommendation to change one's geography or history is useless. We have to forget about history and geography and try to affect the relevant institutions directly". M.J. Trebilcock and R.J. Daniels, *Rule of Law Reform and Development*, 10 (1st ed. 2008) observe that data employed in cross-country statistical studies are too coarse-grained to provide meaningful explanations of the causal relationship between specific design features of institutions and economic development. See also D.C. North et al., *Violence and Social Orders*, 12 (1st ed. 2009) observing that "quantitative social scientists have been persistently frustrated in their attempts to identify causal forces at work in the midst of a sea of contemporaneous correlation".

[17] On complementarities in the socio-legal literature see B. Ahlering and S. Deakin, *Labour Regulation, Corporate Governance and Legal Origin: A Case of Institutional Complementarities?*, in

comparative law studies: it can explain why different countries are able to obtain much the same outcome even when they adopt different rules. Hence, attempts to measure the quality of law should try to understand why and when institutional solutions diverge and what this phenomenon entails from the point of view of economic agents. Finally, legal formants are the elements which contribute to the production of rules in every legal system, including scholarly and judicial opinions, legislative or declamatory statements. Comparative law shows that there are often many divergent legal formants for a specific legal problem. They are all capable of exerting their influence on the actual legal outcome, usually compete to prevail over other formants and none of them can be dismissed as irrelevant. Additionally, they can vary independently from one another because of borrowing from foreign models.[18] Current indicators of institutional quality assume there is a single applicable rule and cannot capture the effects stemming from the multiplicity of legal formants.

Despite its many shortcomings, the debate on the L&F approach has also led to more constructive developments. Comparative legal scholars were forced to abandon their traditional suspicion towards empirical methodology and to propose more reliable institutional indicators.[19] Still, L&F was able to

Law and Society Rev., 865 (41, 2007) (arguing that complementarities across the linked domains of labour regulation and corporate governance provide better explanations of the divergences between legal families); R.V. Aguilera and C.A. Williams, *"Law and Finance": Inaccurate, Incomplete, and Important*, in BYU L. Rev., 1413 (2009) (suggesting that standard linear models do not consider complementarities among legal and non-legal factors). In the economic literature see M. Aoki, *Institutions as Mediating the Cognitive and Physical Aspects of Social Dynamics*, Working Paper, 2009, available at www.ssrn.com , 18-19 (strategic complementarities, and not legal origin, explain the path dependent evolution of legal culture).

[18] See generally R. Sacco, *Legal Formants: A Dynamic Approach to Comparative Law*, in Am. J. Comp. L., 1, 21-34, 394-397 (39, 1991); P.G. Monateri and R. Sacco, *Legal Formants*, in P. Newman (ed.), *The New Palgrave Dictionary of Economics and the Law*, II, 531 (1st ed. 1998); P.G. Monateri, *Legal and Competitive Models: Understanding Comparative Law from Legal Process to Critique in Cross-System Legal Analysis*, Working Paper, December 2008, available at www.ssrn.com .

[19] See references in note 9 above, as well as S. Voigt, *How (Not) to Measure Institutions*, Working Paper, 2009, available at www.ssrn.com . Suspicion is still visible in some quarters: see, e.g., Jansen, *Comparative Law*, above note 8, 331f. (listing the problems of empirical studies in social sciences), 337 (denying that comparison "reveals one legal rule or doctrine to be superior to others"). Familiarity with empirical methodology is more widespread in socio-legal studies: see, e.g., A. Riles, *Comparative Law and Socio-Legal Studies*, in Reimann and Zimmermann, above note 6, 801f. (arguing in favour of different mixes of theoretically

preserve its appeal in many circles. Despite the above mentioned criticisms, its theoretical approach was transformed in a worldwide program of law reform.

2.2 THE WORLD BANK DOING BUSINESS PROGRAM

Starting from 2004, the DB project reports annually on national improvements of regulatory indicators affecting the main stages of the life of a small/medium-size business. Information for the indicators comes from two sources: readings of laws and regulations by the DB team and surveys of national experts. Each indicator is given a score measuring the extent to which it reduces costs, encourages entrepreneurship and simplifies the regulatory context. Those same scores are then used to rank the countries by each indicator and by an aggregate indicator on the ease of doing business. To allow international benchmarking, the impact of regulation is measured with reference to standardized case scenarios, which purport to describe a situation where the rules at issue usually apply.

Widely heralded as one of the most successful World Bank projects, DB has progressively extended its geographical reach (from 133 to 183 countries in 2010) and the number of indicators (from 5 to 10). The methodology employed to build the indicators has been refined, too. The case scenarios have been modified to increase their representativeness. Most importantly, the latest annual reports contain a more nuanced assessment of the goals of the project and a more careful description of its coverage. In 2004 the first DB report boldly claimed that legal origin is an important explanatory variable, with common law countries regulating the least and countries influenced by the French tradition the most. Additionally, in many cases the same reforms were advocated for developed and developing countries, thus defying the saying that one size does not fit all.[20] Both views are absent in the 2009 report. In their place, it is stated that DB "does not measure all aspects of the business environment that matter to firms or investors", that "any benchmarking … is necessarily partial", and that "(j)udgment is required in interpreting these measures for any economy and in determining a sensible and politically feasible path for reform".[21]

informed and empirically grounded scholarship); Twining, *General Jurisprudence*, above note 6, 225-264 (discussing the problems of an empirical science of law, but arguing that empirically-oriented comparative legal studies are central to understanding legal phenomena).

[20] World Bank, Doing Business 2004, xiv, xvi .

[21] World Bank, Doing Business 2009, v, vii .

Many factors prompted this change of perspective. The scholarly debate that followed the publication of the annual reports was often critical of the most sweeping claims on the relationship between regulation and economic outcomes. Moreover, we have already seen in subsection 2.1 that the theoretical background of L&F, which provided the starting point for the DB project, undertook similar modifications. Finally, the policies recommended by the DB project raised concerns within the World Bank and an internal evaluation report recommended important modifications.

As far as the scholarly debate is concerned, some comparative legal scholars pointed out that the legal data collected by the DB team were unreliable and adopted a very dismissive stance toward attempts to measure the quality of institutions.[22] Although no one denies explicitly the legitimacy of empirical inquiries on the regulatory environment, many scholars took issue with specific aspects of the DB methodology for ranking countries. The idea of adopting representative cases was found deficient in a number of respects. It is not clear to what extent the answers provided by local lawyers reflect a reliable assessment of the legal procedures available in each country, how the familiar problems associated with legal translation and home-country bias are managed, whether sound generalizations on the overall quality of a legal system can be drawn from specific cases, whether the DB indicators include the most significant portions of the regulatory environment or leave aside complementary institutions like criminal law or industry-specific regulations, how the empirical methodology distinguishes between the influence of legal and nonlegal factors, whether effective implementation and enforcement, as opposed to formal laws, are taken into account, why the influence of EU law and international conventions in the field of cross-border trade is not readily apparent.[23]

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[22] See, e.g., Association Henri Capitant, *Les droits de tradition civiliste en question. A propos des rapports Doing Business*, I, (1st ed. 2006). For assessment of this reaction see B. Fauvarque-Cosson and A.-J. Kerhuel, *Is Law an Economic Contest? French Reactions to the Doing Business World Bank Report and the Economic Analysis of the Law*, in Am. J. Comp. L., 811 (57, 2009); C. Valcke, *The French Response to the World Bank's Doing Business Reports*, in U. Toronto L.J., 197 (60, 2010).

[23] See M.-A. Frison Roche, *L'Idée de Mesurer l'Efficacité économique du Droit*, in G. Canivet (ed.), *Mesurer l'Efficacité Économique du Droit*, 19-32 (1st ed. 2005); B. Du Marais, *Les Limites Méthodologiques des Rapports "Doing Business"*, in B. Du Marais (ed.), *Des Indicateurs pour Mesurer le Droit ?*, 17-68 (1st ed. 2006); K.E. Davis and M.B. Kruse, *Taking the Measure of Law: The Case of the Doing Business Project*, in L. & Soc. Inquiry, 1095 (32, 2007); C. Ménard and B. Du Marais, *Can We Rank Legal Systems According to Their Economic Efficiency?*, in Wash. U. J. L. &

On a more general level, it has been observed that the DB project is grounded on a misleading view of the role of legal institutions. Completely overlooked is the fact that some legal formalities do not exist exclusively for rent-seeking reasons, but because they provide valuable services for both the private and public sectors. This is the case, for example, of registers of property rights, whose task is to reduce the transaction costs of future exchanges.[24]

The internal evaluation of the World Bank contains many observations which echo the criticisms raised in the scholarly debate. It is claimed that the DB reports do not consider many variables with a significant impact on business life and investment climate. Moreover, the indicators cannot take into account national specificities and do not provide a clear guide on reform priorities. Finally, the internal evaluation shows that the data collected do not lend support to the hypothesis that legal origins are always more important for economic development than each country's public policies.[25]

Several lessons can be drawn from the World Bank's attempt to employ the L&F approach as the scientific basis for a wide program of law reform. Firstly, the internal dynamics of the World Bank explain why, apart from its theoretical soundness, the L&F approach was sponsored as the best empirical methodology for analyzing institutions. In the late '90s the failure of the Washington Consensus, aimed at transferring western-style institutions in less developed countries, was already apparent.[26] The L&F approach was a ready-to-hand solution which allowed the World Bank to keep pursuing its law

Pol., 55 (26, 2008); Shirley, *Institutions and Development*, above note 2, 91-92; Michaels, *Comparative Law by Number?*, above note 6, 771-775; S. Benedettini and A. Nicita, *Towards the Economics of Comparative Law: The 'Doing Business' Debate*, in Comparative L. Rev., 1 (1, 2010). Other problems with statistical correlations between the DB indicators and measures of economic development are pointed out by D. Blanchet, *Analyses Exploratoires des Indices Proposés par les Rapports Doing Business 2005 et 2006 de la Banque Mondiale*, in Du Marais, cited above, 83-98; B. Høyland et al., *The Tyranny of International Index Rankings*, Working Paper, July 2009, available at http://folk.uio.no/bjornkho/projects.htm .

[24] See B. Arruñada, *Pitfalls to Avoid When Measuring Institutions: Is Doing Business Damaging Business?*, in J. Comp. Econ., 729 (35, 2007). For a similar position on the role of courts see G. Wagner, *Legal Origin, Civil Procedure, and the Quality of Contract Enforcement: Comment*, in J. Inst. & Theor. Econ., 171 (166, 2010).

[25] Independent Evaluation Group, *Doing Business: une évaluation indépendante*, The World Bank, 2008, available at www.worldbank.org/oed/ .

[26] See D. Rodrik, *One Economics, Many Recipes*, 153-183 (1st ed. 2007). For an autobiographical reflection on the meaning of the Washington Consensus see J. Williamson, *A Short History of the Washington Consensus*, in L. & Bus. Rev. Am., 7 (15, 2009).

reform agenda, but without a sharp break with its past programs. Moreover, the DB project could be entirely managed by economists within the World Bank and did not require the involvement of the legal department.[27]

Secondly, the legal literature has been unable to provide alternative methodologies to assess the impact of institutions and to suggest which package of legal reforms should be implemented in less developed countries.[28] While the insights that legal knowledge is context-dependent and local conditions matter a lot are useful at a general level, they do not provide the kind of information which is needed to support the action of organisations like the World Bank. This is not to say that the DB project is the only avenue worth following. Even within the World Bank there are alternative programs which, although not directly appealing to comparative law studies, try to address some of the shortcomings of existing institutional indicators.[29] However, it seems clear that a new interdisciplinary dialogue is needed before

[27] In recollecting the history of research at the World Bank, J.-J. Dethier, *World Bank Policy Research: A Historical Overview*, World Bank Policy Research Paper, No. 5000, July 2009, says that interdisciplinary openings were made towards political science, sociology and psychology, but never mentions legal studies. There also seems to be an internal competition between the DB project and the program on Governance Indicators: see D. Kaufman et al., *Measuring Governance Using Cross-Country Perception Data*, World Bank Working Paper, August 2005 (observing that DB indicators only account for rules on the books and not de facto outcomes). Governance indicators are not without their own critics: see M.J. Kurtz and A. Schrank, *Growth and Governance: Models, Measures, and Mechanisms*, in J. Politics, 538 (69, 2007); D. Kaufmann et al., *Growth and Governance: A Reply*, ibid., 555. For an explanation of how economists managed to take the lead on governance issues within the World Bank see J. Faundez, *Rule of Law or Washington Consensus: The Evolution of World Bank's Approach to Legal and Judicial Reform*, in A. Perry-Kessaris (ed.), *Law in the Pursuit of Development*, 180 (1st ed. 2010).

[28] See K.E. Davis and M.J. Trebilcock, *The Relationship Between Law and Development: Optimists versus Skeptics*, in Am. J. Comp. L., 895, 898 (56, 2008) (arguing that "the legal academy's failure to resolve uncertainty about the validity of basic assumptions underlying efforts to promote legal reform is unsettling"). On the lack of communication between comparative law and the goal of economic development see H. Muir Watt, *Comparer l'efficience des droits ?*, in P. Legrand (ed.), *Comparer Les Droits, Résolument*, 433, 440-447 (1st ed. 2009).

[29] See, e.g., World Bank, *Tools for Institutional, Political and Social Analysis of Policy Reform*, (1st ed. 2007) (explicitly referring to the need of analysing the institutional context to assess the impact of policy reforms); V. Fritz e al., *Problem-Driven Governance and Political Economy Analysis*, The World Bank, September 2009 (relying on political science to build a framework aimed at exploring governance problems, with explicit reference (p. 24f.) to the need for comparative studies). For references to World Bank's alternative approaches to institutional analysis in the energy sector see section 2.3.

those programs can be improved with legal knowledge provided by comparative legal scholars.

The next subsection explains why institutional indicators designed for the energy sector fare no better than those proposed by L&F and DB.

2.3 INDICATORS OF REGULATORY QUALITY IN THE ENERGY SECTOR

The relationship between institutional context and performance of energy markets has been widely debated in the last decades. Since the '80s a large number of countries has decided to abandon the old model of vertically-integrated monopolies and to inject competition in the generation and supply segments.[30] While the move towards energy markets is the common denominator of these liberalization/restructuring programs, there are many important differences in their implementation. Moreover, the goal of promoting competition had to be balanced with two other policy goals, namely security and environmental sustainability of national energy systems. Not surprisingly, the large scale of the reforms, the long time span needed to complete the whole process and the multiple goals to be achieved have made it difficult to assess the benefits and costs of the transition from monopoly to competition. However, it is clear that the evaluation of the reform process in the energy sector rises the same problems already discussed with reference to the nexus between law and economic growth. More specifically, the energy sector is heavily regulated because of its economic characteristics and of technological constraints. Hence, it is plausible to assume a strong correlation between the institutional framework and the performance of energy markets. Though, this is just the beginning of the analysis. The next questions are: what kind of rules and institutions are needed to ensure that the three goals of competition, security and environmental sustainability can be achieved? Should each country or region make the same institutional choices for the same problems? Or does the local context exert a decisive influence? On these crucial issues, empirical analyses face a daunting task because of the uncertainty surrounding the definition of relevant variables and the large number of potentially relevant explanatory factors. In what follows, I describe the main attempts to collect data on energy regulatory systems and to assess their quality. The general trend is towards increasingly sophisticated

[30] The most important experiences are discussed in F.P. Sioshansi and W. Pfaffenberger (eds.), *Electricity Market Reform: An International Perspective* (1st ed. 2006); F.P. Sioshansi (ed.), *Competitive Electricity Markets: Design, Implementation, Performance* (1st ed. 2008).

institutional indicators.[31] However, many of the weaknesses already pointed out in the previous sections can be observed in sector-specific studies.

I begin with World Bank studies. Early attempts at measuring the quality of energy regulatory systems were made in the first half of the 2000s.[32] However, they employed a limited amount of institutional information and were not able to design reliable proxies for the impact of regulatory performance.

A significant advancement are the studies which try to benchmark the quality of regulatory governance in the electricity sector of Latin American and Caribbean Countries.[33] The aim of these studies is to describe the

[31] On the EU side the interest in regulatory indicators is connected to the implementation of the new directives enacted in 2009. See, e.g., K. Neuhoff, *Implementing the EU Renewables Directive*, EPRG Working Paper 0908, March 2009, who suggests that quantitative policy indicators might contribute to effective implementation, enhance accountability and facilitate private investments. In 2010 the Commission asked for studies on the comparative legal analysis of national measures implementing dir. 2009/28/EC. According to the invitation to tender No. ENER/C1/181-2009 and the attached specifications, p. 3, the goal is "to obtain a comparative study of the present situation and the future plans, description of the regulatory framework and identification of best practices and recommendations regarding grid and market integration of electricity from renewable sources". According to the invitation to tender No. ENER/C1/504-2009, p. 4, the legal analysis of the national implementing measures should assess "their quality in terms of creating a solid, coherent and effective regulatory framework …". The interesting question is whether comparative law can offer suggestions on how to carry out a study involving a large number of countries (the 27 MSs) and a qualitative assessment of their regulatory framework.

[32] P. Domah et al., Modelling the Costs of Energy Regulation: Evidence of Human Resource Constraints in Developing Countries, University of Cambridge, DAE Working Paper No. 0229, October 2002, updated by M.G. Pollitt and J. Stern, Human Resource Constraints for Electricity Regulation in Developing Countries: Has Anything Changed?, EPRG Working Paper 0910, March 2009; T. Jamasb et al., Electricity Sector Reform in Developing Countries: A Survey of Empirical Evidence on Determinants and Performance, Cambridge Working Papers in Economics No. 0439, July 2004; J. Cubbin and J. Stern, The Impact of Regulatory Governance and Privatization on Electricity Industry Generation Capacity in Developing Economies, in World Bank Econ. Rev. 115 (20, 2006); T. Jamasb et al., Core Indicators for Determinants and Performance of Electricity Sector in Developing Countries, in Int. J. Reg. and Gov. 43 (6, 2006). See also Y.-F. Zhang et al., Electricity Sector Reform in Developing Countries: An Econometric Assessment of the Effects of Privatization, Competition and Regulation, in J. Reg. Econ., 159 (33, 2008).

[33] See L. Andres et al., *Assessing the Governance of Electricity and Regulatory Agencies in the Latin American and Caribbean Region: A Benchmarking Analysis*, World Bank Policy Research

institutional conditions leading to good regulation. Four variables are considered: autonomy, transparency, accountability, tools and capacities. Each of them is composed of several elements, reflecting the different aspects which affect the quality of the institutional context. Data are collected through questionnaires sent to national regulators. Benchmarking is accomplished both with an Electricity Regulatory Governance Index (ERGI), which aggregates all the four variables, and at the level of each variable. The nineteen countries included in the sample are then ranked according to the scores they obtain for each index. This analysis allows the researchers to find out overall patterns of regulatory governance in the region. Moreover, the indices are employed to run econometric regressions which show significant statistical correlations between the quality of regulatory governance and utilities' performance.

Three main criticisms can be raised against these studies. Firstly, there is no independent check on the quality of legal data supplied by national regulators.[34] Secondly, the quality of regulatory governance is measured from the point of view of the US model of independent regulatory commission. This choice is justified by the observation that most countries in the sample followed that model. Hence, countries which did not embrace that model obtain lower scores in the indices. The studies come to the conclusion that there is a bad performance on many aspects of regulatory governance. Comparative law methodology suggests several reasons why this approach is

Working Paper, No, 4380, November 2007; L. Andres et al., *Regulatory Governance and Sector Performance: Methodology and Evaluation for Electricity Distribution in Latin America*, World Bank Policy Research Working Paper, No. 4494, January 2008; L. Andres et al., *Regulatory Governance and Sector Performance: Methodology and Evaluation for Electricity Distribution in Latin America*, in C. Ménard and C. Ghertman (eds.), *Regulation, Deregulation, Reregulation: Institutional Perspectives*, 111 (1st ed. 2009). Within the DB project, a new pilot indicator describing the procedures a business must go through to obtain an electricity connection has been proposed in 2010. However, it only refers to a small part of the electricity service and does not allow an overall assessment of the regulatory system.

[34] Interestingly, another project on electricity indicators followed a different track. In S. Dixit et al., *The Electricity Governance Toolkit*, June 2007 (available at http://electricitygovernance.wri.org), the assessment of decision-making processes in the national electricity sectors is accomplished with qualitative research questions on good governance answered by national inter-disciplinary teams. The teams are supported by an advisory panel which includes government officials, sector experts and academics. Analytical explanations for each indicator are required. However, it is explicitly stated that the toolkit cannot be used for cross-country comparison because of vast differences in social and political traditions and norms.

not to be recommended. Electing a specific national model as the benchmark for the analysis could prevent the researchers from exploring the many different alternatives which are available to address the same regulatory problem. Moreover, even the decision of a country to create an independent regulatory authority cannot be interpreted as a clear choice to embrace all the aspects of the US model. Much will depend on the role that institution will play in the interactions with the legislative, the executive and the judicial powers. In other words, imitation of institutional models usually prompts a whole set of reactions which should be carefully analyzed without assuming that a large distance from the model implies a negative performance.[35] Andres and his colleagues also hint at the possibility that the Anglo-Saxon countries of the Caribbean were more receptive to the US model than the Latin American countries which adopted the more rigid and formalistic French administrative system. This comment is in line with the L&F approach, but we have already seen that it does not offer a convincing explanation of the dynamics of institutional transplantation and reception.

Thirdly, the questionnaires compiled by the national regulators touch upon many relevant legal issues, but it is not entirely clear according to which theoretical framework they should be evaluated. A case in point is the question on the extent of the judicial review of regulatory decisions. Andres and his colleagues assume that a more extensive judicial control improves the accountability of the regulator and affects positively the overall quality of regulatory governance. But this perspective sidesteps the long-standing debate on the optimal balance between the scope of judicial review and the degree of deference to be granted to regulators with greater expertise in a specific sector. Without a theory explaining when more or less control is justified, it is difficult to say whether the benefits of improved accountability outweigh the costs of restraints on the regulators' decision-making powers.[36]

[35] The legal formants approach (above note 18) suggests that imitation of the independent agency model could change the legislative formant, but not the doctrinal and the judicial formants. An additional caveat stems from the observation that in some cases the adoption of the US model of independent commission could be the result of pressures from international organizations or foreign investors. In this case, the real impact of the transplant is even more difficult to assess. See J.M. Miller, *A Typology of Legal Transplants: Using Sociology, Legal History and Argentine Examples to Explain the Transplant Process*, in Am. J. Comp. L., 839 (51, 2003); J. Ohnesorge, *Legal Origins and the Tasks of Corporate Law in Economic Development: A Preliminary Exploration*, in BYU L. Rev., 1619, 1621-1624 (2009).

[36] I discuss the effects of judicial and other forms of accountability in section 4.2.

Of course, the World Bank is not completely unaware of the methodological limitations of synthetic indicators. In subsection 2.2 I have already mentioned alternative projects which try to provide a more accurate description of institutional dynamics. With specific reference to infrastructure industries, a general framework for evaluating the quality of the regulatory system has been proposed.[37] The suggested methodology relies on structured case studies, whose main advantages over cross-country statistical analyses are said to lie in their ability to persuade national governments to adopt the recommended reforms and to see whether the formal legal requirements have been implemented. Three meta-principles (credibility, legitimacy and transparency) are the benchmarks for the evaluation. They are fleshed out with ten additional principles, representing general ideal attributes of a regulatory system, and with more detailed standards. The model is, again, the independent regulator, but there is an explicit acknowledgment that, in countries lacking the institutional capabilities and/or the political commitment to undertake reforms, the best strategy is a transitional arrangement which fits the local conditions and lays the ground for future developments. This approach has much to be recommended. As mentioned above, the main problem is how to bring comparative law knowledge to bear on the evaluation.

Projects for the evaluation of regulatory quality have been carried out within the OECD, too. A set of indicators has been elaborated which draws inspiration from the 2005 OECD Principles for Regulatory Quality and Performance and from the Principle Elements of Good Governance. They are intended to provide national governments with a diagnostic tool which helps to identify priority areas for improving regulatory governance systems. However, it is also explicitly stated that the indicators should be complemented with the more detailed qualitative data included in the country reviews.[38] With specific reference to the energy sector, the OECD International Regulation Database includes indicators measuring the barriers to entrepreneurship and the restrictions to competition in the electricity and

[37] See A. Brown et al., *Handbook for Evaluating Infrastructure Reform*, The World Bank, 2006.
[38] See S. Jacobzone et al., *Indicators of Regulatory Management Systems*, OECD Working Papers on Public Governance, 2007/4; OECD, Indicators of Regulatory Management Systems 2008, 2009.

gas markets.[39] However, they only provide a limited amount of information on the overall structure of national regulatory systems.

Efforts by international organizations to design indicators of regulatory quality can be contrasted with empirical studies in the political science literature. At least two strands of literature are relevant here. The first one focuses on the characteristics of regulators: their degree of independence,[40] the differences in the organisation and powers of sector regulators,[41] the process of diffusion of independent regulators across countries and sectors.[42] The

[39] The database is available at www.oecd.org/eco/pmr . For a description of the methodology see P. Conway and G. Nicoletti, *Product Market Regulation in the Non-manufacturing Sectors of OECD Countries: Measurement and Highlights*, OECD Economics Dep. Working Papers No. 530, December 2006; G. Nicoletti and F.L. Pryor, *Subjective and Objective Measures of Governmental Regulations in OECD Countries*, in J. Econ. Behav. & Org. 433 (59, 2006).

[40] See, e.g., F. Gilardi, *Delegation in the Regulatory State: Independent Regulatory Agencies in Western Europe* (1st ed. 2008); F. Gilardi and M. Maggetti, *The Independence of Regulatory Authorities*, forthcoming in D. Levi-Faur (ed.), *Handbook of Regulation* (1st ed. 2010); C. Hanretty and C. Koop, *Measuring Regulators' Statutory Independence*, Working Paper, July 17, 2009 available at www.ssrn.com .

[41] See generally T. Christensen and P. Lægreid, *Agencification and Regulatory Reforms*, in T. Christensen and P. Lægreid (eds.), *Autonomy and Regulation: Coping with Agencies in the Modern State*, 8 (1st ed. 2006), for a survey of approaches to the study of agencies. With specific reference to the energy sector see IEA, *Regulatory Institutions in Liberalized Electricity Markets* (1st ed. 2001); A. Larsen et al., *Independent Regulatory Authorities in European Electricity Markets*, in Energy Pol., 2858 (34, 2006); L.H. Pedersen, *Transfer and Transformation in Processes of Europeanization*, in Eur. J. Pol. Res., 985 (45, 2006). For more qualitative comparisons see C. Genoud and M. Finger, *Electricity Regulation in Europe*, in D. Finon and A. Midttun (eds.), *Reshaping of European Electricity and Gas Industry: Regulation, Markets and Business Strategies*, BI Norwegian School of Management, Oslo, Research Report 2/2004, 37-71; S. Bulmer et al., *Policy Transfer in European Union Governance: Regulating the Utilities* (1st ed. 2007). Benchmarking exercises are also conducted on specific topics, for example the level of consumer protection in energy markets: see, e.g., the Consumers Markets Scoreboard published annually by the European Commission, DG Sanco, and M. Harker et al., *Benchmarking the Performance of the UK Framework Supporting Consumer Empowerment Through Comparison Against Relevant International Comparator Countries*, ESRC Centre for Competition Policy, University of West Anglia, Norwich, August 2008 (available at http://www.uea.ac.uk/ccp?id=welcome).

[42] See, e.g., F. Gilardi et al., *Regulation in the Age of Globalization: The Diffusion of Regulatory Agencies Across Europe and Latin America*, in G. Hodge (ed.), *Privatisation and Market Development: Global Movements in Public Policy Ideas*, 127 (1st ed. 2006); J. Jordana et al., *The Global Diffusion of Regulatory Agencies: Channels of Transfer and Stages of Diffusion*, forthcoming Comparative Political Studies (2011).

second strand deals with the policy of better regulation. It is often identified with the adoption of procedures for Regulatory Impact Assessment (RIA), but in other cases this topic includes a more extended analysis of the quality of regulatory processes.[43]

The contributions from the political science literature share with comparative law studies the view that national traditions matter, local contexts shape the activities of regulators and imitations of models often produce superficial convergence. Hence, both scholarships raise doubts on the practice to benchmark regulatory systems against an ideal model (usually the American one). However, political science studies do not aim at providing a detailed description of legal culture and do not try to assess its influence on regulatory decision-making. This means that some important institutional details could me missed. Insofar as regulators frame policy issues according to the legal concepts and legal language prevailing in a given country or region, studies focusing exclusively on political factors will offer partial explanations.[44] The approach that will be proposed in the following section tries to foster the interdisciplinary dialogue between political scientists and comparative legal scholars interested in regulation.

3. COMPARING DECISION-MAKING PROCESSES

The preceding section has shown that synthetic indicators of institutional quality fail under a number of respects. They omit many relevant aspects of the legal landscape, rely on theoretically unsound hypotheses about the relationship between law and economic performance, do not take into account the variety of channels and mechanisms which prompt legal change. At the same time, it is also clear that comparative law studies did not offer the kind of knowledge which could have helped to devise better indicators. This

[43] See, e.g., S. Weatherill (ed.), *Better Regulation* (1st ed. 2007); C.M. Radaelli and F. De Francesco, *Regulatory Quality in Europe* (1st ed. 2007).

[44] The different approaches of political and legal scholarship are discussed by K.J. Alter et al., *Law, Political Science and EU Studies: An Interdisciplinary Project?*, in Eur. Union Pol., 113 (3, 2002); C. Engel and A. Héritier (eds.), *Linking Politics and Law* (1st ed. 2003); B. Friedman, *Taking Law Seriously*, in Persp. on Pol. Sc. 261 (4, 2006); M. Shapiro, *Law and Politics: The Problem of Boundaries*, in K. Whittington et al. (eds.), *Oxford Handbook of Law and Politics* 767 (1st ed. 2008). See also J.W. Cioffi, *Legal Regimes and Political Particularism: An Assessment of the "Legal Families" Theory from the Perspectives of Comparative Law and Political Economy*, in BYU. L. Rev. 1501, 1527 (2009) (observing that "political science as a field has largely marginalized the study of law to its own periphery").

unfortunate situation is partly due to well-known differences in scholarly approaches. Legal doctrine has often a normative focus and a descriptive approach to legal materials. Hence, economists or political scientists may not find in that type of legal literature the answers to the policy questions they are interested in. The lack of dialogue can also be explained by the persistence of classificatory traditions. The three most recent collective works on comparative law do not include any entry specifically dedicated to regulation or governance. Only one of them includes an entry on comparative antitrust law. However, all of them include entries on comparative administrative law, which also make some references to the studies on regulation.[45] It may be that legal consciousness of the autonomous significance of cross-sectoral topics like regulation and governance is still too limited, thus hampering a fruitful dialogue with other disciplines.

Leaving aside more general considerations on the development of comparative law studies, it seems clear that the legal literature on regulatory systems needs to enlarge its focus and to find ways to address the policy questions which occupy center stage in the economics and political science literature. To provide a sense of where this perspective should be heading, subsection 3.1 discusses some of the most prominent contributions to the comparative legal analysis of regulatory systems and explains why absolute priority should be given to those approaches which focus on decision processes. Subsection 3.2 explains why comparative law should be complemented by BLE to assess the quality of regulatory decision-making.

3.1 DECISION PROCESSES AND COMPARATIVE LAW

A good place to start analyzing comparative studies on regulation are the pioneering efforts by Anthony Ogus.[46] He tried to describe the main characteristics of the legal framework which underpins regulatory systems in

[45] See D.J. Gerber, *Comparative Antitrust Law*, in Reimann and Zimmermann, above note 6, 1193; J.S. Bell, *Comparative Administrative Law*, ibid., 1259; id., *Administrative Law in a Comparative Perspective*, in E. Örücü and D. Nelken (eds.), *Comparative Law: A Handbook* 287 (1st ed. 2007); H.P. Nehl, *Administrative Law*, in Smits, above note 6, 18. Other collective works do include entries on regulation, but without a comparative perspective: see C. Parker and J. Braithwaite, *Regulation*, in P. Cane and M. Tushnet (eds.), *Oxford Handbook of Legal Studies* 119 (1st ed. 2003); S. Rose-*Ackerman, Law and Regulation*, in Whittington, above note 44, 576.

[46] See A. Ogus, *Comparing Regulatory Systems: Institutions, Processes, and Legal Forms in Industrialised Countries*, in P. Cook et al. (eds.), *Leading Issues in Competition, Regulation and Development* 146 (1st ed. 2004).

industrialized countries. Following the practice of traditional comparative legal studies, he firstly distinguished institutional structures (independence and accountability of the agencies), procedural and managerial systems (transparency and cost-benefit analysis), and instruments used to pursue regulatory goals. Then he explained the choices and trends in the major legal traditions for those three aspects, often finding the ultimate causes of the observable characteristics in the historical evolution of legal systems. Importantly, Ogus stressed the need to understand the influence of the constitutional and cultural context on the decisions of regulators. Even when the same powers are granted to regulators in two different countries, high-order values on the role of the state or bureaucratic traditions might change the meaning and outcome of regulatory activities.

Is this type of approach useful to build indicators of regulatory quality? Only to a limited extent. Ogus tells economists and political scientists they should consider all the aspects of the institutional framework to explain how regulatory systems work. Though, he is much less clear on the relationship among the different parts of the institutional framework and on their relative importance. Moreover, he is exposed to the criticism that legal scholars always consider law the most important driving force, but do not pay attention to other extra-legal factors.[47]

Other comparative legal studies on regulation provide information on the institutional framework of each country, try to clarify the meaning of recurring legal concepts like public service, explain how the notion of regulation is understood and defined in different traditions, or criticize liberalization policies on the ground that they sidestep important values or are implemented through inadequate tools.[48] This type of comparative literature provides useful information on similarities and differences among regulatory systems, but does not address crucial policy issues and does not supply criteria to judge the quality of institutional choices.

In order to begin a fruitful interdisciplinary dialogue between comparative legal scholars and other social scientists interested in regulation, a new analytic framework is needed that guides researchers to understand which

[47] See M. Minogue, *Apples and Oranges: Problems in the Analysis of Comparative Regulatory Governance*, in Q. Rev. Econ. Fin., 195 (45, 2005).

[48] See F. Moderne and G. Marcou (eds.), *L'idée de service public dans le droit des États de L'Union européenne* (1st ed. 2001); F. Moderne and G. Marcou (eds.), *Droit de la régulation, service public et intégration régionale* (1st ed. 2005-2006); L. Verhey and Tom Zwart (eds.), *Agencies in European and Comparative Perspective* (1st ed. 2003); T. Prosser, *The Limits of Competition Law: Markets and Public Services* (1st ed. 2005).

legal data are relevant and explains how those data should be organized and communicated to conduct empirical enquiries. Drawing on the observations made in section 2 about the pitfalls of currently available synthetic indicators of institutional quality, the new analytic framework should satisfy at least the following requisites:

1) give priority to the understanding of institutional complementarities and functional equivalents as the best way to grasp the relevance of national legal cultures;

2) explain whether and through which channels each regulatory system is influenced by foreign or domestic models;

3) describe the impact of horizontal (with other regulators and the judicial system) and vertical (with the legislative, the executive or stakeholders' organizations) relationships on the decisions of the regulator;

4) find a way to empirically assess the influence of indeterminate legal concepts;

5) provide criteria to weight the role of each institutional aspect.

For some of these requisites, empirical legal studies have already provided useful answers. For example, the leximetrics approach has tried to detect patterns of legal evolution without overlooking the role of institutional complementarities and functional equivalents.[49] But other requisites still wait for satisfactory answers. More specifically, it is difficult to find empirical studies which provide accurate descriptions of the institutional framework while at the same time giving a practical advice on how to improve it.

In trying to overcome these difficulties, I argue that comparative legal scholars and social scientists may converge on the idea that regulatory decision-making processes are the most relevant aspect for any empirical inquiry aimed at evaluating the quality of the institutional framework.[50] The

[49] See references in note 9 and M.M. Siems, *Shareholder Protection: A Leximetric Approach*, in J. Corp. L. Stud., 17 (7, 2007); id., *Shareholder Protection Around the World ("Leximetric II")*, in Del. J, Corp.L., 111 (33, 2008).

[50] The same claim can be made about sociolegal studies on regulation. They provide rich qualitative analyses of regulatory procedures and styles, often with a comparative approach. However, they usually adopt a broad notion of regulation, focus on the influence of extra-legal factors, and offer limited evidence on the impact of peculiar traits of national or local legal culture. See the review by C. Coglianese and R. Kagan, *Introduction*, in id. (eds.), *Regulation and Regulatory Processes* xi (1st ed. 2007). New institutional economics, too, has tried to develop a theoretical framework to compare regulatory systems: see, e.g., B. Levy and P.T. Spiller (eds.), *Regulations, Institutions, and Commitment: Comparative Studies of*

economic and the political science literature tend to eschew a direct assessment of the outcomes of regulation because of the multiplicity of non-regulatory factors which can affect them. This observation explains why the usual strategy is to find benchmarks against which to measure the quality of inputs to regulatory systems. The problem to be addressed is how to use comparative legal knowledge to improve the evaluation of regulatory decision-making.

Within the comparative law literature, David Gerber has proposed an analytic framework which helps foster the interdisciplinary dialogue.[51] He starts from the premise that there is the need for a new language which allows researchers to transform a wealth of legal data in usable knowledge. To accomplish this task, the focus of comparative research should shift from traditional legal data (i.e., substantive and procedural rules) to decision processes, that is, the way such rules are produced and applied. The unit of analysis becomes the decision of a legal actor. This is the most important variable if the goal is to detect the patterns of behavior within each legal system. Moreover, studying decisions has the advantage of introducing an evolutionary perspective into the analysis: since decisions change over time, it is possible to underline the factors which encourage the transition towards new policies and to avoid the fallacy of limiting the analysis to the rules in force at a specific date.

Gerber addresses directly the problem of how to choose what to compare. If legal decision processes are the key to understanding the dynamics of institutional systems, the analysis should be directed to those elements which usually influence the behavior of legal actors. Four such elements are highlighted: authoritative texts, structure of institutions, relationships within communities of legal professionals, and the role of traditions of thought. Taken together, these elements form a web of interactions which ultimately affects the performance of the legal system. Each of them should be assessed to detect its influence on decision-making processes. Authoritative texts should be analyzed from the point of view of

Telecommunications (1st ed. 1996); P.T. Spiller and M. Tommasi, *The Institutions of Regulation: An Application to Public Utilities*, in C. Ménard and M.M. Shirley (eds.), *Handbook of New Institutional Economics* 535 (1st ed. 2005). However, this approach is too much worried about the risk of government abuse and does not explain how different institutions achieve their goals.

[51] See D.J. Gerber, *System Dynamics: Toward a Language of Comparative Law?*, in Am. J. Comp. L., 719 (46, 1998); D.J. Gerber, *Globalization and Legal Knowledge: Implications for Comparative Law*, in Tul. L. Rev., 949 (75, 2001).

their status (e.g. the relevance of constitutional norms), their specificity and the criteria used to interpret them. The structure of institutions refers to procedures, distribution of powers, education and social status. The study of communities helps understand the role played by different categories of legal actors. Finally, patterns of thought and their origins determine how legal decisions code experience or select relevant information.

Two advantages of the analytic framework proposed by Gerber should be underlined. Firstly, he explicitly considers the interplay among the four different elements as the main driving force of institutional performance. For example, texts will influence decision-making through patterns of thought and interpretation. The latter are in turn influenced by structures of power and the role of communities. It is not difficult to see that institutional complementarities are another manifestation of the interplay among institutional elements. Hence, they can be easily analyzed within the same framework.

Secondly, Gerber himself refers to the possibility to include contributions from other disciplines in his analytical framework. This way to organize legal knowledge is not only directed to ease communication among comparative legal scholars, but also with scholars from economics, sociology, political science, anthropology and cognitive science. Thus, Gerber is providing an answer to the question from which this paper started, that is how to collect legal data in ways that make them amenable to empirical measurement.

Further support to the idea that a comparative framework geared on decision processes may foster the interdisciplinary dialogue comes from the models of legal behavior proposed by Gillian Hadfield.[52] She starts from the premise that the L&F approach is too focused on the sources of law (codes vs. case law) and does not clarify what institutional factors lead judges to take welfare-enhancing or welfare-reducing decisions. She goes on to trace correlations between some institutional features of the legal systems and the performance of judges. These features include the selection criteria for judges, the degree of specialization of the courts, the distribution of information about cases and the performance of individual judges, the procedures to collect evidence, the organization and regulation of the legal profession.

[52] G.K. Hadfield, *The Levers of Legal Design: Institutional Determinants of the Quality of Law*, in J. Comp. Econ., 43 (36, 2008). A collection of essays discussing this work is published in U. of Toronto L.J., 179-235 (59, 2009), with contributions by C. Valcke, J. Reitz, R. Michaels, P. Legrand and G. Hadfield.

Hadfield is pursuing much the same goal as Gerber: how to find out the institutional factors which affect legal decisions and explain the quality of legal outcomes. Both authors share the view that institutional details of decision processes are the main determinants of legal system dynamics and should be assessed empirically.

What is missing from the frameworks described above is an attempt to suggest criteria to judge the quality of legal decision-making. Gerber aims at increasing the amount of generalizable comparative knowledge. He adds that such knowledge helps predict the behavior of legal actors and can be used by legal professionals or for policy purposes. However, he does not explain exactly how. Hadfield is explicitly concerned with the quality of law. However, her analysis only allows to place legal systems along a multi-dimensional continuum, but not to identify which extreme of such continuum is associated with higher or lower quality. More empirical analysis is advocated to understand judicial incentives, the influence of institutional environments on the accumulation of legal human capital and information processing within institutions. In the next section I argue that Gerber's and Hadfield's analytic frameworks can be complemented with the results obtained by BLE. This branch of interdisciplinary research suggests that the nature and amount of decision costs could be the benchmark against which to evaluate regulatory decision-making.

3.2 Assessing the Cost's of Regulatory Decision-Making

BLE grew out of the parallel developments of Behavioral Economics. While in the past there have been other instances of interdisciplinary dialogue between law and psychology, BLE draws on the most recent research programs in cognitive sciences and proposes more extended applications in a large number of legal settings. It aims at replacing neoclassical Law and Economics, firmly grounded in the normative theories of rational choice, with a more realistic framework which explains and predicts the legally-relevant behavior of people who do not possess infinite cognitive resources. In the last fifteen years this approach has gained the support of many scholars and generated a large amount of research.[53] However, it has also attracted a

[53] See generally C. Sunstein (ed.), *Behavioral Law and Economics* (1st ed. 2000); F. Parisi and V. Smith (eds.), *The Law and Economics of Irrational Behavior* (1st ed. 2005); C. Jolls, *Behavioral Law and Economics*, in P. Diamond and H. Vartiainen (eds.), *Behavioral Economics and Its Applications* 115 (1st ed. 2007); A. Tor, *The Methodology of the Behavioral Analysis of Law*, in Haifa L. Rev., 237 (4, 2008)

sizeable number of criticisms. These refer both to the methodological issues which arise from the attempt to apply the results of cognitive psychology to legal problems and to the policy implications which stem from BLE.[54] I will discuss some of these criticisms after having explained what role BLE could play in the comparative analysis of regulatory systems.

The bulk of the contributions which follow the BLE approach centers on individual decision-making. How people react to the incentives transmitted by legal rules is explained from the point of view of the theories of bounded rationality. What kind of heuristics are used, when and why those heuristics lead to bad decisions, and what strategies the legal system can employ to avoid them are the most recurrent questions.[55] Since its inception, BLE has also been concerned with institutional behavior. In this case, the attention shifts from individual to collective decision-making. Of course, studies on the behavior of judges and juries have a long tradition. More recently, there have been several attempts at extending BLE to other institutions, notably legislators, governments and regulators. The fields of risk regulation and financial markets come easily to mind as examples of extensive applications of cognitive psychology.[56]

The BLE literature on regulation has tried to find out whether the decision-making activities of agencies always follow the strategies recommended by the theory of rational choice or deviate from them in

[54] See, e.g., G. Mitchell and J. Klick, *Government Regulation of Irrationality: Moral and Cognitive Hazards*, in Minn. L. Rev., 1620 (90, 2006); E.L. Glaeser, *Paternalism and Psychology*, in U. Chi. L. Rev., 133 (73, 2006); R.A. Epstein, *Behavioral Economics: Human Errors and Market Corrections*, ibid., 111; A. Schwartz, *How Much Irrationality Does the Market Permit?*, in J. Legal Stud., 131 (37, 2008).

[55] The Heuristics and Biases program of cognitive psychology has been the most visible (albeit not the only) influence on BLE. See generally D. Kahneman and A. Tversky (eds.), *Choices, Values, and Frames* (1st ed. 2000); T. Gilovich et al. (eds.), *Heuristics and Biases: The Psychology of Intuitive Judgment* (1st ed. 2002).

[56] See, e.g., C.R. Sunstein, *The Laws of Fear* (1st ed. 2005); D.M. Kahan and D. Braman, *Cultural Cognition and Public Policy*, in Yale L. & Pol. Rev., 147 (24, 2006); A.C. Pritchard and S.J. Choi, *Behavioral Economics and the SEC*, in Stan. L. Rev., 1 (56, 2003); J.R. Nash, *Framing Effects and Regulatory Choice*, in Notre Dame L. Rev., 383 (82, 2006). In less developed countries lack of experience and of educated professionals suggest that bounded rationality is an important explanatory variable for the activities of regulators: see A. Estache and L. Wren-Lewis, *Toward a Theory of Regulation for Developing Countries: Following Jean-Jacques Laffont's Lead*, in J. Econ. Lit., 729, 750-752 (47, 2009).

systematic ways. Direct experimental evidence on regulators is still rare.[57] Therefore, scholarly writings in the field search for those characteristics of the institutional framework which may lead regulators to use heuristics and increase the probability of cognitive biases. The task of the researcher is to show that behavioral regularities observed in non-legal experimental settings might be present in legal decision-making. For example, there is experimental evidence on the tendency of experts to be overconfident about their decisions and to myopically focus on their area of expertise.[58] Those same biases are said to affect decision-making processes within regulatory agencies. Their staff possesses technical competences which eschew the more common cognitive mistakes of laypersons. But like experts in other fields, agencies' staff could be prone to overconfidence and myopia. No less relevant is the psychological literature on group decision-making. Depending on the internal organization of each regulator, familiar problems like polarization, confirmation bias and groupthink might bias the final outcome.[59]

This approach raises many methodological difficulties. Behavioral regularities observed in laboratory are strictly dependent on the context of the experiment. Hence, they can be useful to explain legal decision-making only if the institutional and the experimental context display strong similarities. Further, the external validity of the experiments, that is to say their relevance

[57] An observational study is proposed by C. Sunstein et al., *Predictably Incoherent Judgments*, in Stan. L. Rev., 1153 (54, 2002) (incoherence in patterns of administrative penalties). There is interesting experimental research on the behavioral impact of regulators' choices: see Y. Feldman and O. Lobel, *Decentralized Enforcement in Organizations: An Experimental Approach*, in Reg. & Gov., 165 (2, 2008) (individual motivation to report misconduct in the workplace); id., *How Law Changes the Environmental Mind: An Experimental Study of the Effects of Legal Norms on Moral Perceptions and Civic Enforcement*, in J. L. & Soc., 501 (36, 2009) (how different legal instruments affect people's reactions to ecologically problematic corporate behaviour); id., *The Incentives Matrix: Experimental Studies of the Comparative Effectiveness of Regulatory Systems*, in Texas L. Rev., 1151 (88, 2010) (effect of different regulatory mechanisms on legal compliance).

[58] See, e.g., J.K. Phillips et al., *Expertise in Judgment and Decision Making: A Case for Training Intuitive Decision Skills*, in D.J. Koehler and N. Harvey (eds.), *Blackwell Handbook of Judgment and Decision Making*, 297 (1st ed. 2004); K.A. Ericsson et al. (eds.), *The Cambridge Handbook of Expertise and Expert Performance* (1st ed. 2006); D. Kahneman and G. Klein, *Conditions for Intuitive Expertise: A Failure to Disagree*, in Am. Psychol., 515 (64, 2009).

[59] See J.J. Rachlinski and C.R. Farina, *Cognitive Psychology and Optimal Government Design*, in Cornell L. Rev., 549 (87, 2002); M. Seidenfeld, *Cognitive Loafing, Social Conformity, and Judicial Review of Agency Lawmaking*, ibid., 486; id., *Why Agencies Act: A Reassessment of the Ossification Critique of Judicial Review*, in Ohio St. L. J., 251 (70, 2009).

outside the laboratory, is always open to question.[60] A related problem is that the lack of direct empirical evidence for legal decision-making prevents any attempt to develop broad normative prescriptions for institutional design.[61]

These objections suggest caution in applying cognitive psychology to legal decision-making. However, there is no reason to believe that this project should be completely abandoned. As far as the problem of empirical evidence is concerned, it should not be forgotten that research on bounded rationality has its roots in studies on behavior in private and public organizations.[62] More recently, political science studies have drawn on models of bounded rationality to explain the characteristics of policy processes, including the activities of legislators, governments and administrative agencies.[63] Of course, there is still a dearth of data on specific legal contexts, but the available evidence suggests that behavioral approaches offer alternative points of view on important aspects of policy-making.

With reference to normative objections, it is clear that the limited amount of empirical evidence available so far does not allow sweeping generalizations about the design of institutions. Still, it could be argued that the comparison of regulatory systems is an interdisciplinary enterprise whose success should be assessed according to a bundle of criteria, in which the scientific standards of experimental economics and psychology play an important but not exclusive role. If policy-makers want to use existing knowledge to improve their decision processes, the most important task of researchers is to communicate such knowledge in usable forms and to explain

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[60] See discussions by D.A. Kysar et al., *Group Report: Are Heuristics a Problem or a Solution?*, in C. Engel and G. Gigerenzer (eds.), *Heuristics and the Law*, MIT Pr., 2006, 103; Tor, above note 53, 275-281.

[61] See W.N. Eskridge and J. Ferejohn, *Structuring Lawmaking to Reduce Cognitive Bias: Critical Review*, in Cornell L. Rev., 616 (87, 2002); S. Issacharoff, *Behavioral Decision Theory in the Court of Public Law*, ibid., 671.

[62] See H.A. Simon, *Administrative Behavior* (4th ed.1997); J.G. March and H.A. Simon, *Organizations*, (4th ed. 1963); J.G. March and J.P. Olsen, *Ambiguity and Choice in Organizations* (2th ed. 1994); Z. Shapira (ed.) *Organizational Decision Making* (1st ed. 1997); C.F. Camerer and U. Malmendier, *Behavioral Economics of Organizations*, in Diamond and Vartiainen, above note 53, 235.

[63] See, e.g., B.D. Jones, *Bounded Rationality*, in Ann. Rev. Pol. Sc., 297 (2, 1999); id., *Politics and the Architecture of Choice: Bounded Rationality and Governance* (1st ed. 2001); S. Workman et al., *Information Processing and Policy Dynamics*, in Policy Stud. J., 75 (37, 2009); F.R. Baumgartner et al., *Punctuated Equilibrium in Comparative Perspective*, in Am. J. Pol. Sc., 603 (53, 2009).

in which contexts and under what conditions it can be safely relied on.[64] This means that attempts at applying cognitive sciences to regulatory problems will offer partial explanations at best. But the same could be said about other fields where public policies are analyzed with the tools of cognitive sciences.[65] There is no reason why a behavioral approach with a normative perspective could not be proposed in the field of regulation.[66]

From a normative point of view, one important contribution of cognitive psychology to comparative analysis is the notion of decision costs. It is well known that decision-making activities are influenced by two factors: the cognitive abilities of the decision-maker and the complexity of the environment in which he works. Of course, both the individual abilities and the environment are subject to change. This is true for legal settings, too: on one hand, the abilities of the decision-makers can vary depending on their expertise, the available financial resources, the delegation of tasks to individuals or groups, and the possibility to learn; on the other hand, the environment can be modified through interventions on the procedures, the distribution of information or the distribution of decision-making powers.

Decision costs provide the link between decision processes and their final outcome. The hypothesis I wish to advance is that Gerber's four institutional elements have a direct bearing on the decision costs of legal institutions. This means that the comparative analysis of regulatory decision processes should be able to discover the extent to which each institutional element increases or decreases decision costs. Consider, for example, the observation made by Mark Seidenfeld, according to which the standards of judicial review employed in the US avoid or reduce the impact of biased

[64] See C. Engel, *The Multiple Uses of Experimental Evidence in Legal Scholarship: Comment*, in J. Inst. Theor. Econ., 199 (166, 2010), who argues that legal decisionmaking is different from scientific inquiry and experimental studies are simply one piece of evidence having a chance to influence the final outcome.

[65] See, e.g., B.D. Bernheim, *Behavioral Public Economics: Welfare and Policy Analysis with Non-standard Decision Makers, in Diamond and Vartiainen*, above note 53, 7; E.J. McCaffery and Joel Smelrod (eds.), *Behavioral Public Finance* (1st ed. 2006).

[66] See, in this vein, O. Amir and O. Lobel, *Stumble, Predict, Nudge: How Behavioral Economics informs Law and Policy*, in Col. L. Rev., 2098, 2127-2137 (108, 2008), who suggest that insights from cognitive psychology could be usefully blended with the new governance approach, which emphasizes the need to adopt a variety of regulatory tools beyond traditional command-and-control mechanisms. On the possible use of behavioral research for the choice of regulatory instruments see also J.B. Wiener and B.D. Richman, *Mechanism Choice*, in D.A. Farber and A.J. O' Connell (eds.), *Research Handbook on Public Choice and Public Law* 363 (1st ed. 2010).

decision-making in federal agencies.[67] A comparative analysis of standards of judicial review in different countries might show that cognitive biases are more probable where a specific type of judicial review is adopted. Alternatively, it might be shown that there are complementary relationships between stronger/weaker judicial review and other types of controls on regulatory activities. Each combination of institutional features may alter the level of decision costs and the probability of specific cognitive biases.

The proposed approach uses decision costs as an external leverage to assess the quality of legal decision processes. It has many analogies with other comparative institutional analyses which focus on the legal actors within the same country. For example, it has been suggested that, in situations where increasing numbers of people are involved and there are highly complex social conflicts, all institutions – markets, legislatures, and judges – are inevitably imperfect. Hence, the power to decide on the allocation of resources should be granted on the basis of an evaluation of the institutional constraints affecting each of them.[68] Analogously, a comparative institutional analysis is advocated to decide what criteria should be employed to interpret constitutions and statutes, or to decide how legislative powers should be allocated between the federal and state levels.[69] In all these cases, decision costs are a shorthand expression which describes the institutional features of the decision processes of one institution and which explain its advantages and disadvantages.

In cross-country comparisons, differences in decision costs cannot lead to proposals of wholesale change in institutional design. Complementarities, cultural constraints and other transplant dynamics discussed above prevent such simple-minded solutions. However, discovering how each regulatory system organizes its decision-making processes, what strategies or heuristics employs and how prone it is to fall prey to cognitive biases is exactly the type

[67] See Seidenfeld, *Cognitive Loafing*, above note 59, 543-547. I return to the issue of judicial review in section 4.2.

[68] See N.K. Komesar, *Imperfect Alternatives: Choosing Institutions in Law, Economics, and Public Policy* (1st ed. 1994); id., *Law's Limits: The Rule of Law and the Supply and Demand of Rights* (1st ed 2001); D.H. Cole, *Taking Coase Seriously: Neil Komesar on Law's Limits*, in Law and Social Inqu.,261 (2004).

[69] See C.R. Sunstein and A. Vermeule, *Interpretation and Institutions*, in Mich. L. Rev., 885 (101, 2003); A. Vermeule, *Judging Under Uncertainty: An Institutional Theory of Interpretation* (1st ed. 2006); id., *Law and the Limits of Reason* (1st ed. 2008); T.W. Merrill, *Preemption and Institutional Choice*, in Nw. U. L. Rev., 727 (102, 2008); C.M. Sharkey, *Products Liability Preemption: An Institutional Approach*, in Geo. Wash. L. Rev., 449 (76,2008).

of knowledge which should be employed for designing effective policies. The goal is neither reduction of all decision costs nor convergence towards a single regulatory model. Rather, a comparative analysis should be understood as an attempt to classify the various strategies for coping with complex issues and balancing accuracy with decision costs.[70] As soon as enough comparative knowledge of this kind becomes available, it could be used in large-N empirical inquiries and as an input to new indices of institutional quality. Needless to say, this kind of indices would only give a partial representation of the overall structure of a regulatory system. Though, even this partial view could be more informative than presently available institutional proxies.

The behavioral perspective could also help avoid some deficiencies of the comparative method. Long-standing debates on the role of culture in assessing similarities and differences, the definition of comparable legal problems and the possibility to single out the function of an institution as the object of study can be seen in a new light if empirical and experimental evidence on human behavior is not discarded.[71] Of course, methodological problems abound, but they do not seem more formidable than those raised by traditional approaches to comparative law. For example, it has been observed

[70] Indeed, this is the perspective adopted in the psychological literature on debiasing techniques. They are usually understood as strategies aimed at improving reasoning: see generally R.P. Larrick, *Debiasing*, in Koehler and Harvey above note 58, 316 (distinguishing between motivational, cognitive and technological strategies, all related to individual behavior but not to modifications of the external environment). According to C.R. Sunstein and C. Jolls, *Debiasing Through Law*, in Journal of Legal Studies, 199 (35, 2006), in legal settings debiasing can be understood as insulation from cognitive biases or as direct intervention to reduce them. The latter approach is further developed in C.R. Sunstein and R.H. Thaler, *Nudge: Improving Decisions About Health, Wealth and Happiness* (1st ed. 2008). A different perspective is proposed by G. Gigerenzer, *Heuristics*, in Engel and Gigerenzer, above note 60, 39f., who suggests that institutions can adopt rules and procedures not to prevent the use of heuristics, but to select those which are ecologically rational, that is decision strategies which help to make good decisions with less information.

[71] See R. Caterina, *Comparative Law and the Cognitive Revolution*, in Tul. L. Rev., 1501 (78, 2004) (explaining why cognitive sciences might help comparative law disentangle the complex issues related to the biological and cultural influences on human behaviour); J. De Coninck, *Overcoming the Mere Heuristic Aspirations of (Functional) Comparative Legal Research? An Exploration into the Possibilities and Limits of Behavioral Economics*, in Global Jurist –Topics, Article 3 (9, 2009); J. De Coninck and B. Du Laing, *Comparative Law, Behavioural Economics and Contemporary Evolutionary Functionalism*, Working Paper, August 2009, available at www.ssrn.com ; J. De Coninck, *The Functional Method of Comparative Law: Quo Vadis?*, in RabelsZ, 318 (74, 2010) (behavioral studies show the limits of functionalism and provide a new starting point for comparative research).

that it is often impossible to connect psychological data on behavioral regularities to actual legal rules or outcomes. Moreover, those data are said to provide knowledge of a very general character and to be of little help in the discussion of specific rules and institutions.[72] While not underplaying the difficulties, I maintain that the comparative analysis of decision-making processes is intended to generate just the kind of specific knowledge which can usefully be deployed for the design of institutions.

In the next section I propose a case study in the field of energy regulation. The aim is to explain in more detail how to compare decision costs among regulatory systems of different countries.

4. CASE STUDY: BUILDING NETWORKS FOR RENEWABLE ENERGY

The transformation of networks for the transmission and distribution of electricity is a central aspect in climate change policies. Increases in the production of energy from renewable sources are sought in many countries because they reduce the emission of greenhouse gases (GHG), one of the main causes of global warming. However, the shift from fossil fuels to renewable sources cannot be accomplished without a radical change in the structure of existing energy systems. In the last century they were organized to support the efficient deployment of technologies that required plants of a large size and transportation of electricity over long distances. The advent of renewable energy entails major transformations.[73] To begin with, natural sources like sun and wind have a high degree of variability and unpredictability. This means that more sophisticated control mechanisms must be adopted to avoid power imbalances on the transmission networks. Moreover, plants of a much smaller size become available, often with a direct connection to the local distribution networks. These new forms of distributed generation require further adaptations. Finally, the construction of new transmission networks is required when there is a long distance between the place where renewable sources are available and the place where supply of

[72] R. Michaels, *Explanation and Interpretation in Functional Comparative Law – A Response to Julie De Coninck*, in RabelsZ, 351 (74, 2010).

[73] See generally R.W. Künneke, *Institutional Reform and Technological Practice: The Case of Electricity*, Ind. & Corp. Change, 233 (17, 2008); M. Finger and F. Varone, *Regulatory practices and the role of technology in network industries: the case of Europe*, in R.W. Künneke et al. (eds.), *The governance of network industries* 87 (1st ed. 2009); M. Ilić and M. Jelinek, *Changing paradigms in electric energy systems*, ibid., 134.

electricity is needed (this is the case for wind power in US) or when there is a lack of cross-border transport capacity (this is the case in EU).

The main regulatory issues in this field relate to: a) the need to overcome communities' or states' resistance to the construction of new networks; b) the allocation of connection and reinforcement costs among networks owners and network users; c) the adoption of new rules for managing the networks which are compatible with variable and unpredictable energy sources, and d) the mechanisms to give priority to those renewable sources which are not price-competitive with high-carbon energy sources. For several reasons, these issues are a good test of regulators' decision-making capabilities.

Firstly, the 'greening' of the energy system is a paradigm change which puts under pressure all the institutional actors and requires market players to adapt to a new environment. Hence, the transition phase shows where the decision costs are higher and what strategies are employed to cope with them. Secondly, there is a lot of uncertainty both on the technological side (which renewable sources should be given priority or subsidized) and on the institutional side (who should manage the transformation and what tools should be employed). This is the kind of situations in which models of bounded rationality have more bite. Thirdly, there are many different levels of governance involved. How they are coordinated is of decisive importance. This aspect has general relevance for the evaluation of any regulatory system. Taken together, these three characteristics offer the possibility to identify the main influences on regulatory decision-making and to assess how large-scale changes and radical uncertainty are managed.

At the outset, a familiar problem of research design in comparative law shall be addressed. One criticism of traditional (functional) comparative law is that legal problems are not universal, but deeply affected by the local culture. Hence, each researcher's choice of topics to be compared is biased by her home-country culture. At the same time, there is no guarantee that the chosen legal problem has the same meaning (or any meaning at all) in other legal systems.[74] To some extent, this criticism extends to the choice of electricity networks development as the focus of the comparative inquiry. Its relevance is shown by the debate in the economic literature and in the initiatives of

[74] For an overview of the debate and possible answers see De Coninck, *The Functional Method*, above note 71, 327-330. As observed by R. Michaels, *The Second Wave of Comparative Law and Economics?*, in U. Toronto L.J., 197 (59, 2009), you cannot avoid being accused of a biased choice of topic simply shifting from a legal concept to an economic concept: the latter could be no less contested.

policymakers. Still, different regulatory systems could well display different approaches to transmission and distribution problems, for example from the point of view of their priority with respect to other aspects of climate change policies or the allocation of costs among categories of network users. I maintain that the analysis of decision-making processes softens these concerns. While the comparison of specific rules or institutions (e.g. legislators, judges) forces the researcher to choose a specific starting point and exposes her to the risk of the home-country bias, shifting the attention to the factors influencing legal decisions leaves open the possibility to include in the analysis a wider range of institutions. Moreover, there is no reason to suppose that each factor will have the same weight in every system, much less to assume convergence toward common regulatory solutions. Of course, no one can claim absolute objectivity in the choice and definition of the subject of inquiry. But the analysis of decision-making processes allows for variation without precluding comparability.

In subsections 4.1 and 4.2 I organize the description of American and European regulatory decision-making along the lines of Gerber's analytical approach. More specifically, I explore the relevance of authoritative texts and of structure of powers. To highlight the nature and amount of decision costs, I suggest that each institutional factor is associated to well-known psychological processes: texts help produce framing effects, while different types of accountability (a central element in regulatory systems) change the motivations and procedures of decision-makers. The focus will be on federal decision-making in US and supranational decision-making in the EU. Obviously, a more complete analysis would require a detailed discussion for each (national and subnational) institutional level, a task I cannot undertake in this paper. The aim here is simply to suggest how the proposed approach might contribute to the debate on the measurement of institutional variables.[75]

[75] I cannot claim that US and EU are representative cases of a larger population because the characteristics of the latter are still unknown and the present inquiry aims at finding them out. Hence, the case study is an exercise in hypothesis generating and not in hypothesis testing [see J. Gerring, *Case Study Research: Principles and Practices* 39-43 (1st ed. 2007)]. A plausible conjecture is that regulatory systems can be arrayed along a continuum using decision costs as the dependent variable. At most, US and EU can be considered "prototypical cases", that is they present features which could be relevant for many other regulatory systems [see R. Hirschl, *The Question of Case Selection in Comparative Constitutional Law*, in Am. J. Comp. L., 125, 142-144 (53, 2005)].

4.1 TRANSMISSION PLANNING, CONSTITUTIONAL TEXTS AND DOMINANT FRAMES

Authoritative texts are among the forces shaping the resolution of any legal problem. Usually, texts cannot be ignored when new regulatory issues must be addressed. According to Gerber, it is important to develop a language which seeks to capture similarities and differences in the characteristics of texts: their levels of abstraction, degrees of systematization and specificity, ways in which they are produced and interpreted.[76] Clearly, Gerber is referring to factors which influence perceptions on how much binding a text is. I suggest that the role of texts in the decision-making process can be better understood if they are represented as one of the factors contributing to the development of the dominant frames. The notion of framing is employed in the psychological literature to show that how the options available for a choice are represented is a strong determinant of the final decision. More specifically, how the decision-maker elects the reference point and whether she gives it a positive (a gain to obtain) or negative (a loss to avoid) connotation explain why a specific alternative is selected. Frames are more powerful than a neutral evaluation of the intrinsic merits of each option.[77] In a regulatory setting, one of the most straightforward applications of this idea is the contrast between market-based and command-and-control instruments in environmental issues.[78]

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[76] Gerber, *System Dynamics*, above note 51, 730-731.

[77] On the origins of these findings see D. Kahneman, *Preface*, in Kahneman and Tversky, above note 55, xiv-xvi. The ensuing debate is surveyed and discussed by D. Soman, *Framing, Loss Aversion, and Mental Accounting*, in Koehler and Harvey, above note 58, 379; Maule and G. Villejoubert, *What Lies Beneath: Reframing Framing Effects*, in Thinking & Reasoning, 25 (13, 2007). In the political science literature framing effects are described as changes in attitudes or behavior provoked by attempts to focus the attention of the public opinion on qualitatively different considerations. In contrast, the psychological literature studies the impact of different descriptions of the same options. The underlying cognitive mechanism should be the same: see D. Chong and J.N. Druckman, *Framing Theory*, in Ann. Rev. Polit. Sci., 103, 114 (10, 2007). Both types of framing are relevant for the discussion in the text. For recent experimental evidence showing that, depending on the context, the process and the features of the task, group decision-making can be affected by framing effects, see K.F. Milch et al., *From Individual Preference Construction to Group Decisions: Framing Effects and Group Processes*, in Org. Behav. and Human Dec. Proc., 242 (108, 2008).

[78] See Nash, above note 53. For other examples of legal framing see C. Guthrie, *Prospect Theory, Risk Preference and the Law*, in Nw. U. L. Rev., 1115 (97, 2003).

Because legal texts shape the context in which public institutions and private agents interact, it is plausible to suppose that they can be employed to define the boundaries of a regulatory problem and to justify a specific course of action. Usually, there will be competition among several frames. Almost surely, the prevailing one will rely on strong textual arguments. In more general terms, the decision procedures adopted in each regulatory system will determine which frames have better chances to prevail, whether they have a positive or negative connotation and which actions they authorize or forbid.[79]

The comparison between American and European policies in the field of renewable energy shows two contrasting legal frames. On the US side, the whole debate is strongly influenced by the issue of federal preemption of state initiatives. On the EU side, the distribution of competences between the supranational and national levels is no less contentious, but a strong emphasis is put on the need to develop common strategies to fight global warming. The American frame seems to suggest a negative connotation: any climate change policy entails a loss of power for the states and an increase of federal influence. The European frame seems to suggest a positive connotation: the coordination of Member States' policies does not reduce their sovereignty, but is the most cost-effective way to address problems with a global scale. The most interesting questions are: what impact regulatory procedures did have on the development of each frame? How those frames push regulators to select among the policies aimed at sustaining renewable sources? To explore these issues, I will discuss American and European initiatives which address the transformation of electricity networks in the scenario of large-scale deployment of renewable sources.

4.1.1 THE NEGATIVE FRAME IN US TRANSMISSION POLICY

The American policy on electricity transmission has been shaped by many different goals. In the nineties the restructuring efforts made clear that a fully developed wholesale market could not be achieved without extending the interconnections among the various parts of the national grid.[80] The open

[79] This perspective is close to those political science studies who underline information processing mechanisms as the major determinant of policy dynamics: see references above note 63, as well as B.D. Jones and F.R. Baumgartner, *The Politics of Attention: How Government Prioritizes Problems* (1st ed. 2005).

[80] See P.L. Joskow, *Transmission Policy in the United States*, in Utilities Policy, 95 (13, 2005); R.J. Pierce, *Completing the Process of Restructuring the Electricity Market*, in Wake Forest L. Rev., 451 (40, 2005).

access to transmission networks, adopted by the FERC in 1996, was aimed at helping new generators to enter the market.[81] But effective competition could not start if vertically-integrated utilities refused to increase the capacity of the networks they controlled or hindered the construction of new ones out of fears that they would lose their market shares.

In the first decade of the twenty-first century, the problems of grid reliability and security gained more prominence. The great blackout of 2003, with 50 millions of American and Canadian people involved and damages amounting to billions of dollars, prompted important statutory changes. The Energy Policy Act of 2005 (EPAct05) tried to improve the planning procedures for inter-state transmission networks. The Department of Energy was charged with the task of designating geographic areas experiencing transmission constraints or congestion as National Interest Electric Transmission Corridors. In these areas, the FERC is authorized to issue permits for construction or modification of transmission facilities when state commissions' behavior runs contrary to the achievement of interstate benefits or the reduction of transmission congestion. This so called "backstop authority" aimed at addressing what was perceived as the main problem of American electricity infrastructure. It is widely believed that the fragmentation of ownership and the lack of a coordinating institution at national level have prevented the investments which could ensure the reliability of the system and the development of market dynamics. But the measures adopted by the EPAct05 did not prove successful. So far, the federal regulator has not been requested to exercise its new backstop authority to supplant state commissions' decision.[82] Moreover, one federal court gave a restrictive interpretation of FERC's power to issue permits.[83] The first reaction was a

[81] FERC, Order No. 888, 61 Fed. Reg. 21540 (May 10, 1996). On the phases of the restructuring process in the US electricity industry see F. Bosselman et al., *Energy, Economics and the Environment* chap. 11 (2nd ed 2006). For a critical review of FERC's open access policy see R.R. Bradley, *Over the River and (Around) the Woods to Grandma's House We Go: Transmission Rights, Transmission Market Power, and Gaming Strategies in a Deregulated Energy Market – An International Comparison*, in Houston J. Int. L., 327 (30, 2008).

[82] See D. Swanstrom and D.D. Jolivert, *DOE Transmission Corridors Designation & FERC Backstop Siting Authority: Has the Energy Policy Act of 2005 Succeeded in Stimulating the Development of New Transmission Facilities?*, in Energy L.J., 415 (30, 2009).

[83] In Piedmont Environmental Council v. FERC, 558 F.3d 304 (4th Cir. 2009), certiorari denied by Edison Elec. Inst. V. Piedmont Envtl. Council, 2010 U.S. Lexis 635 (Jan. 19, 2010), the majority opinion held that the FERC could not override a state commission's decision to deny an application to build a transmission line. Statutory language referred only to FERC's power to issue permits when approval had been withheld for more than

request to the Congress to extend federal siting authority. Pending climate change bills go in this direction, but there is still a heated debate on the best way to coordinate state and federal powers.[84]

The need to adapt the national grid to large-scale deployment of renewable sources is the latest influence on American transmission policy. Although the market-development and reliability goals could further the expansion of the grid and indirectly benefit low-carbon technologies, there are reasons to think that the latter need a more focused transmission policy. Because of their variability, renewable sources ask for reserve transmission capacity in case of production surges. At the same time, more backup and peak power generation resources with traditional fossil-fuel plants will be needed to guarantee reliability when renewable energy becomes unavailable because of weather conditions.[85] Additionally, it is by no means obvious that an increase in transmission capacity will lead to an increase of 'cleaner' electricity. Traditional and dirtier generation plants could well be more profitable and supplant renewable sources.[86] All depends on the type of support mechanism available for low-carbon technologies, as well as on the procedures for connection to the grid and the pricing of transmission services.

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one year. The issues at stake in the case are discussed by J. Noor, *Herding Cats: What to Do When States Get in the Way of National Energy Policy*, in N.C. J. L. & Tech., 145 (11, 2009).

[84] In the American Clean Energy and Security Act 2009 (the Waxman-Markey bill), H.R. 2454, passed by the House of Representatives on 26 June 2009, sec. 151 asks the FERC to issue national planning principles. Adhesion to the principles is voluntary. Plans inconsistent with national principles can be returned for further consideration. New and extended backstop authority is granted to the FERC only in the Western Interconnection. Different solutions on siting and backstop authority are proposed in other five bills pending in the US Senate and House of Representatives (S. 539, S. 774, S. 807, S. 1462 and H.R. 2211). For critical discussions see A.C. Brown and J. Rossi, *Siting Transmission Lines in a Changed Milieu: Evolving Notions of the "Public Interest" in Balancing State and Regional Considerations*, in Colo. L. Rev., 705 (81, 2010) (observing that many legal barriers to new transmission infrastructure are not addressed by pending federal proposals); J. Rossi, *The Trojan Horse of Electric Power Transmission Siting Authority*, in Env. L., 1015, 1039 ff. (39, 2009) (criticizing expansion of federal authority on transmission siting); Noor, above note 83, 163-166 (describing federal proposals on transmission siting); T. Benedetti, *Running Roughshod? Extending Federal Siting Authority Over Interstate Electric Transmission Lines*, in Harv. J. Legisl., 253 (47, 2009) (arguing in favour of preserving state input and authority in the grid planning and siting processes).

[85] See S. Ferrey, *Restructuring a Green Grid: Legal Challenges to Accommodate New Renewable Energy Infrastructure*, in Env. L., 977, 987-996 (39, 2009).

[86] See Rossi, above note 84, 1041-1043.

It seems clear that the debate on transmission policy takes place within the contours of the constitutional allocation of powers in American federalism. How the scope and content of such powers is determined and by whom is largely a matter of prevailing interpretive criteria. Of course, both political and economic factors play a major role in the debate on the alternative between federal preemption or state competence. Though, constitutional rules and their interpretation provide the frame which public and private actors must take into account if their arguments are to prevail.[87] From this point of view, the division of powers in the American electricity industry has the effect of increasing decision costs. The traditional separation between state regulation of retail markets and federal regulation of wholesale markets is a historical legacy of the early structure of the sector. The boundaries between the two regulatory levels have always been contentious. In the past decades they have required many clarifying interventions by the US Supreme Court. Still, the vertically-integrated organization of traditional utilities and the frequent identification of their monopolistic franchise with state borders allowed the smooth coordination of ratemaking procedures at both levels.[88]

As I described above, restructuring efforts and climate change policies suggest that transmission policy cannot be managed by two uncoordinated regulatory levels. Though, the dominant frame makes it difficult to move to a new allocation of powers. This is not to say that the US Congress will never be able to pass a statute which shifts planning competences to the federal level, or to adopt other solutions which improve the coordination among levels. Change is possible, but the dominant negative frame suggests that it could be slow, costly and with a limited scope. For the purposes of this paper, the most important question is whether the institutional features of regulatory procedures can explain why decision costs appear so high in this context.

The psychological literature suggests that reframing, that is trying to build a new frame, is the best antidote to the influence of entrenched representations of the available options. But whether reframing will occur is directly dependent on the characteristics of the decision-maker and of the

[87] See, in the same vein, Cioffi, above note 44, 1526 (observing that law and legal systems "have their own semi-autonomous internal logic that plays a significant role in constituting the institutional environment in which political and economic action occurs").

[88] See J. Rossi, *Regulatory Bargaining and Public* Law (1st ed. 2005), for a description of the regulatory compact which dominated the US electricity industry until the last decade of the twentieth century.

decision environment. For example, it has been shown that in a competitive setting, where individuals are confronted with opposing and equally persuasive arguments, the final decision will take into account a broader range of considerations and lead to intermediate positions. But when the decision-maker has firm predispositions, she is less willing to pull away from them. Further, more knowledgeable individuals usually have strong priors which are difficult to modify.[89]

In the case of transmission planning, the advantages stemming from a transfer of competences to the federal level compete with the benefits connected to the involvement of the states. The psychological literature suggests that, faced with two frames of equal strength, the FERC should try to develop a new and more widely acceptable position.[90] Until now, it has remained stuck to the idea that its powers should be expanded. Several legal factors might explain why this strategy is difficult to modify.

Firstly, consider the influence of American constitutional law. Until the debate is cast in terms of a contrast between the federal government and the states, the only relevant dimension is the vertical relationship between the two levels. Other solutions, which suggest better coordination mechanisms, are ignored because they cannot easily be translated in the terms of the prevailing debate on the vertical allocation of powers.[91] The dominance of the

[89] See Chong and Druckman, above note 70, 111-114; D. Chong and J.N. Druckman, *Framing Public Opinion in Competitive Democracies*, in Am. Pol. Sc. Rev., 637, 649 f. (101, 2007).

[90] The organizational literature suggests that decisions under uncertainty depend on framing practices which the actors involved deploy to build coalitions, change other actors' predispositions and mobilize action in favour of the preferred outcome. See S. Kaplan, Framing Contests: Strategy Making Under Uncertainty, 19(5) Org. Sc. 729 (2008). The FERC has to confront itself with the similar task of constructing a new and legitimate frame, something which is difficult to accomplish if its main concern remains the enlargement of federal competences.

[91] I refer to the many voluntary forms of collaboration among states and public institutions which in the past decade have tried to develop "translocal" policies for climate change. As suggested by J. Resnik et al., *Ratifying Kyoto at the Local Level: Sovereigntism, Federalism, and Translocal Organizations of Government Actors*, in Arizona L. Rev., 709 (50, 2008), these initiatives clearly defy traditional classifications as purely vertical or horizontal, local or federal, domestic or foreign. They suggest that debates on exclusive competences should be replaced by an understanding of the many interdependencies among layers of regulation. See also B.G. Rabe, *Second-Generation Climate Policies in the States: Proliferation, Diffusion, and Regionalization*, in H. Selin and S.D. VanDeveer (eds.), *Changing Climates in North American Politics* 67 (1st ed. 2009). However, almost all these multistate cooperative efforts risk being incompatible with several American constitutional doctrines. See S. Ferrey, *Globets of Fire: Potential Constitutional Impediments to the Regulation of Global Warming*, in Ecology L.Q., 835 (34,

competence frame is further reinforced by the comparison with the restructuring process in the gas sector. The latter is usually believed to be more successful than the parallel process in the electricity sector, at least at wholesale level. According to many commentators, this more favourable outcome is partly explained by the larger scope of federal competence. Since the Federal Power Act of 1938 the FERC has had the power to order the construction of new national pipelines. Similar powers have been granted to the FERC for LNG terminals by the EPAct05.[92] The possibility to point to a successful model lends credibility to the claim that the electricity sector should go down the same path.

Secondly, consider how American regulatory decision-making procedures could have raised the decision costs of switching to a new frame. Both the Congress and the President exert pressures on federal agencies in the attempt to shape their agendas. No less relevant are the inputs the agencies receive from the industry and other stakeholders through regulatory proceedings, whose main characteristic is their adversarial nature. Not only are there broad participatory rights; the federal agencies must also show that they took into account all relevant perspectives and justify the most important measures with detailed cost-benefit analyses. This overall picture is congruent with the idea that federal agencies are overwhelmed by information and strive to find ways to cope with it. Most of the time, they follow bureaucratic routines and adapt incrementally to new scenarios. Only crises of vast proportions or heightened political pressures push agencies to develop new policies, even though such changes could reduce the ability to deal with other tasks or produce measures with a modest impact.[93]

2008); R.K. Craig, *Constitutional Contours of the Design and Implementation of Multistate Renewable Energy Programs and Projects*, in Colo. L. Rev., 771 (81, 2010). For a description of state and regional initiatives on transmission development see A. Schumacher et al., *Moving Beyond Paralysis: How States and Regions are Creating Innovative Transmission Policies for Renewable Energy Projects*, Elec. J., 27 (22, 2009).

[92] On the restructuring process in the American gas sector see generally Bosselman et al., above note 81, chap. 8. On the procedures for siting LNG terminals see S.J. Eagle, *Securing a Reliable Electricity Grid: A New Era in Transmission Siting Regulation?*, in Tennessee L. Rev., 1 (73, 2005); K.T. Kristl, *Renewable Energy and Preemption: Lessons from Siting of LNG Terminals*, in Nat. Resources & Env't, 58 (23, 2009).

[93] See P. May et al., *Organizing Attention: Responses of the Bureaucracy to Agenda Disruption*, in J. Pub. Admin. Res. And Theory, 517 (18, 2008) (distinguishing between routine interventions, with delegation of tasks to lower levels of the organization, and new interventions, with centralization of authority at the top levels of the organization). For the observation that regulatory reactions to crises often do not produce major policy changes

This pattern of reactions can be observed in the case of transmission planning. The FERC tried to foster investments in infrastructure with traditional tools like more generous network tariffs and voluntary cooperation within Regional Transmission Organizations (RTOs).[94] In 2007 Order No. 890 required transmission providers to adopt a planning process complying with nine principles.[95] While useful in some respects, this Order did not address the problems of regional planning. Transmission providers were only asked to coordinate with interconnected systems to share system plans and to identify system enhancements that could relieve congestion or integrate new resources. However, the federal regulator made it clear that there was no duty to undertake investments identified in transmission plans. When climate change came high on the political agenda, the federal regulator started to propose more aggressive solutions.[96] However, in the face of the uncertainty surrounding both the technological and the economic consequences of a large scale overhaul of transmission management, the FERC stuck to the safer course of strengthening its competences without abandoning the dominant frame of separated spheres between the national and state levels.[97]

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see A. Boin et al., Crisis *Exploitation: Political and Policy Impacts of Framing Contests*, in J. Eur. Pub. Policy, 81 (16, 2009).

[94] The EPAct05 mandated the FERC to provide incentive-based rates for investments that would improve the national transmission system. For an assessment see S.H. Strauss and J.A. Schwartz, *Transmission Incentive Overhaul: FERC's ROE Incentive Adder Policy Sends the Wrong Signals, Pub. Utilities Forth.*, February 2009, 32; S.W. Snarr, *FERC Rate Incentives for Transmission Infrastructure Development*, in Elec. J., 6 (23, 2010).

[95] The nine principles are: 1) coordination, 2) openness, 3) transparency, 4) information exchange, 5) comparability, 6) dispute resolution, 7) regional participation, 8) economic planning studies, 9) cost allocation for new projects.

[96] The notice of proposed rulemaking issued by FERC on 17 June 2010 proposes to strengthen coordination for both intraregional and interregional facilities and to adopt a more detailed cost allocation methodology. See *infra* sec. 4.2.1.

[97] My reconstruction is consistent with a psychological explanation which relies on prospect theory: the FERC is reluctant to impose certain losses (additional costs of the transition towards a greener transmission network for industry and other stakeholders) when the future benefits of new policies are uncertain because of technological and economic factors. For a discussion of regulators' loss aversion see Seidenfeld, *Why Agencies Act*, above note 59, 289f.. A related consequence of framing effects is that those who are going to suffer the losses will fought harder against the new measures than those who are going to reap the benefits, thus making it more difficult for the regulator to adopt innovative programs: see Rachlinski and Farina, above note 59, 603-606.

4.1.2 THE POSITIVE FRAME IN EU TRANSMISSION POLICY

Whereas the description of American policies on transmission planning explains why a negative frame became dominant and heightened the decision costs of adopting a different regulatory framework, the European policies suggest that a positive frame goes a good deal towards smoothing the transition to a new and greener paradigm. Of course, the description that follows is not intended to mean that the EU succeeded in devising optimal coordination mechanisms of Member States' policies for transmission planning. Though, the many problems still to be addressed did not prevent the adoption of measures which represent the beginning of a pan-European policy for electricity networks. It is submitted that the decision-making process leading to the dominance of a positive frame contributed to a reduction of the decision costs for the adoption of such policy.

The starting point for the analysis of the European scenario is the observation that EU institutions have been developing energy policies even though the European Treaties did not grant them any specific competence in that field. In the history of the EU, this is not a unique situation. For the environmental sector, too, many important legislative measures were adopted before the official recognition of a specific competence with the Single European Act in 1986.[98] Much the same path has been followed by European energy policy: important measures, above all the radically transformative liberalization process, started without an explicit legal basis in the Treaties. In 2008 Art. 4 and 174 TFEU eventually came to recognize (some parts of) energy policy as one of the subject-matters in which Member States and the EU share concurrent powers. Although the general opinion is that the new Treaty provisions will not make a substantial difference,[99] the most important point is that in the past decade the EU has been very active in assembling the many pieces of a comprehensive energy policy. This effort culminated in 2009 with the simultaneous enactment of the Third Energy Package, aimed at pushing forward the liberalization process, and of the Climate Change Package, aimed at devising a general strategy and the policy instruments to accomplish the well-known 20-20-20 targets for reduction of GHG emissions,

[98] See generally I. von Homeyer, *The Evolution of EU Environmental Governance*, in J. Scott (ed.), *Environmental Protection: European Law and Governance* 1 (1st ed. 2009); A. Lenschow, *Environmental Policy*, in H. Wallace et al. (eds.), *Policy-Making in the European Union* 307 (6th ed. 2010).

[99] See, e.g., S. Andoura et al., *Towards a European Energy Community: A Policy Proposal, Notre Europe*, April 2010, 11-15, available at www.notre-europe.eu .

increase of the share of energy from renewable sources and improvement on energy efficiency. Apart from the many criticisms raised against the effectiveness of both the liberalization and climate change policies,[100] for the purposes of this paper the question to be answered is: which characteristics of the European decision-making process explain the choices made in addressing the most vexing problems of the energy sector?

Like in the American case, the search for the dominant frame offers a useful perspective. Such a frame is not built from scratch. How energy-related issues come to dominate the public debate and the legislative agenda is strictly dependent on the multi-level structure of European decision-making processes. The sociological and political science literature have already demonstrated that the ability to build new worldviews and aggregate a large consensus among Member States and other stakeholders is one of the most important resources of the EU. The Single Market Program is a striking example of a new frame which overcame political paralysis, changed the preferences of the States from non-cooperative to cooperative, and relaunched the European project.[101] On a more limited scale, the start of the liberalization process in the energy sector can be described in similar terms: the frame entrepreneurs within the Commission's Directorate Generals were able to build a coalition which defeated the opposition of many Member States and of traditional utilities.[102]

After having implemented the broadest liberalization process in the world, the EU was able to design the most ambitious package of climate change policies. In the latter case, too, frames played a central role. The Commission took advantage of the clear cross-border nature of the environmental problems to affirm its competences in a new field.[103] It could

[100] A recent assessment of the liberalization process is provided by J.-M. Glachant and F. Léveque (eds.), *Electricity Reform in Europe: Towards a Single Energy Market* (1st ed. 2009); M.G. Pollitt., *Electricity Liberalisation in the European Union: A Progress Report*, EPRG Working Paper 0929, December 2009. For criticisms of European climate change policies see D. Helm, *EU Climate-change Policy – A Critique*, in D. Helm and C. Hepburn (eds.), *The Economics and Politics of Climate Change* 222 (1st ed. 2009).

[101] N. Fliegstein, *Institutional Entrepreneurs and Cultural Frames – The Case of the European Union's Single Market Program*, in Eur. Societies, 261 (3, 2001).

[102] J. Nylander, *The Construction of the Market – A Frame Analysis of the Liberalization of the Electricity Market in the European Union*, in Eur. Societies, 289 (3, 2001); R. Eising, *Policy Learning in Embedded Negotiations: Explaining EU Electricity Liberalization*, in Int. Org., 85 (56, 2002).

[103] According to D. Buchan, *Energy and Climate Change: Europe at the Crossroads* 113-115 (1st ed. 2009), the fight against global warming helped the Commission to regain a central role

also rely on the legitimacy provided by its accomplishments in environmental policy.[104] Finally, it presented the issues of competition, security and sustainability as three pillars of a coherent pan-European energy policy, never acknowledging the many trade-offs which the parallel implementation of each goal will inevitably bring to light.[105]

When trying to explain why some frames came to prevail, several aspects of European decision-making can be pointed out. The agenda-setting powers of the Commission and its ability to form coalitions are usually regarded as the most important causal factor. Issues are presented in such a way as to win the support of the largest number of actors. Experts groups are often appointed to control the definition of policies and the preferred options, so as to indirectly influence the whole legislative process. Moreover, the proposed frame tries to supply convincing explanations for the allocation of powers to the European level of government. No less relevant for their impact on the content of policies are the number of access points to the European institutions made available to interests groups, the voting rules and the possibility to use litigation as a strategic device.[106]

The European policy on electricity transmission networks provides insights on the relevance of those institutional factors. To begin with, EU Treaties never granted extended competences on networks. The only express reference, added by the Maastricht Treaty in 1992, was the promotion of Trans-European Networks (TENs) in the areas of transport,

after the crisis induced by the negative outcome of the French and Dutch referendums on the European Constitution.

[104] The extent to which such accomplishments are simply another instance of a legitimizing frame is explored by A. Lenschow and C. Sprungk, *The Myth of a Green Europe*, in J. Comm. Mkt. Stud., 133 (48, 2010).

[105] On the main trade-offs in European energy policy see L.-H. Röller et al., *Energy: Choices for Europe* 24-38 (1st ed. 2007); Buchan, above note 103, 12-19. For a general discussion of framing in climate change policy see J. I. Scrase and D.G. Ockwell, *The Role of Discourse and Linguistic Framing Effects in Sustaining High Carbon Energy Policy – An Accessible Introduction*, in Energy Pol., 2225 (38, 2010).

[106] S. Princen, *Agenda-Setting in the European Union: A Theoretical Exploration and Agenda for Research*, in J. Eur. Pub. Pol., 21 (14, 2007); T. Larsson and J. Murk, *The Commission's Relations with Expert Advisory Groups*, in T. Christiansen and T. Larsson (eds.), *The Role of Committees in the Policy-Process of the European Union* 64 (1st ed. 2007); C. Mahoney and F. Baumgartner, *Converging Perspectives on Interest Group Research in Europe and North America*, in West Eur. Pol,. 1253 (31, 2008); P. Bowen and M. Mccown, *Lobbying Versus Litigation: Political and Legal Strategies of Interest Representation in the European Union*, in J. Eur. Pub. Pol., 422 (14, 2007).

telecommunications and energy infrastructures. Since 1995 the implementing regulations have laid down the rules for granting Community financial aid, while the guidelines have identified the priorities and the projects of common interest. The impact of these measures on the development of cross-border energy networks has been modest: on average, € 20 million per year were awarded.[107] Moreover, the classification as priority projects did not help to speed up the completion of most infrastructures. The main hindrance is usually identified in the lack of coordination among the Member States and the diversity of authorization procedures. The 2006 TEN-E guidelines tried to enhance cooperation with the appointment of coordinators, who in some cases proved successful in overcoming resistance to the projects.[108] When the financial crisis threatened to dry up the resources for the TEN-E projects, the EU came to the rescue with a new financial instrument, endowed with a budget of about € 3 billion and to be employed in the areas of gas and electricity infrastructures, offshore wind electricity and carbon capture and storage. Up to 50% of eligible costs can be financed.[109] However, because of the temporary nature of this intervention, it is clear that the new instrument cannot boost investments in infrastructures in the long term.

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[107] See E.D. Cross, *EU Energy Law*, in M.M. Roggenkamp et al. (eds.), *Energy Law in Europe*, 300-303 (2nd ed 2007). Other EU financial instruments are described in European Commission, Report on the Implementation of the Trans-European Energy Networks in the Period 2007-2009, COM (2010) 203 fin. of 4 May 2010, 4-5, and the Annexes to the same report, SEC (2010) 505 fin. of 4 May 2010, 49-61.

[108] See European Commission, Implementation, above note 107. As far as the interconnectors between national electricity systems are concerned, the new exemption regime laid down by Art. 17 Reg. 714/2009 gives the ACER the power to settle disagreements between NRAs. Moreover, the Commission could issue binding guidelines on the exemption procedure. These provisions should ease the planning of cross-border transmission infrastructure, although there are persistent uncertainties about the methodology applied to applications for exemptions: See A. de Hauteclocque and V. Rious, *Regulatory Uncertainty and Inefficiency for the Development of Merchant Lines in Europe: A Legal and Economic Discussion*, in B. Delvaux et al. (eds.), *EU Energy Law and Policy Issues*, 163 (2nd ed. 2010). On the previous regime see H.P.A. Knops and H.M. de Jong, *Merchant Interconnectors in the European Electricity System*, in J. Network Industries, 261 (6, 2005); H. Bjørnebye, *Interconnecting the Internal Energy Market: A Goal without a plan?*, in Comp. & Reg. in Network Industries, 333 (1, 2006);

[109] See reg. EC No. 663/09, OJEU L200/31 of 17 July 2009, establishing a programme to aid economic recovery by granting Community financial assistance to projects in the field of energy. For preliminary results see European Commission, Implementation of the European Energy Program for Recovery, COM (2010) 191 fin. of 27 April 2010.

The Third Energy Package included provisions that could increase coordination among national plans for new transmission lines and, at the same time, lower the barriers to the deployment of renewable sources on a large scale. Here again, the Commission was able to exploit the powerful frame of the Internal Energy Market (IEM), linking it with the goal of decarbonising the energy sector. During the discussion of the Third Energy Package, the proposal on ownership unbundling of transmission networks was fiercely opposed and eventually abandoned. However, it proved easier to overcome objections against the strengthening of coordination among transmission operators. Interestingly, the fears about the vulnerability of the European power infrastructure, prompted by some large scale blackouts in the 2000s, helped the Commission to legitimize its claim that a more centralized planning procedure was badly needed.[110]

The new transmission planning procedures are laid down in Art. 8 and 9 reg. 714/2009. The European Network of Transmission System Operators for Electricity (ENTSO-E) is charged with the task of adopting a non-binding Community-wide ten-year network development plan every two years. It shall take into account the national investment plans, the regional investment plans and the TEN-E guidelines. Although explicitly qualified as non-binding, the ten-year plan is subject to two types of controls. An ex-ante control is provided by the Agency for the Cooperation of Energy Regulators (ACER) on the draft ten-year plan. Amendments can be recommended to the ENTSO-E and the Commission when the plan does not contribute to non-discrimination, effective competition, the efficient functioning of the market or an efficient level of cross-border interconnection open to third-party access. An ex-post control is provided by ACER when there are inconsistencies in the implementation of the plan (Art. 6(7) reg. 713/2009) or between the national and the Community-wide plans. Amendments or effective implementation of the investments can be recommended.

The regulation does not explain what are the legal consequences should the ENTSO-E fail to align to the recommendations. It seems that neither ACER nor the Commission have the power to impose unilateral changes to the Community-wide plan. However, effective enforcement should be indirectly guaranteed at national level. Art. 22 dir. 2009/72/EC states that the

[110] It is open to doubt that the blackouts showed the failure of the decentralized mode of governance administered by the UCTE: see E. van der Vleuten and V. Lagendijk, *Interpreting Transnational Infrastructure Vulnerability: European Blackout and the Historical Dynamics of Transnational Electricity Governance*, in Energy Pol., 2053 (38, 2010).

national regulatory authority (NRA) may require the transmission system operator to amend its ten-year plan. Moreover, NRAs shall have the power to ensure that the planned investments are actually made. According to this institutional design, the cooperation between ACER and NRAs should avoid inconsistencies in transmission planning and prevent deviations from the forecasted investments. Attempts by the European Parliament to confer on ACER a more extensive power of ex-ante approval of the Community-wide plan were rejected by the Council. More generally, the EU constitutional framework prevented the delegation of rule-making and enforcement powers to the ACER, hence making it inevitable to rely on a two-tier system.[111]

The enactment of the Third Energy Package leaves open several problems in the field of transmission planning. Firstly, authorization procedures have not been harmonized and concerns about excessive delays have not been addressed. Secondly, the NRAs are not given a clear mandate to follow the evaluations on priority projects made with the TEN-E guidelines. The first version of the ten-year plan suggests that the European evaluation should have a parallel acknowledgement by Member States' laws.[112] However, Art. 36 dir. 2009/72/EC asks the NRAs to carry out their duties in accordance with the objectives of EU energy policy. For cross-border issues, Art. 38 of the same directive asks the NRAs to cooperate in order to enable the optimal operation of networks and the development of effective competition. The Commission may issue guidelines on the extent of the cooperation [Art. 38(5)] and ask a NRA to withdraw decisions deemed not compatible with them (Art. 39 dir. 2009/72/EC). These control procedures reduce the discretion of NRAs in evaluating transmission projects with criteria which do not take into account the European interest. However, other public

[111] On the limits of delegation to agencies in the EU see generally S. Griller and A. Orator, *Everything Under Control? The "Way Forward" for European Agencies in the footsteps of the Meroni Doctrine*, in Eur. L. Rev., 3 (35, 2010). The debate on the ACER during the legislative process is described in detail by B. Delvaux, *The Agency for the Cooperation of Energy Regulators: A New Beginning?*, in Delvaux et al., *EU Energy Law and Policy Issues*, above note 108, 183. An assessment of the impact of the new distribution of regulatory powers is provided by L. Hancher and A. de *Hauteclocque, Manufacturing the EU Energy Markets: The Current Dynamics of Regulatory Practice*, RSCAS Working Papers 2010/1, January 2010.

[112] ENTSO-E, Ten-year network development plan 2010-2020, Pilot Project Final, 28 June 2010, 282; ENTSO-E, Position paper on permitting procedures for electricity transmission infrastructure, 29 June 2010. The forthcoming Commission's Infrastructure Package, to be presented by the end of 2010, will try to address these issues. See below par. 4.2.2 for a description of its contents.

entities involved in the authorization procedure are not similarly constrained. As far as transmission system operators (TSOs) are concerned, Art. 12(1) reg. 719/2009 requires them to establish regional cooperation and publish a regional investment plan. But TSOs are free to decide whether to undertake the investments.

I will discuss a third problem, namely the allocation of costs for cross-border transmission lines, in the next subsection. As a preliminary assessment, the legislative developments in the EU suggest that a regulatory framework for transmission planning is beginning to emerge. To be sure, the ten-year plan risks being a list of forecast investments without a vision for a truly pan-European grid.[113] But from an institutional point of view, there are positive signals as well. The distinctive trait of the EU framework is the explicit acknowledgement of shared competences among the Commission, the ACER, the ENTSO-E and the NRAs. While it is too early to judge whether this architecture will achieve the three objectives of competition, security and sustainability, two observations help to measure the distance from the US experience.

Firstly, a regulatory system which explicitly endorses the cooperation among NRAs, and between ACER and NRAs, is in line with the evolution of the European constitutional framework. The latter can be aptly described as a type of cooperative federalism. The Lisbon Treaty gave an official recognition to the idea that, in the energy sector as elsewhere, the EU and the Member States shall find an equilibrium to exercise their concurrent powers.[114] The congruence between the constitutional architecture and the frame proposed by the Commission helps explain why it came to be accepted. This observation supports the view, advanced by Gerber, that authoritative texts and interpretive criteria are one of the factors affecting legal decisions.

Secondly, a constitutional framework of cooperative federalism can be associated with a negative or a positive frame. The same trajectory from dual to cooperative federalism can be detected in the US.[115] The dominance of the positive frame in the EU is due above all to the agenda-setting powers of the Commission. Moreover, the inevitability of shared powers is more clearly

[113] This is the criticism raised at the 18th Florence electricity Forum of June 2010 in the joint declaration by Eurelectric and EWEA. See also G. Zachmann, *Power to the People of Europe*, Bruegel Policy Brief, June 2010.
[114] See R. Schütze, *From Dual to Cooperative Federalism: The Changing Structure of European Law* (1st ed. 20099.
[115] See Schütze, above note 114, 94-108 .

perceived in Europe, where the subsidiarity principle and the idea of concurrent competences were given an explicit constitutional status. A different situation is to be found in the US. The conflicts between the federal and the state levels are resolved according to the judicial interpretation of the preemption doctrine.[116] Moreover, the presence of a federal agency endowed with broad rule-making powers leads to a strong polarization of the debate between centralized and decentralized planning solutions. Reframing the issue around intermediate solutions is thus more complex than in the EU.[117]

As a general remark, EU decision-making procedures entail lower decision costs when there is the need to frame a new issue and gain the approval of a large coalition of Member States and stakeholders. At the same time, the price to be paid lies in the adoption of compromise solutions which leave many implementation issues open to further discussion.[118] On the US side, any attempt to cross the border between federal and state competences faces strong opposition and could lead to the paralysis of the legislative and regulatory decision-making procedures. This is not to say that these "friction costs" are insurmountable. But any answer to transmission planning problems should start from the idea that both the federal and the state levels shall have a relevant role to play. Once a new regulatory framework gets approved, the broader enforcement powers available to the FERC will entail a clear advantage in the implementation phase compared to the European situation.

From the point of view of the empirical analysis of regulatory performance, it can be argued that federalist dynamics influence decision-

[116] See generally W.W. Buzbee (ed.), *Preemption Choice: The Theory, Law, and Reality of Federalism's Core Question* (1st ed. 2009); R.A. Epstein and M.S. Greve (eds.), *Federal Preemption: State's Powers, National Interests* (1st ed. 2007).

[117] Several attempts at reframing energy issues in US have not proven successful. See, e.g., G. Bang, *Energy Security and Climate Change Concerns: Triggers for Energy Policy Change in the United States?*, in Energy Pol., 1645 (38, 2010) (efforts to put energy independence and climate change on the same legislative agenda).

[118] Another difference in the US and the EU legislative process can be pointed out here. Mahoney and Baumgartner, Converging Perspectives, above note 106, 1265, argue that in the former lobbyists are often successful in stopping the discussion over a proposal in Congress. Conversely, in the EU lobbyists know that proposals will be adopted sooner or later and try to modify them. See also R.J. Lazarus, *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, in Cornell L. Rev., 1154, 1179-1187 (94, 2009) (explaining why fragmentation among and within the branches of US political system make it difficult to pass and implement comprehensive environmental legislation). This institutional characteristics could explain the main features of the respective regulatory frameworks.

making both as a source of reference points and as a channel to consolidate existing frames or adopt new ones. Hence, this legal background cannot be neglected when assessing the quality of a regulatory system. The next question is how to find proxies which provide an accurate representation of those dynamics. At least two requisites should be deemed necessary. First, the variables cannot be assigned binary values, but should reflect a wider range of possible institutional options.[119] Second, the risk of adopting an idealized, country-specific regulatory model should be avoided by choosing institutional variables which, to the extent possible, have an impact on decision costs, irrespective of their formal classification in a specific legal system.[120]

4.2 WHO PAYS FOR TRANSMISSION DEVELOPMENT? REGULATORY DECISION-MAKING AND ACCOUNTABILITY MECHANISMS

It is beyond doubt that integrating renewables in the transmission grids requires huge investments, both to build new lines and to reinforce existing ones. Financing such investments at state level is already a contentious issue. Different policy goals pull in contrasting directions when the share of costs to be allocated to producers from renewable sources, network operators and end users must be decided. But difficulties increase exponentially with transmission projects which cross several state borders. In this case, traditional criteria fall apart and new infrastructure which could help increase the share of renewables never becomes available or suffers long delays.

A comparison of the American and European regulatory frameworks on cost-allocation methodologies for cross-border transmission projects offers useful suggestions on one important determinant of legal decision-making, namely the structure of power within a specific institutional environment. As suggested by Gerber, decision-makers are subject to a variety of external

[119] The same recommendation was advanced by Armour et al., How Do Legal Rules Evolve?, above note 9, 600-604. With reference to the case study on transmission development, differences about the level of integration and cooperation among the different regulatory layers can be assigned a range of values, but cannot be coded according to the simple yes/no format. For instance, proxies reflecting the influence of the federal structure might include the number of decision-making levels, the number of goals to be addressed by each decision-maker, the existence and type of coordination mechanisms among levels, the features of the decision-making procedures.

[120] For example, traditional measures of regulatory performance tend to focus on sector-specific regulations, but overlook the larger institutional context, whose impact on decision costs (and hence on final regulatory outcomes) goes undetected.

pressures.[121] Explaining how those pressures are filtered by the internal organization of each institution is one of the most straightforward ways to discover the nature and amount of decision costs. More specifically, the relationship between regulators and other public or private actors in the sector is usually described in terms of accountability mechanisms. The latter have been explored from many different perspectives in regulation studies.[122] We shall see that psychologists have collected evidence on the impact external controls might have on individual and group decision-making. Because cost allocation of new transmission lines is one of the most controversial issues in the field of energy policies, accountability mechanisms are called on both to avoid the paralysis of the decision-making process and to ensure its transparency. Judicial review of regulatory outcomes is perhaps the best known among such mechanisms. However, there are relevant differences across legal systems from the point of view of the scope and depth of review. Moreover, in some cases alternative accountability mechanisms play a functionally equivalent role. The following two sections compare US and EU to see whether in the case of transmission development these differences affect regulatory decision costs and regulatory outcomes.

4.2.1 JUDICIAL REVIEW OF COST ALLOCATION IN THE US

In the US the debate on the methodology for allocating the costs of multi-state transmission projects is far from settled. According to the Edison Electric Institute, nearly $56 billion of transmission investments are planned through 2020. Projects aimed at facilitating integration of renewable sources represent 66% of the total, with a future cost of $37 billion. Moreover, 70% of projects span more than one state.[123] As already seen in subsection 4.1.1, there is much uncertainty on the applicable siting and planning procedures. The same lack of clarity can be observed for cost allocation issues. As a general matter, three different criteria have been proposed: beneficiary pays, generator pays, and participants pay. The first is apparently the least

[121] Gerber, System Dynamics, above note 51, 731.

[122] See, e.g., M.W. Dowdle (ed.), Public Accountability: Designs, Dilemmas and Experiences (1st ed. 2006); M. Bovens, Analysing and Assessing Accountability: A Conceptual Framework, in Eur. L.J., 447 (13, 2007); M. Bovens et al., Does Public Accountability Work? An Assessment Tool, in Pub. Admin., 225 (86, 2008); J. Black, Constructing and Contesting Legitimacy and Accountability in Polycentric Regulatory Regimes, in Reg. & Gov., 137 (2, 2008).

[123] Edison Electric Institute, Transmission Projects: At a Glance, February 2010.

contentious one, but it quickly becomes unmanageable as soon as the number of states involved increases and each transmission project is able to deliver different categories of difficult-to-quantify benefits. The generator pays principle is not suited to multi-state projects and could hinder the development of renewable sources. The participants pay principle applies to independently financed projects.[124]

In recent years, the FERC did not issue general regulations on cost allocation methodology, but authorized each proposal falling within its jurisdiction on a case-by-case basis. However, in August 2009 the *Illinois Commerce* decision showed that this approach had become untenable.[125] Writing for the majority, Judge Posner found that the federal regulator had not provided enough evidence to justify the allocation of costs for new high-voltage transmission facilities to all the utilities belonging to the RTO PJM. According to Posner, the FERC cannot claim that this methodology is in line with the beneficiary pays principle if it fails to provide any estimates of the costs and the benefits accruing to each utility. Even though these estimates will never allow to quantify the exact proportion of costs and benefits, generic claims on improved reliability brought about by new transmission facilities fall short of demonstrating a reasonable balance. For this reason, the federal judge remanded to the FERC for the determination of the appropriate allocation method.

A strongly-worded dissenting opinion was written by Judge Cudhay, a renowned expert in energy law. He pointed out that high-voltage transmission lines provide general systemic benefits. Therefore, pro rata allocation of costs has the virtue of avoiding protracted discussions on the identification of benefits for specific utilities. This methodology does not deny the beneficiary pays principle, but acknowledges that the benefits should be evaluated according to the broader goals of increasing reliability and fostering the development of renewable sources. The dissenting judge even suggested that the burden of proving the lack of benefits should be put on the dissenting utilities, and not on the federal regulator.

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[124] See S.M. Kaplan, *Electric Power Transmission: Background and Policy Issues, Congressional Research Service*, April 14, 2009, 20-22; M. Willrich, *Electricity Transmission Policy for America: Enabling a Smart Grid, End-to-End*, MIT-IPC-Energy Innovation Working Paper, July 2009, 25-28; S.L. Teichler and I. Levitine, *HVDC Transmission: A Path to the Future?*, in Elec. J., 1 (23, 2010); PJM, *A Survey of Transmission Cost Allocation: Issues, Methods and Practices*, 10 March 2010, available in FERC's docket EL05-121-006.

[125] Illinois Commerce Commission v. FERC, 576 F.3d 470 (7th Circ. 2009).

This case is the best example of the polarization of arguments in the American debate on cost allocation. The traditional beneficiary pays principle is almost impossible to apply when the transmission project is aimed at connecting distant states to renewable sources. Transit states can oppose the project if not compensated, but exactly what benefits should be considered relevant is open to debate. System-wide allocation methods, approved by FERC, greatly simplify the relationships among the involved utilities, but they run against the objection that cost discipline is weakened and funding is biased in favour of transmission expansion and against alternative solutions like demand response and local renewable power.[126]

Although J. Posner did not ask the FERC a detailed estimation of all costs and benefits, the first practical effect of the remand has been a new paper hearing before the FERC with an in-depth discussion of all the costs and benefits of the proposed transmission facilities, compared to those of the alternative lower voltage transmission lines.[127]

A further by-product of *Illinois Commerce* has been the probable end of the case-by case approach to cost allocation. In October 2009 the FERC sought comments on transmission planning processes and cost allocation methodologies. The questions raised clearly go in the direction of collecting evidence on the thorniest issues, namely cost allocation processes over regions larger than existing RTOs, how benefits should be calculated, and the opportunity to pursue generic reform of cost allocation. This initiative raised concerns among the opponents of an expanded role for the federal regulator.[128] Even the Congress is sending mixed signals. The so called Corker Amendment (S. 1462) goes beyond the *Illinois Commerce* decision and prohibits the allocation of costs to a region or subregion, unless the costs are reasonably proportionate to measurable and reliability benefits.

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[126] Kaplan, above note 124, 21. According to E.N. Krapels, *The Terrible Trio Impeding Transmission Development: Siting, Cost Allocation, and Interconnection Animus*, in Elec. J., 34 (23, 2010), there is no reason to suppose that only one methodology should be applied everywhere.

[127] The paper hearing procedure ordered on remand by the FERC was still pending in September 2010. See the evidence supplied by PJM and the comments in FERC's docket EL05-121-006.

[128] See FERC, *Transmission Planning Processes Under Order No. 890*, Notice of Request for Comments, October 9, 2009, Docket No. AD09-8-000. Reactions to the notice are discussed by B.W. Radford, *Wellinghoff's War – FERC Fights for the Green-Grid Superhighway – Even if Congress Won't*, Pub. Utilities Forth., January 2010, 24.

In lieu of the uncertainty surrounding the legislative debate on climate change bills, the notice of proposed rulemaking issued by FERC in June 2010 tries to fill the regulatory gap. Transmission providers are required to participate to regional planning processes that meet the same principles already established by Order No. 890. Both local and regional planning processes should account for public policy requirements established by state or federal laws and regulations. Transmission planning agreements must be entered into among neighboring regions. Finally, default principles for allocating the costs of intraregional and interregional facilities in a manner which is roughly commensurate with the distribution of benefits are established.

It is easy to foresee that this proposal will engender much opposition, already reflected in the comments to the FERC's notice of October 2009. Although the federal regulator claims that the proposal leaves much flexibility in the design of the planning process and does not infringe upon state authority, it is clear that the new requirements force all transmission providers to participate to regional and interregional processes. The end result could be close to what could follow from some legislative proposals on transmission planning pending in the Congress. In this case, too, judicial review of the final rule will surely play an important role.

Not surprisingly, judicial review is one of the factors affecting regulatory policy in the US legal system. From a comparative point of view, the most interesting issue is how to measure its impact on decision costs. In the *Illinois Commerce* case judge Posner claims to apply a deference standard. However, it is well known that the intensity of review varies wildly and is dependent on a host of circumstances.[129] The psychological literature suggests that accountability mechanisms could have both positive and negative effects. Its positive effects stem from stronger motivations of decision-makers to please the audience, need to consider alternatives and to work harder at generating information. Its negative effects are associated with the amplification of cognitive mistakes like the confirmation bias or the consideration of irrelevant information.[130] While it is difficult to forecast whether the negative or the

[129] See, e.g., P.L. Strauss, *Overseers or "The Deciders" – The Courts in Administrative Law*, in Chi. L Rev., 815 (75, 2008). T.J. Miles and C. R. Sunstein, *The Real Word of Arbitrariness Review*, in U. Chi. L. Rev., 761, 802-805 (75, 2008) explain that the stringency of judicial review cannot be evaluated in the abstract without knowing more about the responsiveness of litigants and of the agencies.

[130] See the discussion of accountability in the context of regulatory decision-making by Seidenfeld, *Cognitive Loafing*, above note 59, 508-526. See also M. Seidenfeld, *The Psychology of*

positive effects will be prevalent in a specific regulatory system, it is plausible to argue that in the US judicial review is so deeply ingrained in the legal culture that adaptive mechanisms were developed to foster complementarity between the two branches. The issue of cost allocation seems to confirm the prevalence of the positive effects of accountability. The most visible impact of *Illinois Commerce* lies not so much in showing which methodology should be adopted, but in forcing the regulator to collect evidence to justify its choices. This is a positive effect because the methodology is still not settled and there are many competing considerations to take into account. Moreover, this example confirms that the higher decision costs prompted by extended judicial review do not lead to a negative evaluation of the regulatory system. Indicators of institutional quality should take into account the ambivalence of accountability systems.

4.2.2 REGULATORY ACCOUNTABILITY AND COST ALLOCATION IN THE EU

Let's now turn to the European regulatory framework. Integration of renewable sources into existing grids is said to be the main driving factor for investment in 20.000 km of new or refurbished power lines until 2015. For the same period, total investment costs for transmission projects of European significance amount to € 23-28 billion.[131] However, how these costs should be distributed has not been decided. So far, the largest part of the debate has focused on cost allocation at national level. The main issue is how to harmonize the support to generation from renewable sources with the distribution of the costs of network connection and reinforcement. The usual distinction is between shallow (the generator only pays the connection costs) and deep (the generator pays both connection and reinforcement costs) charging methods. Although shallow methods appear to be widespread in Europe, the adaption of the networks to large-scale deployment of renewables

Accountability and Political Review of Agency Rules, in Duke L.J., 1059 (51, 2001). Bovens, *Analysing and Assessing Accountability*, above note 122, 464, suggests a learning perspective, according to which accountability offers public institutions "a regular mechanism to confront administrators with information about their own functioning and forces them to reflect on the successes and failures of their past policies."

[131] ENTSO-E, above note 112, 121-122, 126. According to ENTSO-E, Research and Development Plan, 23 March 2010, 49, R&D costs for transmission-related projects amount to € 560 million. An higher estimates of € 2000 million until 2020 was provided by the European Commission, Investing in the Development of Low Carbon Technologies (SET-Plan), Staff Working Document, SEC (2009) 1295 of 7 October 2009.

entails many other changes to the traditional regulatory framework. Balancing and system reliability costs must be taken into account. Moreover, incentive regulation of networks should be amended to avoid the conflict between the goals of reducing costs and of investing to integrate renewable sources.[132]

The European debate on cost allocation for cross-border transmission investments started some years ago, but it has not led to a widely agreed position. In 2007 ERGEG proposed to extend its competences to the approval of the methodology for allocating costs and risks of investments in the EU grid. In 2008 Eurelectric advocated a regional planning procedure and criteria for cost allocation of cross-border investments.[133] The Third Package did not take up either of these options. MSs are only required to promote and facilitate the cooperation of TSOs at regional level (Art. 6(1) dir. 2009/72/EC). ACER can recommend binding rules if voluntary cooperation among TSOs and NRAs does not ensure the compatibility of regulatory frameworks among the regions [Art. 6(2)]. The framework directive on renewables 2009/28/EC lays down some general principles on the procedures for distributing grid costs related to the deployment of renewable sources. According to Art. 16, transmission system operators and distribution system operators shall set up and make public their standard rules. Those rules shall be based on objective, transparent and non-discriminatory criteria, taking particular account of all the costs and benefits related to the connection of renewable sources. Member States may require the network operators to bear the costs in full or in part. Cost sharing shall take into account the benefits that initial and subsequently connected producers as well as network operators derive from the connections.

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[132] See Green Net Europe, Action Plan: Promoting Grid-Related Incentives for Large Scale RES-E Integration into the different European Electricity Systems, May 2009, available at www.greennet-europe.org ; Joint Research Centre – Institute for Energy, *Review of Existing Methods for Transmission Planning and for Grid Connection of Wind Power Plants*, Realisegrid, 15 June 2009, available at http://realisegrid.erse-web.it/ ; A. van der Welle, *Regulatory Road Maps for the Optimal Integration of Intermittent RES-E/DG in Electricity Systems*, Final Report of the RESPOND Project, August 2009, available at www.respond-project.eu/ .

[133] ERGEG, Cross Border Framework for Electricity Transmission Network Infrastructure – An ERGEG Conclusions Paper, 18 April 2007; Eurelectric, Report on Regional Transmission Investment Incentives, October 2008; Eurelectric, Integrating Intermittent renewables sources into the EU Electricity System by 2020: Challenges and Solutions, April 2010. See also H. Knops, *How Adequate is the European Legal Regime for Investments in Electricity Networks*, in M.M. Roggenkamp and U. Hammer (eds.), *European Energy Law Reports VI* 103, 109-110 (1st ed. 2009) (discussing the possibility of compensation mechanisms among TSOs).

It is clear that Art. 16 delegates to Member States the task of specifying the categories of costs and benefits which are relevant for the integration of renewable sources, as well as their distribution among producers, network operators and end users. Furthering harmonization on this point was not possible because of the different support schemes for renewables introduced at national level. However, these provisions will not help to address the issue of cross-border transmission investments. To be sure, Art. 16 asks Member States to take the appropriate steps to develop transmission and distribution grid infrastructure, including interconnection between Member States and with third countries. But it is not clear whether this provision binds NRAs to evaluate transmission projects without giving priority to national interests or it is no more than an encouragement to promote voluntary cooperation within the existing and future regional and pan-European structures.

Awareness of the need for more specific guidance on cross-border cost allocation is shown in a recent document issued by the Commission. It announced a proposal for a new Energy Infrastructure Package by the end of 2010. The main goals are to address the shortcomings of the current TEN-E framework and to pursue the development of a truly Europe-wide network. The package will include provisions for the financing of projects with widespread European benefits. The aim is to find the optimal balance between the "user pays" and the "taxpayer pays" principles.[134]

Besides future initiatives by the European legislator, the new organisational structures introduced with the Third Package could play a major role in the search for common methodologies on cross-border transmission investments. In its draft ten-year plan, the ENTSO-E has already suggested criteria to assess the economic priority of transmission projects. It is envisaged that these criteria can be included in the European network codes. In this case, they would provide a reference point for future projects. However, it is difficult to believe that the European network operators are able to solve cooperatively all the issues related to cost allocation. The parallel experience with the compensation mechanism for

[134] European Commission, Stock Taking Document – Towards a New Energy Strategy for Europe 2011-2020, February 2010. According to the Commission's presentation in the 18th Florence Forum of June 2010, the Energy Infrastructure Package will include in November 2010 a political communication on energy infrastructure development and priorities for 2020/2030, a communication on the six priority infrastructure actions and an impact assessment; in Spring 2011 a legislative proposal for an EU Energy Security and Infrastructure Instrument.

cross-border flows, voluntarily introduced by TSOs, shows that spontaneous adherence is not guaranteed.[135]

A comparison of US and EU accountability mechanisms is difficult because both regulatory frameworks have not yet reached a stable equilibrium. At this stage it can be observed that in the EU judicial review is not going to be the main accountability mechanism. To be sure, European rules already provide for judicial intervention. For example, ACER's decision can be contested before the Board of Appeal, the Court of First Instance and the Court of Justice (Art. 19 and 20 reg. 713/2009). At national level, Art. 37(16) dir. 2009/72/EC states that decisions taken by NRAs shall be fully reasoned and justified to allow for judicial review.[136] However, in European regulatory systems dispute resolution about transmission planning usually falls within the jurisdiction of NRAs. Not surprisingly, ERGEG's guidelines on electricity grid connection and access explicitly state that the NRAs shall have the power to settle disputes related to connection and access to the grid.[137] But there is a dearth of comparative studies on how such disputes are dealt with.

If the announced Infrastructure Package will try to establish a planning procedure for cross-border transmission investments, the simplest regulatory solution would be to delegate to ACER any dispute resolution tasks, extending the competence it was granted on disputes about interconnectors. In this case, appeals to European courts will be available, but the core of the regulatory framework would be the interplay between the ACER, the ENTSO-E and the Commission. Hence, regulatory and political accountability could have more weight than judicial accountability.

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[135] Until 2009 the Inter-TSOs compensation mechanism was operated on a voluntary basis. In its annual reports, ERGEG has repeatedly argued that such mechanism was not fully compliant with Art. 3 reg. 1228/2003: see, e.g., ERGEG, Regulation (EC) 1228/2003 Compliance Monitoring, Second Report, 10 September 2008. In December 2009 the Commission issued a proposal of regulation on compensation for cross-border flows and a common regulatory approach to transmission charging. The main reason supporting this proposal was that negotiations among TSOs had become unmanageable. Much the same unsatisfactory outcome could be expected for voluntary cooperation on cross-border allocation of network investment costs. For a general discussion of inter-TSO compensation mechanisms see G. Buglione et al., Integrating European Electricity Markets, IEFE Research Report No. 2, October 2009, 152-185.

[136] See also the interpretative notes of the Commission on the regulatory authorities of 22 January 2010, 19-21.

[137] ERGEG, Final Guidelines of Good Practice on Electricity Grid Connection and Access, 10 December 2009, 10.

Whether different forms of accountability have a significant impact on decision costs is difficult to predict. The psychological literature suggests that accountability improves decision-making when there isn't previous knowledge about the preferences of the audience. If such preferences are revealed, the decision-maker may alter the outcome of her decision to come closer to an outcome her audience will find acceptable. Likewise, the decision-maker may opt for an inefficient decision in order to avoid an outcome she will find unpleasant to explain to her audience. From this point of view, judicial review has a clear advantage over regulatory and political accountability because the judges' preferences are usually unknown.[138] If ACER and the Commission will be the only institutions in charge of monitoring cost allocation for cross-border transmission investments, there is a high probability that TSOs will try to apply criteria which mirror the preferences of those institutions. However, it is not clear whether the perspectives of all the categories of network users will be adequately represented. In contrast, judicial review tends to force regulators to take into account all the competing perspectives.

These observations are not meant to suggest that extended judicial accountability should be adopted in the EU, much less it is without its own shortcomings. The role of different accountability mechanisms is only in part the outcome of conscious design. It is clearly affected by entrenched regulatory cultures. However, it is difficult to deny that each institution employs different approaches to carry out the task of reviewing regulators' decisions. This is an instance of functional equivalence, a theme usually explored by comparative law. But functional equivalence does not automatically lead to convergence toward the same outcome. If US and EU will adopt different accountability mechanisms for cost allocation, it can be expected that the substantive criteria and the level of decision costs will differ as well.

As far as the design of indicators is concerned, it is clear that an assessment of the quality of a regulatory system cannot overlook accountability mechanisms. The arguments presented above suggest that a variable indicating the existence of some type of judicial review does not say much about the real impact on regulatory decision-making. Not only the specific standard of review should be pointed out, but also the existence and impact of other accountability mechanisms. Moreover, this aspect of a

[138] See Seidenfeld, *Cognitive Loafing*, above note 59, 516-517, 546. On the psychological impact of political accountability see Seidenfeld, *The Psychology of Accountability*, above note 130, 1091-1093.

regulatory system is perhaps the best example of an institutional complementarity. The internal organization of the regulator, the type of arguments used and the final outcome can all be affected by the existence of a specific type of accountability mechanism. Synthetic indicators of regulatory performance should try to capture this complementarity.

5. CONCLUSIONS

It seems clear that the quantitative analysis of legal quality in the L&F literature was driven by methodological concerns and scientific interests which are very far from traditional comparative law. It is not the idea of empirically measuring legal quality that is debatable, but how such task should be carried out. On a large number of issues, comparative law is much closer to the methodological tenets of empirical qualitative analysis. Affinities with the latter can be found in areas like approaches to causation, case selection practices, relevance of context and definition of concepts. Even the classic problem of institutional endogeneity, so heavily tainting any quantitative analysis, can be seen from an entirely different perspective when the goal of the research is an in-depth study of causal mechanisms for specific cases.[139]

The familiar conclusion of methodological debates in the social sciences applies here as well. Each approach has its vices and virtues. It should be chosen according to the researcher's goals and with complete awareness of the trade-offs it entails. Not surprisingly, some scholars will be more inclined toward the type of thick contextual knowledge that can be gained with small-N case studies, while others will prefer the more general results that can be obtained from large-N studies.[140]

As far as the measurement of regulatory quality is concerned, the review of indicators presented in the previous sections suggests that in this field

[139] For discussions of differences between qualitative and quantitative analysis see J. Mahoney and G. Goertz, *A Tale of Two Cultures: Constructing Quantitative and Qualitative Research*, in Polit. Analysis, 227 (14, 2006); A. Bennett and C. Elman, *Qualitative Research: Recent Developments in Case Study Methods*, in Ann. Rev. Pol. Sc., 455 (9, 2006).

[140] For example, H. Spamann, *Large-Sample, Quantitative Research Designs for Comparative Law?*, in Am. J. Comp. L., 797 (57, 2009) argues that for some research questions quantitative methods are the only way to identify interesting connections in a wealth of data, even though much details must be ignored. In contrast, Pistor, *Rethinking the "Law and Finance" Paradigm*, above note 14, 1662-1669, suggests that case-study analysis is the most productive approach to understanding the "rolling relationship" between legal and economic systems.

large-N quantitative analysis has not produced satisfactory outcomes. The case study on electricity transmission planning confirms that many important aspects of the regulatory decision-making process are not adequately represented by the available indicators. Hence, there seems to be an urgent need to refine the analytic tools for the empirical measurement of regulatory quality.

The focus on decision-making processes is probably the most straightforward way to assess regulatory performance. At the same time, it opens to way to a larger contribution of comparative law to empirical studies. To find out which factors affect legal decisions is a difficult endeavour, but comparative legal scholars could provide the type of detailed knowledge which leads to better concepts and better indicators. The notion of decision costs and the approach of Behavioral Law and Economics usefully complement this program. They provide a common metric for measuring differences among regulatory systems and can help design new policy proposals.

Of course, many issues must be tackled before the approach presented in this paper becomes the basis for a full-fledged empirical program: how to find good proxies for each institutional factor potentially affecting decision costs, how to assign weights to each of them, how to choose the level of analysis for decision-making processes, how to find objective criteria to define the scope of a regulatory problem which can be compared across legal systems, how to compare countries with different levels of economic and institutional development. This list of problems speaks to the difficulties of interdisciplinary endeavours. Though, there is enough evidence to argue that this is a path worth following: previous attempts to compare the quality of regulatory systems with monodisciplinary approaches did not fare well.