

ARTICLE: ECONOMIC ANALYSIS OF RULES: DEVOLUTION, EVOLUTION, AND REALISM

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Text

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In this article, Richard Whisnant and Diane Cherry describe the problems and questions that arise when the idea of regulatory reform meets the constraints of the real world. The authors rely on their experience with rulemaking and analysis at North Carolina's Department of Environment, Health, and Natural Resources (DEHNR), as well as information from other states' and federal agencies, to add an empirical perspective to the debate over regulatory reform. In a detailed discussion of the economic theories involved in various forms of economic analysis, the authors point out the questions legislators should consider when drafting laws affecting rulemaking. Based on the evolving rulemaking procedures used by DEHNR, the authors urge a more dynamic and publicly accessible method of rulemaking that will use available technology and expertise to develop rules which best utilize the limited resources available to agencies in the advancement of important social goals.

INTRODUCTION: AN OVERVIEW OF THE PROBLEM

Much of the new law now made in the United States is made by state administrative agencies in the form of rules.¹ The states are rapidly evolving limits on rulemaking through various forms of economic analysis.² The 1981 Model State Administrative Procedures Act (MSAPA)³ contained a requirement for agencies to perform economic analysis of rules.⁴ [*695] Fifteen years later, states are in the middle of a wave of implementation and refinement of their rudimentary systems for economic analysis as a means of regulatory reform, with the endorsement and encouragement of institutions such as the National Governor's Association.⁵

The fundamental concerns fueling this evolution are very similar at the state and federal levels. The mandates for rulemaking are growing more general and the scope of rulemaking is increasingly broad.⁶ As a result, the federal and state regulatory system has grown more complex. The power thus wielded by unelected, civil servants presents challenges for the legal system and proponents of good governance.⁷ How can there be greater legitimacy, fairness, and efficiency for large numbers of increasingly complex state agency rules with existing or reduced levels of resources in the institutions that oversee the agencies? How can state regulatory agencies work more effectively?⁸ How can anyone outside the agencies be assured that rulemaking accords with statutory ends?

"Benefit-cost analysis"⁹ or some related form of economic analysis of rules has been a primary response to these questions at the federal level.¹⁰ [*696] The current rapid evolution of states' experience with economic analysis of rules, however, opens an entirely new chapter in the history of regulation and its reform. This chapter is made all the more important by the devolution of policy responsibility from the federal government to the states. Perceiving and critiquing this evolution are important to understanding how many United States regulatory programs are actually implemented, because state agencies and their rules are ultimately responsible for much regulatory activity.¹¹ The states' experience is also important for understanding the diverse forms that an apparently simple, coherent public policy tool, such as benefit-cost analysis, may actually take in the hands of legislators, governors, and agency personnel in multiple jurisdictions.¹² The states' experience with economic analysis is problematic and unique for three main reasons: the lack of resources typically devoted to analysis of rules at the state level, the absence of staff exper- [*697] tise to conduct traditional benefit-cost analysis, and the

¹ One crude measure of this fact comes from comparing the number of records for proposed state rules in 1995 (47,226) to the number of entries in the Federal Register for 1995 (31,703). Search of LEXIS, States library, Alladm file and Genfed library, Fedreg file (Jan. 15, 1996). This comparison is greatly biased in favor of higher federal numbers because the state database searched covers the administrative registers of only twenty states, as of early 1996. Cf. 1 KENNETH CULP DAVIS & RICHARD J. PIERCE, JR., ADMINISTRATIVE LAW TREATISE section 1:1, at 2 (3d ed. 1994) (noting that "federal agencies adjudicate far more disputes involving individual rights than do the federal courts and create more binding rules of conduct than Congress"); Edward L. Rubin, Law and Legislation in the Administrative State, 89 COLUM. L. REV. 369, 408-09 (1989) (indicating that the shift to rulemaking from direct legislation is so fundamental as to suggest a rethinking of traditional separation of powers analysis). The volume of "rulemaking" may be related to, but is not the same as, the volume of "regulation." Much rulemaking concerns matters such as non-regulatory information dissemination (how one finds things out and gets things from agencies). Further, any change in an existing rule--including a deregulatory change--is counted as rulemaking. See 5 U.S.C. section 551(5) (1994) (defining "rulemaking" as the "agency process for formulating, amending, or repealing a rule").

² Many states already have some rudimentary form of economic analysis of rules. Most of these statutory requirements have been created and subsequently revised to add more elaborate analysis, all within the last ten years. See, e.g., ALASKA STAT. section 44.62.195 (1993) (requiring agencies affected by a change in regulation to prepare reports estimating additional funds needed to comply); ARIZ. REV. STAT. ANN. sections 41-1052 to -1056 (Supp. 1995) (requiring agencies to create an "economic, small business and consumer impact statement"); CAL. GOV'T CODE section 11346.5(a)(6), (7), (9) (Deering Supp. 1995) (requiring estimates of costs to agencies and of adverse impact to businesses); id. section 11346.54 (assessment of effect on jobs and business); id. section 11346.6 (cost of variance from federal statutes); COLO. REV. STAT. section 24-4-103(4.5) (1988 & Supp. 1995) (economic impact and effectiveness analysis "on request of any person"); CONN. GEN. STAT. ANN. section 4-168(a)(5) (West Supp. 1996) (fiscal note estimating cost or revenue impact); id. section 4-168a (regulatory flexibility analysis for small business); FLA. STAT. ANN. section 120.54(2)(a), (b) (West 1996) (small business impact analysis and economic impact statement); IOWA CODE section 17A.4(1)(c) (1995) (estimates of economic impact); KAN. STAT. ANN. section 77-416(b) (1989) (economic impact statement); KY. REV. STAT. ANN. section 13A.240 (Michie/Bobbs-Merrill Supp. 1984) (regulatory impact analysis); id. section 13A.250 (fiscal note); LA. REV. STAT. ANN. section 49:953(A)(1) (West Supp. 1996) (fiscal and economic impacts); MD. CODE ANN., STATE GOV'T section 10-124(b) (1993) (impact on business); MASS.

minimal state judicial expertise to review these analyses.¹³ The ideal form of benefit-cost analysis continues to remain the focus of scholarly work, while actual, real-world implementation receives little scrutiny. Discussion of the states' experience in economic analysis of rules is almost completely absent from the administrative law literature.¹⁴ Without closer attention to the new state rulemaking procedures and their analytic overlays, curious results for the nation's regulatory system will likely emerge as states' programs mature.¹⁵

Whether the state experience with economic analysis of rules will provide a productive laboratory of solutions for the general challenges of agency discretion and good governance or will instead waste time and effort on paperwork that is useless--or worse, that undermines other legitimate efforts at regulatory reform and legal effectiveness of rules--depends on four factors: (1) the level of agreement of interested parties on the goals of a state analytic system; (2) the resources devoted to the system; (3) the way the system fits into the overall rulemaking process; and (4) the critical methodological choices that must be made to implement a program for economic analysis of rules. These concerns are common to the state and federal government, but they take on heightened and unique dimensions at the sub-national level.¹⁶

I. THE PROBLEM OF ECONOMIC ANALYSIS OF RULES IN THE STATES

A. The North Carolina Example

This article describes one state agency's struggle to make meaning out of a mandate to conduct economic analysis of rules and to make that [*698] mandate into an analytic system that furthers the best intentions of regulatory reformers. The agency is the North Carolina Department of Environment, Health, and Natural Resources (DEHNR), which has broad regulatory powers across the entire spectrum of environment, natural resource, and public health issues.¹⁷ In North Carolina, DEHNR rules govern such matters as the waste that is discharged into the state's air and waters, the transportation, storage, treatment, and disposal of solid, hazardous, and radioactive waste, coastal zone development, mining, fishing, forestry, water resources, wetlands, sedimentation control, state

[ANN. LAWS ch. 30A, section 5](#) (Law. Co-op. 1995) (estimates of fiscal effect and impact on small business); [MINN. STAT. ANN. section 14.131](#) (West Supp. 1996) (statement of need and reasonableness); [MISS. CODE ANN. section 49-2-11](#) (Supp. 1995) (economic and fiscal statement for environmental rules only); [NEV. REV. STAT. ANN. section 233B.066\(1\)\(e\)](#) (Michie 1996) (estimated economic effect on the regulated business and on the public); [N.Y. A.P.A. LAW section 202-a](#) (McKinney 1995) (regulatory impact statements); id. section 202-b (regulatory flexibility statements); id. section 202-c (rural area flexibility analyses); [N.C. GEN. STAT. section 150B-21.4](#) (1995) (fiscal and economic impact notes); [WIS. STAT. ANN. section 227.14](#) (West 1994 & Supp. 1995); Regulatory Reform Act of May 16, 1995, ch. 403, section 201, 1995 Wash. Laws 2169-71 (to be codified at WASH. REV. CODE section 34.05) (benefit-cost analysis); Exec. Order No. 384 (Mass. 1996) [hereinafter Mass. Exec. Order No. 384]; Exec. Order No. 27 (N.J. 1994) [hereinafter N.J. Exec. Order No. 27].

³ 1981 MODEL STATE ADMIN. PROCEDURE ACT, 15 U.L.A. 1 (1990).

⁴ See ARTHUR EARL BONFIELD, STATE ADMINISTRATIVE RULE MAKING 213 (1986). "Section 3-105(a) of the 1981 MSAPA requires an agency to issue an impact statement called a 'regulatory analysis' if, within 20 days from the date that notice of proposed rule making is published, the administrative rules review committee, the governor, a political subdivision, an agency, or 300 persons file a written request for such a statement." Id. The official comment to the model rules notes: a cost-benefit analysis is

an important device with which to assure sound agency consideration of the desirability of a rule. It is also a useful device to help assure public support for, or opposition to, a rule, to the extent either is warranted, based upon a fully public description of its potential costs and benefits.

1981 MODEL STATE ADMIN. PROCEDURE ACT section 3-105 cmt., 15 U.L.A. 39 (1990).

⁵ NATIONAL GOVERNOR'S ASS'N, POLICY NR-6: ENVIRONMENTAL PRIORITIES AND UNFUNDED MANDATES (Winter Meeting 1996) [hereinafter POLICY NR-6].

⁶ Bonfield notes that the states are experiencing the same "distinct shift away from an earlier insistence on clear standards in legislative delegations of authority to administrative agencies" to more generalized grants of rulemaking authority, with safeguards provided primarily by procedures, as numerous commentators have documented at the federal level. BONFIELD, *supra* note 4, at 20.

parks, agricultural subsidies, restaurant and lodging sanitation, the public health response to sexually transmitted diseases, reimbursement of medical expenses under various state and federal welfare programs, post-mortem examinations, accident prevention, lead and asbestos abatement, and operation of the state's zoo, museum of science, and aquariums.¹⁸ This breadth of responsibility makes implementation of a systematic approach to economic analysis of rules both harder and more interesting than approaching it at a particular program or project level. In addition to explaining the choices faced by DEHNR in setting up a system for economic analysis of rules, this paper considers state efforts across the United States and compares state and federal responses to some of the general problems in economic analysis of rules.

The new economic analysis statute in North Carolina requires that a proposed rule with an "aggregate financial impact on all persons affected of at least five million dollars"¹⁹ must contain a description of affected parties, a description and estimate of the types of expenditures that these parties will have to make to comply with the rule, a description of the purpose and benefits of the proposed rule, and an explanation of how the estimates were calculated.²⁰ The term "persons" in this requirement includes natural and corporate, as well as public and private, entities.²¹ The analysis can be done either by the agency promulgating the rule, subject to approval by another executive branch agency (the Office of State Budget and Management, or OSBM), or the analysis can be done by OSBM itself.²² For the vast majority of rules, the agency formally promulgating a rule is a board or commission of citizens appointed by the governor, the legislature, or both. These boards serve on a part-time basis and are staffed by full-time state employees. In an agency such as DEHNR, the boards and commissions are considered a part of DEHNR for administrative purposes, but their members are not subject to removal and replacement by the agency head, the Secretary of DEHNR.²³ [*699]

The analysis of the proposed rule must be done and approved by OSBM prior to publication of the text of the proposed rule in notice and comment proceedings.²⁴ Failure to do the analysis allows any person to challenge the rule when it comes before yet another agency, the Administrative Rules Review Commission, which has veto power over all rules.²⁵ When it passed the requirement to do economic analysis of rules, the North Carolina

⁷ See CHRISTOPHER F. EDLEY, JR., ADMINISTRATIVE LAW: RETHINKING JUDICIAL CONTROL OF BUREAUCRACY 6 (1990) (noting that the sweeping delegation of powers to administrative agencies and the concomitant "sense that this discretion must be controlled which continues to animate administrative law"); 3 DAVIS & PIERCE, *supra* note 1, sections 17:1-9, at 97162; Merrick B. Garland, Deregulation and Judicial Review, 98 HARV. L. REV. 505, 525-37 (1985); Richard B. Stewart, The Reformation of American Administrative Law, 88 HARV. L. REV. 1667, 1669-1711 (1975).

⁸ Professor Edley's call for a broader interpretation of the thrust of administrative law--beyond the mere checking of arbitrariness--to "improve the quality of public sector decision making," animates the work of setting up the system of regulatory analysis discussed in this article. EDLEY, *supra* note 7, at 6 n.9; see also Colin S. Diver, Statutory Interpretation in the Administrative State, 133 U. PA. L. REV. 549, 568-73 (1985); Colin S. Diver, The Optimal Precision of Administrative Rules, 93 YALE L.J. 65, 71-79 (1983) (urging consideration of the proper mix of transparency, accessibility, and congruence in formulating regulations); Colin S. Diver, Policymaking Paradigms in Administrative Law, 95 HARV. L. REV. 393, 428-34 (1981) (on choosing between incremental and synoptic modes of policymaking); Rubin, *supra* note 1, at 409 (advocating "effectiveness" as a basis for legislative theory of modern state). But the notion of improving "effectiveness" partly begs the question of regulatory analysis, which is how to measure effectiveness (relative to costs) for rules.

⁹ Neither "benefit-cost analysis" nor its synonym "cost-benefit analysis" is a very precise term as applied to rulemaking. This definitional problem is discussed *infra* notes 3236 and accompanying text.

¹⁰ See generally Christopher M. Heimann, Project: The Impact of Cost-Benefit Analysis on Federal Administrative Law, 42 ADMIN. L. REV. 545 (1990). For historical perspectives on federal regulatory review from the Nixon administration through the Reagan administration, see Richard N.L. Andrews, Economics and Environmental Decisions, Past and Present, in ENVIRONMENTAL POLICY UNDER REAGAN'S EXECUTIVE ORDER: THE ROLE OF BENEFIT-COST ANALYSIS 43, 45-81 (V. Kerry Smith ed., 1984) (reviewing the history and evolution of federal requirements); Ralph A. Luken & Arthur C. Fraas, The U.S. Regulatory Analysis Framework: A Review, 9 OXFORD REV. ECON. POL'Y 96, 97-99 (1993). These histories move from the "Quality of Life" review established under President Nixon, see FEDERAL REGULATION & REGULATORY REFORM, H.R.

legislature appropriated money to establish two positions in OSBM to carry out the program. ²⁶ Agencies that

Doc. No. 134, 94th Cong., 2d Sess. (1976), to President Ford's Executive Order 11,821, 3A C.F.R. 203 (1975), reprinted in 12 U.S.C. section 1984 (1976), amended by Exec. Order No. 11,949, 3 C.F.R. 161 (1977), to President Carter's Executive Order 12,044, 3 C.F.R. 152 (1979), reprinted in [5 U.S.C. section 553](#) (Supp. II 1978), which required that agencies consider the direct and indirect effects of the regulation and choose the least burdensome alternative, to President Reagan's Executive Order 12,291, 3 C.F.R. 127 (1982), reprinted in [5 U.S.C. section 601](#) note (1994) (revoked by Exec. Order No. 12,866, 3 C.F.R. 638 (1994), reprinted in [5 U.S.C. section 601](#) (1994)), which required a Regulatory Impact **Analysis**. For a review of the Clinton administration's twists, Exec. Order No. 12,866, section 1(a), (b)(5)-(6), 3 C.F.R. 638, 638-39 (1994), reprinted in [5 U.S.C. section 601](#) (1994), see Richard H. Pildes & Cass R. Sunstein, Reinventing the Regulatory State, [62 U. CHI. L. REV. 1](#) (1995).

¹¹ There are different senses of "**devolution**." For some, it primarily connotes a political shift in power from the federal government to the states. Others note that the states already carry out the vast majority of health, environment, and safety regulation in this country. See, e.g., Mary A. Gade, The **Devolution** Revolution Has Already Occurred, STATE ENVTL. MONITOR, Mar. 4, 1996, at 17; Mary A. Gade, When the States Come Marching In, NAT. RESOURCES & ENV'T, Winter 1996, at 3. Still others question the extent to which all the recent discussion of **devolution** really means anything. See, e.g., James M. McElfish, Jr., Is There A **Devolution** Revolution? I-1 (Apr. 26, 1996) (Paper presented to the North Carolina Bar Association Environmental Law Section). Nevertheless, regulatory reform proposals of recent vintage continue to press for transfer of authority to the states and, in light of such proposals, the importance of state rulemaking and regulation generally seems destined to grow, at least in the short run. E.g., HARVARD GROUP ON RISK MANAGEMENT REFORM, REFORM OF RISK REGULATION: ACHIEVING MORE PROTECTION AT LESS COST 43-46 (1995) [hereinafter HARVARD GROUP] (when the potential costs and benefits of contemplated federal **rules** of conduct will be experienced primarily by citizens in a particular state, those citizens are likely to be better positioned to decide "how safe is safe enough"). Heightened interest in policy responsibility at the sub-national (or sub-confederation, in the case of the European Union) level is not confined to the United States. The concomitant concern for sub-national or sub-confederation **analysis** of **rules** and their implications for resource allocation is an international issue.

¹² See infra part V.

¹³ See infra part III. Questions of state competence and capacity have always loomed large in debates over the allocation of policy responsibility between the federal government and state governments. As this paper will discuss further, based on the early experience of states with **economic analysis**, there are substantial concerns about the level of resources states will devote to improved rulemaking. But there is some evidence that the general level of state administrative competence and capacity has increased significantly in the last several decades, at least in the environmental area. See NATIONAL ACADEMY OF PUBLIC ADMINISTRATION, SETTING PRIORITIES, GETTING RESULTS: A NEW DIRECTION FOR EPA 71-74 (1995).

¹⁴ The excuses given by administrative law scholars for reluctance to delve into states' experiences seem particularly weak in a field such as **economic analysis** of **rules**. The field itself is young and there is good reason to believe that some state innovations will be unique and that not everything to be learned can be learned from studying the federal agencies. Cf. Richard J. Pierce, Jr., How Much Should an Administrative Law Course Accomplish?: A Response to Schotland's Five Easy Pieces, 43 ADMIN. L. REV. 123, 124 (1991) (state agency experience is not generalizable or interestingly different from federal agency experience).

¹⁵ Cf. [New State Ice Co. v. Liebmann, 285 U.S. 262, 311 \(1932\)](#) (Brandeis, J., dissenting) ("It is one of the happy incidents of the federal system that a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and **economic** experiments without risk to the rest of the country.").

¹⁶ For example, certain methodological problems, such as the "standing" of persons outside a state's borders to be counted in a cost-benefit calculus, are typically less critical at the national level. See infra part V.B (discussing the "standing" problem).

¹⁷ See [N.C. GEN. STAT. section 143B-279.3\(b\)](#) (1995) (listing areas over which DEHNR has regulatory powers).

¹⁸ Id.

¹⁹ Id. section 150B-21.4(b1).

²⁰ Id. section 150B-21.4(b2).

²¹ Id. section 150B-2(7).

²² Id. section 150B-21.4(b1).

wished to conduct and publish analyses themselves were to do so with existing personnel and resources, which typically include few, if any, professional economists.

DEHNR, which is comprised of approximately thirty divisions and an additional thirty-plus boards and commissions with advisory or rulemaking powers, wished to conduct analyses on its own rules. No one else within the state is likely to understand the immediate consequences of a rule change as well as the persons who administer the rule. To accommodate the differences between its sub-agencies, DEHNR grouped its rules into different categories depending on the type of regulated behavior usually associated with those categories, believing that different types of rules require different analysis styles and techniques. For example, rules governing land use are analytically distinct from rules governing pollution control technology and sanitation, which are themselves different from rules governing the awarding of grants and loans.

To help bridge the gap between the knowledge of program personnel about the likely consequences of a rule change and the knowledge of an economist about a rule's economic implications, an interactive, computerbased reference guide provides the rulewriters, analysts, and other interested persons with expert advice, examples, data sources, and a document assembly program. The software provides its user with a flexibly structured "conversation"--answering queries, consulting tutorials, checking data sources and an archive of examples, and organizing the user's responses--and when finished, the computer produces a standardized economic analysis report, summarizing the analysis and all supporting assumptions and data. The introductory screens and first two steps of the software are common to all rules regardless of subject matter or rule content. Step 1 asks for basic information about the rule. Step 2 allows the analyst to screen out any rule for which an analysis is not required, such as [*700] as a technical correction, or a rule which adopts a federal statute by reference. Step 3 asks the analyst for more information about the rule, the parties it affects, and their baseline situation. Step 4 asks the analyst to estimate compliance costs for the regulated community (for rules that regulate behavior) or the cost to the taxpayer (for service/financial program rules), as well as how the rule will affect the costs to implementing agencies. In addition, Step 4 asks the analyst to qualitatively estimate the benefits of the rule.

Step 5 asks the analyst to determine whether the total economic impact is greater than \$ 5 million in a twelve-month period (the statutory threshold determination for producing a fiscal analysis) based on answers to the earlier questions. Finally, for rules that regulate consumer behavior and that do cross the threshold, Step 6 helps the analyst refine and expand on earlier entries. The software package uses the World Wide Web and allows for links to references through use of the Internet. Use of the Internet opens up the possibility for analyses to be openly disseminated to, and commented on by, interested persons outside the agency.

This is the basic framework of North Carolina's new requirement for economic analysis, and DEHNR's initial response. This statutory requirement is not unlike the evolving requirements in many states. DEHNR's responses are driven by factors which are also common to the states and critical to understanding the implications of these economic analysis requirements for the nation's regulatory system.

B. Background Beliefs About Economic Analysis of Rules in the States

²³ See, e.g., id. section 143B-279.3(b) (listing some of the boards and commissions within DEHNR); id. section 143-215.3 (Supp. 1995) (powers of the Environmental Management Commission, including general rulemaking power); id. section 143B-282 (1995) (same); id. section 143B-283 (Supp. 1995) (appointment of the Environmental Management Commission by the Governor and legislative leadership). This structure for rulemaking bodies--separating the actual power to promulgate rules from the full-time bureaucrats--is not unusual at the state level, although it differs from the federal norm.

²⁴ Id. section 150B-21.4(b1) (1995).

²⁵ The Rules Review Commission is made up of part-time citizen volunteers, appointed by the legislature, with two full-time professional staff members. See id. section 150B21.12(d) (describing the Administrative Rules Review Commission's ability to veto agency rules).

²⁶ See infra note 125.

Based on DEHNR's early experience and a review of other states' attempts to carry out similar mandates, it appears that useful economic analysis of rules is possible at the state level, but only by loosening widely-held beliefs about the nature of "good" economic analysis and substituting alternative assumptions. DEHNR's fledgling system for economic analysis of rules is built with several of these alternative norms in mind. These norms will provide a useful basis for review of economic analysis of rules, particularly in states, such as North Carolina, that (1) undertake analysis with a primary goal of slowing down and changing the regulatory framework; (2) are unwilling to devote the level of resources to analysis that is demanded by traditional benefit-cost analysis; (3) wish to inject analysis into the early phases of rule development and public debate; and (4) do not have judicial experience in reviewing economic analysis.

In such states, economic analysis of rules will be helpful to the extent that it informs and supplements political debate over rules, rather than attempting to substitute for popular or political judgments about the wisdom of policy choices. Ideally, analysis should illuminate distributional consequences, rather than obscuring them or pretending that they do not exist. Analysis of rules in such states is improved to the extent it accepts and incorporates legislative, constitutional, and common-law judgments about entitlements and rights as necessary and socially beneficial, rather than attempting to replace those judgments with an ideology of "efficiency" as the primary goal for analysis. Similarly, analysis is improved to the extent it views "costs" and "benefits" in ways that are most relevant to those that are affected by a rule, which may not be in ways that meet all the requirements of orthodox applied welfare economics. The legislative or policymaker's judgments about the ends of analysis should dictate how a program of analysis is set up. In other words, actual policy goals should become the objective function for the analyst, perhaps replacing efficiency, the traditional objective in this arena.²⁷ A program of regulatory analysis thus loosened from the anchor of orthodox benefit-cost analysis may actually be more beneficial and less costly than a more traditional program of analysis. Working from the values and assumptions DEHNR makes about regulatory analysis--primarily that it should enhance political debate and participation--it is important to make analysis of rules accessible to as many people as possible.

While these are the conclusions of one state agency mandated to undertake economic analysis of rules, this article stresses that other choices are possible and defensible. The framework presented in this paper for thinking about the ends and means of regulatory analysis can accommodate both traditionalists and their critics. Before reviewing this framework, it is important to keep in mind that systems of regulatory analysis will be dynamic and evolutionary. With a good foundation and continual review, these systems may evolve to a closer fit with the particular goals, resources, and institutional structure of the state.²⁸ The initial system designers should keep this "need for growth" in mind.

No credible process for regulatory analysis can be created without careful attention to three predicate questions. First, what should economic analysis of rules add to the rulemaking process?²⁹ Second, how much is the state

²⁷ Not all authors on economic analysis of rules are careful enough to note that furthering efficiency is but one possible goal of analysis. For an example of care in making this disclaimer, see Robert W. Hahn & John A. Hird, The Costs and Benefits of Regulation: Review and Synthesis, 8 YALE J. ON REG. 233, 236 (1991) (noting that past studies of regulatory costs often overstate costs by failing to disaggregate transfers); cf. Daniel W. Bromley, The Ideology of Efficiency: Searching for a Theory of Policy Analysis, 19 J. ENVTL. ECON. & MGMT. 86 (1990). But see Anthony Boardman et al., Costs and Benefits Through Bureaucratic Lenses: Example of a Highway Project, 12 J. POL'Y ANALYSIS & MGMT. 532, 532-55 (1993) (categorizing ways in which "real world" policy analysts (bureaucrats) miss or ignore the "correct" way to analyze impacts). Failure to keep this point explicit adds sting to philosophical criticism such as that of Steve Kelman, Cost-Benefit Analysis: An Ethical Critique, REGULATION, Jan.-Feb. 1981, at 33, 35 (noting that benefit-cost analysis fails as a complete description of a means to enhance social welfare, however conceived).

²⁸ The need for an evolutionary approach to law and policy, as well as a careful focus on actual consequences, are themes explored by Jonathan Baert Wiener in Law and the New Ecology: Evolution, Categories and Consequences, 22 ECOLOGY L.Q. 325 (1995). See also ROBERT N. BELLAH ET AL., THE GOOD SOCIETY 15 (1991) (discussing the co-evolution of nature and culture).

²⁹ See infra part II.

willing to spend on analysis? ³⁰ Third, how does the reg- [*702] ulatory analysis fit into the larger institutional context for agency rulemaking, including statutory standards, public input, and review? ³¹ For a state agency that wishes to or is forced to begin economic analysis of rules in an attempt to improve rulemaking, there are a series of methodological choices to be made before such analysis can proceed. The only way to know how well these choices have been made is by reference to the primary, predicate questions about economic analysis of rules: Why do it? What resources can be spent on it? How will it be reviewed?

C. On Terminology

Whenever legislatures and agencies discuss rulemaking, terminology relating to economic analysis is imprecise. "Benefit-cost analysis" itself resists precise definition. ³² For example, it can be used in a narrow sense, borrowed from the economic analysis of public investment projects such as dams. ³³ In this narrow sense, "benefit-cost analysis" attempts to provide an economically defensible answer to the question of whether the benefits of a rule outweigh the costs. On the other hand, in a broader sense "benefit-cost analysis" has come to refer to a general framework for quantifying and comparing changes that are predicted to occur after promulgation of a rule. This general framework may or may not yield a direct, quantitative comparison of costs and benefits.

This definitional difficulty is heightened by two factors. First, the term "benefit-cost analysis" masks a variety of methodological choices which have no determinate "right answer." ³⁴ Second, there are important and problematic differences between the analysis of the costs of and benefits from a project, such as a dam, and an administrative rule. ³⁵ The [*703] uncertainty about changes in behavior that will occur as a result of a rule is often much greater than the uncertainty about economic changes resulting from a project. ³⁶ The effects of a rule change are also spread over much greater spatial and temporal spans than the effects of a project.

With this as background, this article uses the term "economic analysis of rules" to refer to the broader sense in which "benefit-cost analysis" is sometimes used: as a general framework for investigating and reporting the economic effects of a rule. The term "regulatory impact analysis" is currently used in this sense at the federal

³⁰ See *infra* part III.

³¹ See *infra* part IV.

³² See, e.g., [*International Union v. OSHA*, 938 F.2d 1310, 1319-21 \(D.C. Cir. 1991\)](#) (reviewing cases on the relationship between benefit-cost analysis and statutory standards, noting Ben Franklin's claim of fathering benefit-cost analysis, his "moral or prudential algebra"); Bruce D. Fisher, Controlling Government Regulation: Cost-Benefit Analysis Before and After the Cotton-Dust Case, 36 ADMIN. L. REV. 179, 181 & n.21 (1984). The definitional and other problems that arise in the use of "cost-benefit analysis" for rules generally also apply to the use of the term with respect to standard setting. Standard setting is an important subset of rulemaking, especially in the health, safety, and environmental areas. Twenty years of experience with "cost-benefit analysis" or its related forms of economic analysis as applied to standard setting at the federal level have produced some lessons for rulemaking generally. See generally, e.g., Jonathan K. Baum, Legislating Cost-Benefit Analysis: The Federal Water Pollution Control Act Experience, 9 COLUM. J. ENVTL. L. 75 (1983) (discussing cost-benefit analysis used for the Federal Water Pollution Control Act).

³³ See, e.g., ROBERT SUGDEN & ALAN WILLIAMS, THE PRINCIPLES OF PRACTICAL COSTBENEFIT ANALYSIS 3 (1978) ("This book is about the appraisal of projects.").

³⁴ See *infra* part V.

³⁵ The basic early texts on benefit-cost analysis do not seem to acknowledge or distinguish its use for public investment projects from its use for regulatory programs, other than EDWARD M. GRAMLICH, BENEFIT-COST ANALYSIS OF GOVERNMENT PROGRAMS (1981) (arguing that benefit-cost analysis need not be limited to expenditure programs) and ROBERT HALVORSEN & MICHAEL G. RUBY, BENEFIT-COST ANALYSIS OF AIR POLLUTION CONTROL (1981). Later writers, reviewing the experience with benefit-cost analysis and Executive Order 12,291, are more candid about the differences. See, e.g., V. Kerry Smith, Environmental Policy Making Under Executive Order 12291: An Introduction, in ENVIRONMENTAL POLICY UNDER REAGAN'S EXECUTIVE ORDER: THE ROLE OF BENEFIT-COST ANALYSIS, *supra* note 10, at 3, 22-23.

level and in some states. ³⁷ The term "regulatory impact analysis" has an advantage over the term "economic analysis" in that it avoids begging the question as to whether the analysis is or is not "economic." ³⁸ The discussion that follows, however, is not confined to the issues or choices raised by "regulatory impact analysis." Indeed, part of the value in reviewing the states' experience comes from their broader set of issues and responses. In order to lessen confusion, this paper avoids the term "regulatory impact analysis" unless it refers specifically to that program for analysis carried out under the auspices of the various federal executive orders. The term "benefit-cost analysis" in this paper refers to the narrow sense of analysis in the orthodox tradition of welfare economics.

As for the "economics" in "economic analysis of rules": if "economics" is "what economists do," then some might claim the analytic system for DEHNR rules is not economics. DEHNR's program is designed to be undertaken by rule writers who are not economists and it borrows from, but does not adhere to, orthodox welfare economics. This may suggest to [*704] some that it is, at best, a vulgarization. ³⁹ DEHNR's goal is not vulgarization, but rather to make the analysis meaningful with the available resources. Economic analysis should employ scientists, engineers, and natural resource technicians as part of the "richer interdisciplinary synthesis" ⁴⁰ that is increasingly called for in policymaking.

For DEHNR in North Carolina, as for states generally, it is still early to judge whether economic analysis of rules will be productive. The potential problems are formidable. Benefit-cost analysis techniques were first developed for analysis of large public investment projects and then later adapted for analysis of major rules at the federal level. This adaption raised methodological and philosophical problems and prompted debate over the usefulness of benefit-cost analysis techniques in the federal rulemaking context. The art and science of analysis has progressed greatly in response to these problems. Now the focus of the debate should shift, as the practice of economic analysis at the state level begins in earnest; the same old methodological and philosophical problems remain, but states add a unique set of twists. The evolution of economic analysis of rules, moving hand in hand with the

³⁶ Many rules do no more than categorize people and services, define terms, set up processes, or other things that are quite far removed from actual, predictable changes in the behavior of regulated persons. Thus, one must "understand that the characteristics of a particular rule-making may affect: 1) whether any [economic analysis] could yield useful information; and/or 2) the applicability and utility of various approaches to [economic analysis]." Anne DeVries et al., Economic Analysis of Proposed Environmental Rules and Regulations: A Scoping Report on Potential Implementation Issues (Fall 1994) (unpublished manuscript, on file with DEHNR).

³⁷ E.g., KY. REV. STAT. ANN. section 13A-240 (Michie/Bobbs-Merrill Supp. 1994).

³⁸ To add to the terminological confusion, the North Carolina statute that mandated the program we describe refers to the analysis to be done as a "fiscal note," a holdover from the longer history of state government analysis of fiscal impact of rules (impacts on governmental revenue and expenditures). N.C. GEN. STAT. section 150B-21.4(b1) (1995). Confusion between economic concepts (e.g., costs) and accounting concepts (e.g., expenditures) is typical whenever one steps outside the realm of professional economists to discuss regulatory impacts. Rather than viewing concern about accounting concepts as misguided or biased, as some economists might, a state agency is usually better off taking this concern as evidence of what proponents of regulatory impact analysis really want--i.e., if the statute says "analyze expenditures," even though benefit-cost analysis would dictate analysis of "costs," then the agency should defer to the statutory language. Cf. George J. Stigler, Economists and Public Policy, REGULATION, May-June 1982, at 13, 15-16 (urging economists to recognize that policymakers ignore some economic advice for important, rational reasons).

³⁹ See generally Smith, *supra* note 35, at 25 (present state of benefit-cost analysis methodology implies extensive need for professional judgment in doing actual analyses). DEHNR's initial efforts to crack this conundrum involve initial setup of a system by professionals (economists and policy analysts) with expertise captured and delivered on the computer; opening the analyses up to criticism and advice from professionals; archiving and comparing the results from similar rule changes to seek institutional learning and improvement over time; and keeping open the potential for adversarial-like participation in the process. Eventually, perhaps, the agency can simply hire professionals. But these other techniques may add value even for an agency with the resources to "leave it to the professionals."

⁴⁰ SUSAN ROSE-ACKERMAN, RETHINKING THE PROGRESSIVE AGENDA: THE REFORM OF THE AMERICAN REGULATORY STATE 6 (1992).

devolution of policy responsibility to the states, will greatly affect the way rules are formulated and carried out in the United States in the foreseeable future. To understand and critique that evolution, one must begin with a realistic assessment of the goals that states have in doing economic analysis of rules.

II. WHY STATES ANALYZE THE IMPACTS OF RULES

There are many different motivations for espousing economic analysis of rules. Political proponents for economic analysis of rules, though, are not always clear about what it is they are seeking to accomplish.⁴¹ Lack of clarity on the ends toward which analysis aims may enhance the [*705] political chances for enacting a program, but it severely undercuts the chances for evaluating whether the program "works."⁴² The following discussion contains some of the most frequently cited reasons for attempting economic analysis of rules. Each reason may dictate certain methodological choices in carrying out economic analysis of rules. Each serves as a different "yardstick" for measuring the success of a program. Is a successful program for economic analysis of rules one that produces rules that are, individually or as a set, more "efficient" in the technical sense of that word? Or is success simply weeding out the few rules for which costs greatly outweigh benefits? Is the criterion instead whether the ultimate rules chosen are the least costly ways to accomplish given goals? Or perhaps success is measured by improvements in the quality or quantity of public comment on the actual consequences of the rule? Does success mean simply slowing down the rulemaking process? Or does it mean better assurance that rules are effective in accomplishing the legislatively sanctioned ends towards which they presumably aim? Many of these and other potential reasons to conduct economic analysis appear, to some extent, inconsistent with each other, especially in the real world of limited resources. Their apparent inconsistencies, however, must be viewed in the larger context in which rulemakers find themselves: as one part of a large, dynamic regulatory and political structure.⁴³ At one time or another, each goal may be paramount for a participant in the dance of legislation and rule promulgation. Viewed in this larger context, many apparent inconsistencies resolve into useful, distinct points of view. In the context of designing a system for economic analysis, however, maximizing all these goals at once is impossible. A well-designed system must concentrate on some narrower set of these goals. Different states--and different administrations at the federal level--choose different sets of goals on which to focus.⁴⁴ [*706]

⁴¹ See, e.g., Act of Apr. 8, 1994, ch. 589, section 1, 1994 Miss. Laws 1038 ("Environmental rules and regulations should . . . be adopted after consideration of the cost to the regulated community of implementing the rule or regulation. (2) It is further the intent of the Legislature that environmental rules and regulations be developed which are protective of the environment and can be implemented on a least-cost basis and in a least-intrusive manner."); N.J. Exec. Order No. 27, supra note 2 (requiring "cost-benefit analysis" of standards that exceed federal standards, but giving as a reason that "New Jersey's administrative agencies should analyze whether analogous federal standards sufficiently protect the health, safety and welfare of New Jersey citizens").

⁴² But cf. Baum, supra note 32, at 76 (statutorily created gradations of analysis for technology standards in the FWPCA blurred over time into essentially one test, the easiest to administer, and judicial review has largely permitted this). Baum seems to attribute this decay in clarity to the lack of meaning in the statutory gradations, which did not represent a carefully considered continuum of analysis. The standards were further confused by a purposefully contradictory legislative history. This might also be an example of the tendency for technocratic institutions to establish means as goals in and of themselves. E.g., Rubin, supra note 1, at 412.

⁴³ So, for example, it is not really possible to tear rulemaking out of the regulatory fabric without unraveling threads such as enforcement and permitting. To understand the uses and abuses of economic analysis of rules, one needs to consider these interrelationships. See, e.g., IAN AYRES & JOHN BRAITHWAITE, RESPONSIVE REGULATION: TRANSCENDING THE DEREGULATION DEBATE 19-20 (1992) (noting a linkage between enforcement and rulemaking).

⁴⁴ It is not possible to make definitive determinations of a state's goals for analysis from a simple review of its economic analysis statutes. The statutes are typically ambiguous, inconsistent, have a layering of additional responsibilities over time, and, depending on the level of resources devoted to the analytical effort, may be implemented in a manner that differs greatly from the textual mandate. With these reservations in mind, it is possible to discern different goals in programs such as Arizona and Minnesota, which call for analysis of macroeconomic effects, see [ARIZ. REV. STAT. ANN. section 41-1055\(A\)\(4\)](#) (Supp. 1995); [MINN. STAT. ANN. section 14.11\(1\)](#) (West Supp. 1996); from, for example, Massachusetts' new regulatory sunset executive order, which seeks to rescind all regulations that do not meet a set of apparently stringent economic and

A. The Focus on Economics

A distinguished group of economists was convened in 1995 to discuss the role of economic analysis in the regulation of health, safety, and the environment. This group's first two findings provide a general statement of goals for economic analysis of rules from an economist's point of view. First, the group noted, "a benefit-cost analysis is a useful way of organizing a comparison of the favorable and unfavorable effects of proposed policies."⁴⁵ That is, despite the acknowledged fact that "in many cases, benefit-cost analysis cannot be used to prove that the economic benefits of a decision will exceed or fall short of the costs,"⁴⁶ there is potential value in estimating costs and benefits anyway in order to "help the decisionmaker better understand the implications of a decision."⁴⁷ Second, "economic analysis can highlight the extent to which cost savings can be achieved by using alternative, more flexible approaches that reward performance."⁴⁸ This is a measured, modest statement of the goals of economic analysis that might be summed up by saying that economic analysis of rules, like economic analysis generally, seeks to improve the allocation of scarce resources, which are committed through regulation as well as through direct investment.

A less modest formulation of an economic focus states that analysis should determine whether individual rules provide potential Pareto improvements, to borrow the terminology of welfare economics.⁴⁹ This formulation asserts that analysis should reveal whether the sum of economic gains from a rule change exceeds the costs, in theory allowing the winners to compensate the losers and still leave some societal gain (the so-called Kaldor-Hicks criterion).⁵⁰ The notion of potential Pareto improvements lies at the heart of benefit-cost analysis and is buttressed by reams of academic economic research and writing.⁵¹ This goal has a strong form [***707**] and a weak form, with the strong form including a decision criterion that rules should not be adopted unless their benefits exceed their costs, and the weak form not implying a decision rule.⁵² Proponents of the Reagan administration's Executive Order 12,291⁵³ cite such a decision rule as a unique contribution of that executive order to regulatory impact analysis.⁵⁴ The Clinton administration's Executive Order 12,866 softens the decision rule, in the same way recommended by the National Governor's Association, by requiring an agency to "propose or adopt a

administrative tests, see Mass. Exec. Order No. 384, *supra* note 2; and from Washington's concern with a quantitative assessment of the distribution of costs and benefits on small business, see WASH. REV. CODE section 34.05 (1995).

⁴⁵ KENNETH J. ARROW ET AL., BENEFIT-COST ANALYSIS IN ENVIRONMENTAL, HEALTH, AND SAFETY REGULATION: A STATEMENT OF PRINCIPLES 5 (1996).

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Id.* at 6.

⁴⁹ See GRAMLICH, *supra* note 35, at 43; HALVORSEN & RUBY, *supra* note 35, at 20-21 (discussing the criteria applied in economic analysis).

⁵⁰ See, e.g., SUGDEN & WILLIAMS, *supra* note 33, at 89-90 (discussing project appraisal). The work of John Hicks and Nicholas Kaldor in creating the notion of potential Pareto improvements is generally credited for allowing economists to divest themselves of concern about distributional problems and to focus on a conception of efficiency that is claimed to be "positive," and "value-free." E.g., ROGER BACKHOUSE, A HISTORY OF MODERN ECONOMIC ANALYSIS 302-03 (1985).

⁵¹ But see Bromley, *supra* note 27, at 96 ("In all of this prodigious elegance, rarely is there recognition that the Pareto test remains what it has always been--an analytical construct (inconsistent and incoherent at that) with no special claim to legitimacy beyond the tautological domain out of which it arose.").

⁵² The North Carolina economic analysis statute does not include a decision rule. See [N.C. GEN. STAT. section 150B-21.4](#) (1995). The State of Washington recently amended its statute requiring economic analysis of rules to include, among other things, a decision rule: "Before adopting a rule . . . an agency shall . . . determine that the probable benefits of the rule are greater than its probable costs, taking into account both the qualitative and quantitative benefits and costs and the specific directives of the statutes being implemented." [WASH. REV. CODE section 34.05.328](#) (1995). Query how one determines that benefits are "greater" than costs without quantification.

regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs." ⁵⁵ This formulation acknowledges that some outcomes cannot be quantified, because it does not require that benefits "exceed" costs for a rule to be adopted.

The value of potential Pareto improvements as a guide to public policy choices, however, may be unrealized by those outside the economics profession (as well as by some within). ⁵⁶ For many economists, the potential Pareto improvement idea has served to justify inattention to distributional effects and to avoid fatal difficulties with interpersonal comparisons of utility. The rest of the world, however, along with many [*708] economists whose work includes policy advice to decisionmakers, continue to care deeply about distributional effects and to make, at least implicitly, interpersonal comparisons of utility. It is hard to believe that legislators or governors who call for economic analysis of rules do not intend to have distributional consequences, such as disproportionate burden on a particular sector, considered in an analysis. ⁵⁷ The importance of distributional analysis is even clearer in a review of most existing state mandates, which typically prescribe sectors such as small business, or other persons or firms for whom impacts must be especially described. ⁵⁸

There are other significant economic, ⁵⁹ sociological, ⁶⁰ political, ⁶¹ le- [*709] gal, ⁶² and philosophical ⁶³ criticisms of benefit-cost analysis built on the potential Pareto improvements foundation. Further, since rule writers and reviewers, particularly at the state level, are unlikely to be professional economists, and may not have the resources to hire economists to conduct analysis of rule changes, this goal presents severe challenges in implementation.

At the federal level, many individuals have accepted these challenges, believing either that their approach is better than any known alternatives, or that through practice some good answers will evolve. ⁶⁴ It is not clear to us that these federal efforts have succeeded, at least in any way that is directly helpful to states. There is not, for example, a great stock of economic analyses that are easily transferable from the national to state levels. The art and

⁵³ Exec. Order No. 12,291, *supra* note 10.

⁵⁴ Critics see this as a weakness of Executive Order 12,291 and its Reagan administration twin, Executive Order 12,498. These executive orders failed to use the multi-objective approach increasingly supported in the realm of project analysis. See W. Norton Grubb et al., The Ambiguities of Benefit-Cost Analysis: An Evaluation of Regulatory Impact Analyses Under Executive Order 12291, in ENVIRONMENTAL POLICY UNDER REAGAN'S EXECUTIVE ORDER: THE ROLE OF BENEFIT-COST ANALYSIS, *supra* note 10, at 121, 129. Reagan administration officials responsible for rules review under Executive Order 12,291 claim that this decision criterion was a new feature added by the Reagan administration to federal agencies' use of benefit-cost analysis. See C. DeMuth & Douglas H. Ginsburg, White House Review of Agency Rulemaking, 99 HARV. L. REV. 1075, 1075 nn.1-2, 1075-76 (1986) (authored by Administrators for Information and Regulatory Affairs in the Reagan Office of Management and Budget from 1981-1984 and 1984-1985 respectively) (applying the criterion that the "agency may take regulatory action only if the expected benefits to society outweigh the expected costs, and agencies must set their regulatory priorities to maximize the net aggregate benefits to society"). However, the Federal Water Pollution Control Act development documents for water standards predate the Reagan administration's use of benefit-cost analysis as a decision criterion by almost a decade. Further, the Army Corps' use of benefit-cost analysis for water projects had a decision criterion for many years before Executive Order 12,291. However, the development documents were quite conclusory on why they deemed benefits to justify costs, see Baum, *supra* note 32, at 96, and the Corps' documents became famously sophistic in their dances around this criterion.

⁵⁵ Exec. Order No. 12,866, *supra* note 10, at 639 (emphasis added).

⁵⁶ Cf. Grubb et al., *supra* note 54, at 121 (concluding that some economists will see calls for economic analysis of rules as a chance to improve the state of economics as practiced in administrative agencies, but this is likely to be a long-term goal at best).

⁵⁷ Cf. Bromley, *supra* note 27, at 96-97 ("It seems safe to argue that Congress, when it first called for an assessment of the benefits and costs of public works projects, had rather more in mind than an analysis of potential Pareto improvements."). To aim only for potential Pareto improvements is to accept or ignore the existing distribution of income and the clear trend, at least in the United States, towards greater income inequality. Accepting the existing distribution of income in the United States seems

science of benefit-cost analysis do not easily permit transfers of cost or benefit information from one study to another study except under stringent conditions that will rarely obtain in analyzing rule changes in different jurisdictions and from the federal to state or local level.⁶⁵

Economic analysis of rules may also be performed with a view to comparing the costs of different ways to regulate behavior, as discussed broadly by Kenneth Arrow and others in 1995.⁶⁶ With this end in mind, the question is not so much whether there are potential Pareto improvements from a proposed rule as whether there are better ways to do what the rule seeks to accomplish. This approach assumes that the benefits of different regulatory approaches are the same, while seeking to identify [*710] the regulatory alternative that imposes the least cost. Courts have accepted an agency's use of this "cost-effectiveness" analysis as appropriate under a legislative mandate to consider costs and benefits in setting clean water standards.⁶⁷ Several states have mandates to do some form of costeffectiveness analysis for proposed rules.⁶⁸

One key problem with cost-effectiveness analysis lies in framing alternatives. Rule changes are often proposed by agency staff who believe there is an improvement to be made in an existing regulation. This is distinct from rulemaking created to implement a new program. Most rulemaking makes incremental changes to an existing program. Proponents of a rule change, though, are not always in the best position to suggest alternative ways to accomplish the same benefits.⁶⁹ Indeed, it may be difficult to conceive of other ways to accomplish the same regulatory goal, short of radically reworking the basic regulatory framework.⁷⁰ But any such radical reworking is highly likely to change the benefit side of the equation, potentially throwing the analyst into all the difficulties of benefits valuation; that is, requiring benefit-cost analysis. Thus, if costeffectiveness is a desired analytical goal, careful attention should be paid to the process for selecting alternatives.

Another possible goal for economic analysis of rules is to reveal whether the costs and benefits of the rule are "roughly proportional." This goal was publicly birthed by United States Senator Edmund Muskie's gloss on the economic analysis required under the Federal Water Pollution Control Act--it was to be a limited cost-benefit

increasingly problematic, as it continues to grow more skewed, with the lowest income sectors earning less and less of the total income, and the highest income sectors gaining a higher percentage of the total. See, e.g., U.S. Bureau of the Census, Current Population Reports, Series p-60 (visited Sept. 3, 1996) <<http://www.census.gov/hhes/income/histinc/h01.prm>> (relative income charts, 1967 to 1993).

⁵⁸ See, e.g., MD. CODE ANN., STATE GOV'T section 10-124 (1993) (agency divides businesses up into classes on the basis of size and evaluates the effect on each class). There are many special provisions for analyzing impacts on small business throughout the states. E.g., WIS. STAT. ANN. section 227.114 (West 1994 & Supp. 1995) (providing special rulemaking considerations for small businesses). Note that with passage of the Small Business Regulatory Enforcement Fairness Act of 1996, Pub. L. No. 104-121, 110 Stat. 857 (1996), the federal government is greatly expanding its own protections for small business in rulemaking and adjudication through judicial review of regulatory flexibility analyses and creation of rule review panels and ombudsmen to watch out for the interests of small businesses.

⁵⁹ For a summary of economics-based critiques of benefit-cost analysis, see JAMES T. CAMPEN, BENEFIT, COST AND BEYOND: THE POLITICAL ECONOMY OF BENEFIT-COST ANALYSIS 7078 (1986). See also John V. Krutilla, Reflections of an Applied Welfare Economist, 8 J. ENVTL. ECON. & MGMT. 1 (1981). Most economists seem to agree that benefit-cost analysis must be somehow combined with other forms of information to give sound policy advice on the merits of projects. E.g., E.J. MISHAN, COST-BENEFIT ANALYSIS 198-99 (1982); RICHARD A. MUSGRAVE & PEGGY B. MUSGRAVE, PUBLIC FINANCE IN THEORY AND PRACTICE 156-57 (4th ed. 1984); D.W. PEARCE, COST-BENEFIT ANALYSIS 3 (1983). However, economists appear to differ on why benefit-cost analysis does not suffice and what supplementation is appropriate. Some economists acknowledge that the numerous, important questions about the methodology make it unsuitable as a single source of policy advice, but cling to the hope that further intra-disciplinary development will solve what appear to many to be inherent problems. See, e.g., PER-OLOV JOHANSSON, COST-BENEFIT ANALYSIS OF ENVIRONMENTAL CHANGE 3, 113, 121 (1993) (pressing for greater sophistication, such as general equilibrium analysis, as a way out of the problems).

⁶⁰ E.g., BELLAH ET AL., supra note 28, at 27-29 ("The major blind spot in the economic theory . . . is that it sees only disaggregated individuals, not the institutions that give them meaning and a place in the world."); MARCEL MAUSS, THE GIFT: THE FORM AND REASON FOR EXCHANGE IN ARCHAIC SOCIETIES 71-83 (W.D. Halls trans., 1990) (critique of utilitarian assumptions behind benefit-cost analysis).

analysis: "The balancing test between total cost and effluent reduction benefits is intended to limit the application of technology only where the additional degree of effluent reduction is wholly out of proportion to the costs of achieving such marginal level of reduction."⁷¹ Despite uncertainty in the legislative history, courts have accepted the "roughly proportional" test [***711**] for water.⁷² Similarly, knowledgeable proponents of reform in the regulation of risk have called for omnibus federal legislation to require a "reasonable relationship" between costs and benefits of health, safety, and environmental **rules**.⁷³ In the states, the recent National Governor's Association policy on environmental priorities calls for **analysis** that seems to approximate this "rough proportionality" test; it suggests that "the regulatory agency should be required to certify that a regulation is likely to produce benefits that justify the costs."⁷⁴ This falls short of a "demonstration" that benefits "will" exceed costs, and is thus more akin to a requirement of "rough proportionality." As "soft" and "fuzzy" as this formulation of **economic analysis** may seem to quantitatively-oriented analysts, it does accord with the realistic constraints on state agency time, resources, data, and expertise in carrying out assessments of **rules**.⁷⁵

B. The Focus on Accountability and Effectiveness

Some critics of **economic analysis** of **rules** are primarily concerned with public participation in rulemaking, the importance of meaningful comments in **rule** proceedings, the effect of regulation on a particular sector, individual or group, or a justification of agencies' regulatory programs in an era of government downsizing and increased attention to efficiency and efficacy in operations. One might consider these "political" goals for **economic analysis** of **rules**. They are goals that focus on accountability and effectiveness of agency action.

Public participation in rulemaking is important beyond questions about costs and benefits.⁷⁶ If a system of **economic analysis** of **rules** focuses on improving rulemaking through more informed participation of commentators and decisionmakers, the appropriate yardstick for evaluation will not be measured in dollars and cents. The rulemaking process, including the process for commenting on the **analysis**, is itself an outcome. Proponents of this goal will concentrate less on achieving apparent objectivity in **analysis** and more on diverse input, transparency in method, and communication of results.⁷⁷ This approach gains credence in areas, such as

⁶¹ Political scientists tend to be concerned that benefit-cost **analysis** replaces or undermines what should be broad-based (participatory) decision making through political process with a narrower-based quantitative **analysis** of the single issue of **economic** efficiency. The main concern is that the use of "**analysis**" transfers societal decision-making power to a technical elite," in effect disenfranchising the lay citizenry. BARUCH FISCHOFF ET AL., ACCEPTABLE RISK 117 (1981). The result, say some, is to "drive politics deeper into the technical **analysis**, veiling the real choices from the public eye." Steve H. Hanke and Richard A. Walker, Benefit-Cost **Analysis** Reconsidered: An Evaluation of the Mid-State Project, 10 WATER RESOURCES RES. 898, 907 (1974).

⁶² Legal criticisms can, of course, run the gamut from procedural errors based on the particular **economic analysis** statute involved to large-scale institutional considerations, such as the (often problematic) relationship between the social welfare function used by the **economic** analyst and the social welfare function implied or required by the legislature in setting up or authorizing the program for which the **rule** is designed.

⁶³ See generally Kelman, *supra* note 27.

⁶⁴ E.g., Ann Fisher, An Overview and Evaluation of EPA's Guidelines for Conducting Regulatory Impact **Analysis**, in ENVIRONMENTAL POLICY UNDER REAGAN'S EXECUTIVE ORDER: THE ROLE OF COST-BENEFIT **ANALYSIS**, *supra* note 10, at 99, 101-02 (1984) ("The 'RIA guidelines' recommend pushing the state of the art in quantifying health effects.").

⁶⁵ See, e.g., Kevin J. Boyle & John C. Bergstrom, Benefit Transfer Studies: Myths, Pragmatism, and Idealism, 28 WATER RESOURCES RES. 657, 659 (1992) (positing ideal technical criteria for transferability of study site data); V. Kerry Smith, On Separating Defensible Benefit Transfers from "Smoke and Mirrors," 28 WATER RESOURCES RES. 685, 686-91 (1992). Interestingly, in this 1992 issue of Water Resources Research, another author predicted that state and local governments would likely become a source of demand for benefittransfer studies, despite the author's observing at that time that "governments at this level have not historically used benefit-cost **analysis**." K.E. McConnell, Model Building and Judgment: Implications for Benefit Transfers with Travel Cost Models, 28 WATER RESOURCES RES. 695, 695 (1992).

⁶⁶ See ARROW ET AL., *supra* note 45.

environmental law, where there is little technical or scientific consensus on the level of regulation that is needed.⁷⁸ Just as "the [*712] better answer to the question 'how safe is safe?' may be the improved question: 'how good is the social dialogue on safety?'," ⁷⁹ the better answer to the question "what is a good system for economic analysis of rules" may be the improved question: "how extensive is the level of public and interested party participation in the analysis?"

In effect, to pursue this goal is to aim at increasing the politicization of rulemaking. For persons with a skeptical perspective on politics, it seems odd to say that economic analysis of rules can or should be designed to increase politicization of rulemaking. The proponents of benefit-cost analysis, including many economists and advocates of public policy as a science, view benefit-cost analysis as a positive alternative to politicized rulemaking, as a check on the "uninformed" pressure that shapes rules. Furthermore, Americans' interest in participation in government is declining.⁸⁰ Why bother setting the table if no one shows up to eat? Put differently, if it is only the specially concerned interest groups who will bother to monitor rulemaking, why shouldn't those groups be the only important target audience for impact analysis?

Yet there are widespread negative connotations of politicization. Consider the outcry over the use of rules review in the Reagan administration. Critics maintain that regulatory impact analysis and review became a facade for "back-room" negotiations over rule changes.⁸¹ This outcry may have been due to the perception that only certain interested persons, with disproportionate power and influence, were able to make use of the Reagan administration process to comment on rules. Whatever the source, the negative connotations of economic analysis of rules for public participation in rulemaking remain, and there is a common misperception that such analysis is inherently conservative and tilted towards deregulation, probably due to the strong association with Executive Order 12,291.⁸²

More debate and openness about uncertain methodologies and inadequate data may not improve public consensus.⁸³ Nor would all analysts necessarily agree that everyone should understand the economic analysis [*713] of a given rule.⁸⁴ But there is great danger in relaxing the principle that rules and the public discussion of

⁶⁷ The Tenth Circuit apparently accepted EPA's view that a cost-effectiveness analysis sufficed to do the best practical technological, economic analysis required under the [Federal Water Pollution Control Act. American Petroleum Inst. v. EPA, 540 F.2d 1023, 1037-38 \(10th Cir. 1976\)](#), cert. denied, **430 U.S. 922 (1977)**.

⁶⁸ E.g., [ARIZ. REV. STAT. ANN. section 41-1055](#) (Supp. 1995); [N.Y. A.P.A. LAW section 202-b](#) (McKinney 1995); [WIS. STAT. ANN. section 227.14](#) (West 1994 & Supp. 1995); Mass. Exec. Order No. 384, supra note 2.

⁶⁹ This difficulty, along with the fact that many agency rule changes are undertaken in response to a specific legislative mandate, may explain why consideration of regulatory alternatives seems so often to degenerate into boilerplate. See, e.g., N.Y. DEPT ENVTL. CONSERVATION, CONSOLIDATED REGULATORY IMPACT STATEMENT ON RULE TO REQUIRE PERMITS FOR DISTURBANCE OR CONSTRUCTION IN PROTECTED STREAMS 8 ("The only alternative considered . . . was the no-action alternative. This was unacceptable as it would force the department to be out of compliance with statutory requirements and would leave activities found to have potential detrimental effect on the waters of the state unregulated.").

⁷⁰ Incrementalism raises another problem for economic analysis: how thin can you slice a rule change and still have something worth analyzing? Most economists, it seems, will want to err on the side of analyzing programs as a whole, not just marginal changes in existing programs.

⁷¹ H.R. Res. 1146, 92d Cong., 2d Sess., 118 CONG. REC. 33,696 (1972) (emphasis added).

⁷² See, e.g., [Weyerhaeuser Co. v. Costle, 590 F.2d 1011, 1044-49 \(D.C. Cir. 1978\)](#).

⁷³ HARVARD GROUP, supra note 11, at 30-33.

⁷⁴ POLICY NR-6, supra note 5 (emphasis added).

rules should be clear and understandable. Absent such clarity, a system of analysis may be implemented in an arbitrary fashion. Even if improved communication about rules is not the most important goal of a system for economic analysis of rules, some consideration must be given to minimizing arbitrary analytic assumptions.

Another widely-touted benefit of benefit-cost analysis, which might be a political goal for a system of economic analysis of rules, is forcing a framework for thinking about rules on the rule writers. A more apt metaphor than "framework" is a "lens" through which to view rules, since economic analysis of rules rarely, if ever, dictates the structure of a rule itself. The regulated community often comments that rule writers should be made to "see" and appreciate the costs of their rule writing decisions. Those who advance this justification for regulatory analysis desire that those with power to promulgate rules will at least think through the economic impacts of their drafting decisions in a systematic way. ⁸⁵

The results of "framework forcing" may not always be desirable. Agencies may substitute other means of executing their responsibilities such as adjudication and the use of "nonbinding" agency policy statements. ⁸⁶ Alternatively, other more subtle, unintended effects may occur in response to the new framework. For example, the rise of quantitative risk assessment at the United States Environmental Protection Agency (EPA) happened, in part, as a response to the regulatory impact framework imposed by Executive Order 12,291. ⁸⁷ This Executive Order required the EPA to quantify benefits that are inherently difficult to quantify and this need for quantification in one relatively confined area is now shaping policy development for the EPA as a whole, despite substantial questions about its suitability as an overall framework for policy development. ⁸⁸ In general, a risk-based or benefit-cost based framework may increase pre- [*714] dictability and aid in communicating analytic results, but those advantages may come at a cost from substituting a simpler, formulaic approach "for the more complex understandings that have been worked out, however imperfectly, in the present legal framework," which relies on many evaluative outcomes. ⁸⁹

⁷⁵ E.g., Robert Dorfman, Forty Years of Cost-Benefit Analysis, in *ECONOMETRIC CONTRIBUTIONS TO PUBLIC POLICY* 268, 278 (Richard Stone & William Peterson eds., 1978); Aaron Wildavsky, The Political Economy of Efficiency: Cost-Benefit Analysis, Systems Analysis, and Program Budgeting, 26 PUB. ADMIN. REV. 292 (1966).

⁷⁶ Participation is integral to legitimacy, especially given that agency heads and rule writers are generally not elected. Many state agencies are currently struggling with ways to make participation by the public more meaningful.

⁷⁷ Cf. Bromley, *supra* note 27, at 97 ("Progress in policy analysis would seem to follow from an understanding that the term "analysis" does not mean that the economist must produce an objective truth rule for identifying "good" decisions.").

⁷⁸ Donald T. Hornstein, Reclaiming Environmental Law: A Normative Critique of Comparative Risk Analysis, 92 COLUM. L. REV. 562, 632 (1992) (suggesting that questions such as "how safe is safe? and to what extent should individual preferences be subordinated to collective decisions--should not and cannot fully be resolved with a set of a priori rules." (crediting Dr. Richard Andrews)).

⁷⁹ *Id.* at 632-33.

⁸⁰ See BELLAH ET AL., *supra* note 28, at 87 (noting the work of Herbert Gans, who finds that middle Americans in the late twentieth century "want as little to do with large organizations of any kind as possible").

⁸¹ E.g., THOMAS O. MCGARITY, REINVENTING RATIONALITY: THE ROLE OF REGULATORY ANALYSIS IN THE FEDERAL BUREAUCRACY 286-87 (1991) (citing hundreds of cases of Office of Management and Budget intervention into agency rulemaking to urge less stringent regulations and at most, a handful of cases to urge agencies to regulate more stringently).

Some propose economic analysis of rules as a way to check the overzealous pursuit of agency goals. This may be an overlay of the previous goal of giving rule writers an economic framework or lens through which to view proposed rules. The overlay acts as a check on what some see as an inevitable tendency of agencies to begin confusing means with ends, to believe that their particular program of regulation justifies itself, and that its success and scope are commensurate with the public interest. This check works, in theory, by forcing the continual justification and rejustification of a regulatory program and its rules against a neutral social welfare function.

This view has been advanced by key proponents and participants in the Reagan administration program of economic analysis of rules.⁹⁰ But there is limited, if any, empirical support for the effectiveness of economic analysis as a significant force in reshaping agency goals at the federal level. Reviews of the federal regulatory impact analysis program do not seem to find a significant change in the volume, scope, or intrusiveness of rules as a result of the various executive orders.⁹¹ Perhaps for this reason, discussion has moved on to "regulatory sunset" and other means for requiring agencies to justify their regulations.⁹²

A program for analysis must be woven tightly into the process for developing rules in order to "reframe" rulemaking. Unfortunately, analysis is often appended to the rulemaking process after the idea for a rule has crystallized.⁹³ Weaving together rule creation and analysis requires a program of analysis that rule writers understand and value, rather than a [*715] system of analysis that is carried out by a distinct part of an agency or of state government that is removed from actual program responsibility.⁹⁴ Short of this ideal, there at least must be a process for iterative changes and adjustments in rule text and analysis. However, there are few, if any, examples of this level of integration or iterative communication apparent in the field, either at the federal or state levels.⁹⁵ Thus, it is not surprising that economic analysis of rules, as implemented to date, has not fundamentally altered the approach of regulatory agencies to their missions.

Economic analysis of rules has also been justified as a means to increase executive or legislative branch control over rulemaking. In this view, economic analysis acts like a gate, allowing some rules through and barring others, with the executive branch, or someone appointed by the legislative branch, acting as gatekeeper.⁹⁶ This goal of

⁸² Exec. Order No. 12,291, *supra* note 10.

⁸³ One can read cases such as *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375 (D.C. Cir. 1973), cert. denied, 417 U.S. 921 (1974) as illustrations of the principle that "as more is revealed about a rule, the agency has more loose ends to explain away." Fisher, *supra* note 32, at 203.

⁸⁴ The technical nature of rules themselves suggest to some that principles such as clarity and comprehensibility do not apply to rulemaking. See Rubin, *supra* note 1, at 404. If these principles do not apply to the rule itself, one might ask, why should they apply to economic analysis of the rule--complexity piled on top of complexity? The basis for the answer to this question, once again, reverts back to the predicate questions about the system for analysis: what is its goal? What resources are devoted to it? How does it fit within the larger institutional framework for rulemaking?

⁸⁵ The evidence to date suggests that this goal of "reframing" rule writing is very ambitious and will not be attained easily. For example, Robert King, head of New York Governor Pataki's Office of Regulatory Reform, has observed that the hardest part of his job in implementing economic analysis of rules is changing the viewpoint of rule writers and their managers. See Regulatory Reform Director Aims to Review Rules that Impede Growth of Business, CAP. DISTRICT BUS. REV., July 3, 1995, at 15.

⁸⁶ See, e.g., Richard K. Berg, Reexamining Policy Procedures: The Choice Between Rulemaking and Adjudication, 38 ADMIN. L. REV. 149, 167-68 (1986) (dismissing alternative forms of rulemaking). But see Antonin Scalia, Back to Basics: Making Law Without Making Rules, REGULATION, July-Aug. 1981, at 25, 27 (arguing that induced adjudication from increased procedural rulemaking requirements may be a good thing).

⁸⁷ Hornstein, *supra* note 78, at 565 n.8.

⁸⁸ See generally *id.* (discussing the EPA's use of comparative risk analysis). But see HARVARD GROUP, *supra* note 11, at 30-37 ("When determining what investments in risk are reasonable, regulators should take into account quantitative estimates of benefits and cost . . .").

increased control of rulemaking is likely to dictate both decision criterion for whether rules pass the gate and a structure for review of analyses. Since these features serve the interests of the gatekeeper, they are likely to be present in such a system.⁹⁷ In practice, a gatekeeper can have quite varied roles--from universal approval of agency analysis by administratively checking that analysis was done, to an adversarial/overseer role in which the gatekeeper's judgment is freely substituted for that of the analyst. The issues are similar to the issues that arise in judicial review of agency decisionmaking.⁹⁸

The importance of greater executive or legislative control over rulemaking is a persistent theme of the administrative law literature in the last twenty years. Advocates of the Reagan administration regulatory reform approach viewed the rise of greater executive control of rulemaking as "inevitable" in light of "the wave of new health, safety and environmental legislation in the early 1970s."⁹⁹ Some critics cite the enhanced review of agency rules by the Office of Management and Budget as the [*716] most important regulatory reform wrought by the Reagan years.¹⁰⁰ At the state level, governors have issued executive orders designed to increase control over rulemaking,¹⁰¹ some of which have contained a form of economic analysis as the primary tool for attempted control. In the past five years, however, it has been the legislatures, both federal and state, that have been most active in attempting regulatory reform through controls on rulemaking.¹⁰²

A final "political" goal for setting up a system of economic analysis of rules is to simply slow down rulemaking.¹⁰³ Undoubtedly, there has been a rise in the volume of state and federal rulemaking in the past thirty years.¹⁰⁴ Economic analysis of rules has been proposed as one method to apply the brakes. In this conception of the role of economic analysis, the main concern is that the process for analysis is time-consuming.

As trite as this goal might sound, there is something to be said for stability in legal structures. When rule changes are made too often, as a way of incremental refinement in carrying out programs, there is little stability.¹⁰⁵ Critics call this approach to economic analysis "paralysis by analysis." Administrative law scholars have decried the "ossification" of rulemaking at the federal level,¹⁰⁶ noting that rules have many advantages [*717] over other

⁸⁹ Hornstein, *supra* note 78, at 631 (discussing risk, but in a way equally applicable to costs and benefits).

⁹⁰ DeMuth and Ginsburg, *supra* note 54, at 1075-88.

⁹¹ E.g., Robert W. Hahn, Regulation: Past, Present and Future, 13 HARV. J.L. & PUB. POL'Y 167, 180 (1990) (federal outlays for regulatory activities grew from 1982 to 1988 after Executive Order 12,291).

⁹² For example, Massachusetts has combined the economic analysis and sunset approaches by planning to sunset all existing regulations on or before December 31, 1996, that do not pass economic analysis review. See Mass. Exec. Order No. 384, *supra* note 2. At the federal level, the new Small Business Regulatory Enforcement Fairness Act of 1996, Pub. L. No. 104-121, **110 Stat. 857 (1996)**, attempts to give Congress a period for legislative veto prior to a major rule's becoming effective. Similar legislation was passed by the North Carolina General Assembly in 1995. See [N.C. GEN. STAT. section 150B-21.3\(b\)](#) (1995).

⁹³ This is one of the several close parallels between economic analysis of rules and the National Environmental Policy Act, [42 U.S.C. sections 4321-4370a](#) (1994), with its environmental impact statements intended to reframe agency decisionmaking, but in practice often prepared after and to justify a decision. Cf. *infra* note 114 (discussing some federal and state agencies' attempts to legitimately perform benefit-costs analyses before promulgating rules).

⁹⁴ Note the tension between promoting the most defensible analyses from a traditional economics point of view, which most likely will happen with a centralized staff of trained economists, and on the other hand, promoting integration of analyses with the actual writing of rules, which argues for decentralization and a system that is understandable to people with only a rudimentary grasp of economics. See *infra* text accompanying notes 142-46 (discussing centralized and decentralized analysis of rules).

⁹⁵ But see Regulatory Reform Act of May 16, 1995, ch. 403, section 201, 1995 Wash. Laws 2169-71 (to be codified at WASH. REV. CODE section 34.05) (benefit-cost analysis with iterative updates statutorily required).

⁹⁶ For example, New York has created a "Governor's Office of Regulatory Reform" to act as a gatekeeper, using "regulatory impact statements" as tickets through the gate for new rules. See ROBERT L. KING, FUNDAMENTAL COMPONENTS OF

means of regulation, but it appears unlikely that state legislators at present understand or appreciate the value of flexible rulemaking procedures. Thus, any advantage that state rulemaking now has in terms of time and expense to produce rules is likely to be eroded in the present legal climate, and this change will affect state agencies used to implementing policy changes through rulemaking relatively quickly.¹⁰⁷ Whether the primary effect is "paralysis" or a substitution of other policy making measures, such as greater adjudication based on statutory interpretation, or greater use of non-binding policy memoranda, remains to be seen.¹⁰⁸

Finally, economic analysis of rules might be done with a primary view towards testing the effectiveness of agencies in carrying out their missions. Instead of focusing the analysis on costs, a system might concentrate on benefits (to use the economists' categorization), with benefits analyzed in terms of a particular agency's objectives. For example, an environmental regulatory agency might be required to demonstrate the ecological effectiveness of a given rule change as a predicate to adopting the rule change.¹⁰⁹ Orthodox benefit-cost analysis assumes that the benefits side gets at least equal attention from the analyst. In the realm of state systems for analysis, however, where tighter budget constraints almost inevitably force concentration of resources on only one or a few types of regulatory impacts, it is important to stay mindful of the fact that costs are not the only candidate for attention. There is nothing inherent in the notion of economic analysis of rules that dictates a primary focus on costs. There is no methodological reason why a system for economic analysis could not be used as a means of forcing greater attention to outcome measurement on the benefits side.¹¹⁰ The reasons for focusing on costs [*718] versus benefits are primarily political.

Most systems for economic analysis of rules will aim at more than one of these economic and political goals, with differences due to matters of degree and focus. Economic analysis is inherently flexible enough to allow for variations in approach. Those authors who believe that economic analyses are primarily supplements, rather than substitutes, for political decision processes, often recommend some form of multi-objective or multi-criteria analysis.¹¹¹ There are many ways to reconcile outcomes in a single document and, in the same way, it is not impossible to design a system for economic analysis that furthers goals that seem at first blush irreconcilable.

COST-BENEFIT ANALYSIS: A GUIDE FOR NEW YORK STATE'S REGULATORY AGENCIES (forthcoming) (comment draft at iii, on file with author).

⁹⁷ New York's new program for economic analysis appears to have all these features, except the decision criterion. See *id.* (discussing the features of New York's program).

⁹⁸ In North Carolina, the OSBM is the first level "gatekeeper," with the responsibility to either prepare or approve agency economic analyses, and a ninety-day time limit for preparing analyses. See [N.C. GEN. STAT. section 150B-21.4\(b1\)](#) (1995) (prescribing rule change procedures).

⁹⁹ Demuth & Ginsburg, *supra* note 54, at 1079.

¹⁰⁰ E.g., Pildes & Sunstein, *supra* note 10, at 3. But see Hahn, *supra* note 91, at 224 (referring to the executive branch's regulatory oversight's "limited potential" to make important differences).

¹⁰¹ E.g., Exec. Order No. 49, 9 N.C. Reg. 349 (1994) (requiring enhanced review of rules affecting local government); N.J. Exec. Order No. 27, *supra* note 2 (requiring a statement as to whether a rule or regulation contains any standard or requirement which exceeds the federal counterpart; the statement must include a discussion of the policy reasons and a cost-benefit analysis to support an agency's decision to use a stricter standard).

¹⁰² The Republican Party made benefit-cost analysis part of their centerpiece legislation from the Contract with America in 1994 and 1995. This particular plank in the Contract with America became the Job Creation and Wage Enhancement Act of 1995, H.R. 9, 104th Cong., 1st Sess. (1995) (as introduced in the House). Title III of H.R. 9 would have required each rule designed to protect human health, safety or the environment that was likely to have an annual economic effect of \$ 25 million or more (or to have met other triggers) to be accompanied by an assessment of risks reduced, other benefits, and costs. *Id.* section 3201. H.R. 9 passed the House, but not the Senate. It did, however, spawn a host of similar attempts to force more extensive and rigorous use of benefit-cost analysis at the federal level. E.g., Comprehensive Regulatory Reform Act, S. 343, 104th Cong., 1st Sess. (1995) (introduced by Sen. Bob Dole of Kansas and others); Risk Assessment and CostBenefit Act of 1995, H.R. 1022, 104th

In sum, the first question for reviewing a program of economic analysis of rules asks what the program should accomplish. The choices vary from purely economic to purely political goals. In North Carolina, the legislation requiring economic analysis was passed without great clarity or consensus on the goals, and this obscurity is typical. Discerning the legislature's intent in this respect requires extrinsic evidence. Like most states, North Carolina does not publish "official" legislative histories. The Legislative Research Commission report which accompanied North Carolina's new economic analysis statute said, cryptically: "These legislative proposals . . . are intended to increase the amount of scrutiny administrative rules receive before becoming effective."¹¹² The bill, as passed, had no statement of policy or intent.

DEHNR's own goals for economic analysis, based on input from industry and environmental groups as well as academic economists and public policy analysts, are to make rule writers think in a structured way about the economic impacts (including the benefits) of rule changes and to enhance public discussion of the consequences of rule changes. At present, DEHNR does not aspire to determine whether rule changes create potential Pareto improvements, or to increase legislative or executive control over rule changes.¹¹³ The focus of the system is on the rule writers, [*719] interested party commentators, and the members of the boards and commissions that ultimately decide the content of rules.

III. ECONOMIC ANALYSIS UNDER STRINGENT RESOURCE CONSTRAINTS

The second question to consider in reviewing a system for rule analysis is how well a system will be financed and staffed. Few states today can pretend to adopt the cavalier attitude toward resources expressed by some proponents of federal economic analysis of rules.¹¹⁴ A state agency involved in regulatory analysis is more likely to agree with Professor Bonfield's assertion that "in most instances of state agency rule making, the costs of preparing such a formal, detailed regulatory analysis will far exceed the benefits of such an analysis."¹¹⁵ A state interested in various forms of economic analysis of rules should ask hard questions about the level of resources it

Cong., 1st Sess. (1995); Regulatory Reform and Relief Act, H.R. 926, 104th Cong., 1st Sess. (1995) (introduced by Rep. George Gekas of Pennsylvania). For a listing of state legislative action, see *supra* note 2.

¹⁰³ For example, Governor Pataki of New York, in his 1995 State of the State address, uttered what might be the mantra of politicians in the mid-1990s: "This government not only spends too much and taxes too much, it regulates too much. . . . The regulatory burden on our people must be lifted. . . . It is time to cut regulation and encourage achievement and success." Governor George E. Pataki, Annual State of the State Message 12-13 (Jan. 4, 1995).

¹⁰⁴ See, e.g., Hahn, *supra* note 91, at 168, 181, 222.

¹⁰⁵ There are, of course, potentially offsetting advantages to incrementally evolving rules. See generally C. LINDBLOM & E. WOODHOUSE, *THE POLICY-MAKING PROCESS* 24-32 (3d ed. 1993).

¹⁰⁶ See Thomas O. McGarity, Some Thoughts on "Deossifying" the Rulemaking Process, [41 DUKE L.J. 1385, 1436-37 \(1992\)](#); Richard J. Pierce, Jr., Seven Ways to Deossify Agency Rulemaking, 47 ADMIN. L. REV. 59, 60-62 (1995); Paul R. Verkuil, Rulemaking Ossification--A Modest Proposal, 47 ADMIN. L. REV. 453, 453-59 (1995).

¹⁰⁷ Cf. Howard Latin, Ideal Versus Real Regulatory Efficiency: Implementation of Uniform Standards and "Fine-Tuning" Regulatory Reforms, [37 STAN. L. REV. 1267, 1270 \(1985\)](#).

¹⁰⁸ Cf. Robert A. Anthony, "Well, You Want the Permit Don't You?" Agency Efforts to Make Nonlegislative Documents Bind the Public, 44 ADMIN. L. REV. 31, 32 (1992) (suggesting ways to review purportedly interpretive policy statements that actually function to bind the public like rules).

¹⁰⁹ Here again, Massachusetts has put in place the mandate to do this, along with its benefit-cost analysis and regulatory sunset. See Mass. Exec. Order No. 384, *supra* note 2 ("The Agency must demonstrate . . . that . . . the Agency has established a process and a schedule for measuring the effectiveness of the regulation . . .").

¹¹⁰ The flipside is true, too: environmental impact statements could be vehicles for economic analysis, construed broadly. Cf. [Calvert Cliffs' Coord. Comm. v. United States Atomic Energy Comm'n](#), 449 F. 2d 1109, 1113, 1123 (D.C. Cir. 1971) (seminal opinion under the National Environmental Policy Act with the pregnant, but never followed, suggestion that NEPA analysis

is willing to commit to the endeavor. On the other hand, in some cases, state agencies may be forced to undertake economic analysis of rules, and there may be no new resources available. For example, Mississippi passed a law in 1994 requiring the Department of Environmental Quality to consider economic impact and environmental benefits of rules and regulations,¹¹⁶ but no appropriation came with passage of the statute.¹¹⁷ New Jersey's Governor Christine Todd Whitman's Executive Order of November 1994 mandates that any rule or regulation that exceeds any standards or requirements imposed by federal law must include a benefit-cost analysis supporting the agency's decision to use the stricter standard.¹¹⁸ Again, the agencies received no additional resources to carry out this executive order.¹¹⁹ As in Mississippi, New Jersey is currently struggling with how to staff and conduct these assessments.¹²⁰ Massachusetts, with its ambitious 1996 Executive Order,¹²¹ is similarly situated: there are presently no new resources for implementing the new analytic requirements.¹²² Such examples are likely to grow with time.

There is unfortunately, and ironically, little good data about the level of resources needed for optimal analysis. The literature contains few empirical analyses of the benefits and costs of economic analysis itself.¹²³ Economists have devoted attention to the problem of information economists; George Stigler, among others, has commented that "information costs are the costs of transportation from ignorance to omniscience, and seldom can a trader afford to take the entire trip."¹²⁴ Assuming that economic analysis can contribute positively to rulemaking, it makes sense to apply the same scrutiny to legislative or executive mandates for analysis that proponents of benefit-cost analysis want to place on the agencies.¹²⁵

Rough calculations suggest that an average regulatory impact analysis conducted at the EPA costs from \$ 100,000 to several hundreds of thousands of dollars, depending on the rule.¹²⁶ The analyses themselves are almost always completed by government contractors whose work is overseen by several analysts at the EPA. It is quite common for each analysis to be several volumes thick, taking considerable time to review and synthesize.

should proceed along the same lines as benefit-cost analysis, but with a focus on "environmental costs"). But because economic consequences have typically been thought of in terms of goods and services, construed narrowly to mean goods and services for which organized, legitimate markets exist, and environmental consequences have typically been thought of in terms of things other than market-based goods and services, the two types of analyses typically do not mesh.

¹¹¹ The multiple-objective approach accords with the "decision-making approach" of SUGDEN & WILLIAMS, *supra* note 33, at 178-97, and the "multicriterion analysis" of DUNCAN MACRAE, JR. & DALE WHITTINGTON, *EXPERT ADVICE FOR POLICY CHOICE: ANALYSIS AND DISCOURSE* (forthcoming 1997) (unpublished draft, on file with author) ("[Quality control] must be judged not simply by the theoretical or mathematical standards of any social science discipline, but in relation to the standards of various expert groups that can justifiably claim to appraise the tasks of advising."), in contrast to others who view the proper ends of analysis more narrowly. See MISHAN, *supra* note 59; see also Pildes & Sunstein, *supra* note 10, at 65 ("It would be better to have a disaggregated system for assessing the qualitatively different effects of regulatory impositions. Not all benefits are fungible, nor are all costs."); HARVARD GROUP, *supra* note 11, at 30-33.

¹¹² ECONOMIC IMPACT OF RULES COMM., LEGISLATIVE RESEARCH COMM'N: REPORT TO THE 1995 GENERAL ASSEMBLY OF NORTH CAROLINA 7 (1995).

¹¹³ As in many other states, the North Carolina legislature has already sought and granted itself ultimate control over the final shape of rules through a legislative veto process, and has slowed rulemaking considerably after heavy lobbying from development and industrial groups. See *N.C. GEN. STAT. sections 150B-21.3(b)* (delaying effective date to allow for legislative veto), -21.12(d) (1995) (veto also allowed by legislatively-appointed Administrative Rules Review Commission). Changes such as these--legislative vetoes and delayed effective dates--may be packaged with economic analysis and aimed at the same ends as economic analysis. Although many people will see them as flip sides of the same coin, they are not necessarily related.

¹¹⁴ See DeMuth & Ginsburg, *supra* note 54, at 1088 (dismissing cost-based criticisms of OMB review without presenting cost or benefit data). At least some federal agencies, such as the Environmental Protection Agency, have set up entire policy shops just to conduct the analyses reviewed by OMB. Some state agencies, such as in Washington, have done the same thing. See *supra* note 2 (listing states that set up procedures to analyze rules). Based on the experience thus far in North Carolina, any state

State experience in this area is more difficult to gauge. The only full quantitative study that DEHNR undertook prior to setting up its new program was a single analysis of more stringent air toxics rules in the mid-1980s. The study cost \$ 62,000 and took a year to complete. The state of Washington passed the "Regulatory Fairness Act" in 1982 to minimize the economic impact of rules on small business.¹²⁷ Under the law, each [*721] rule proposed by Washington state agencies must include an estimate of the economic impact on small business.¹²⁸ Implementation of the statute, though, took seven years.¹²⁹ To meet the law's requirements, one state agency, the Washington Department of Ecology, hired four economists to perform the analyses in-house.¹³⁰ The Ecology staff completes a small business economic impact analysis of approximately twenty rules per year, at a cost of approximately \$ 17,000 to \$ 50,000 per rule.¹³¹ Minnesota state agencies are required to analyze several types of economic impacts and to determine "whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule."¹³² For the Minnesota Pollution Control Agency, approximately three and one half economists are devoted to these analyses.¹³³ These stringent resource constraints are typical at the state level.

whose goals for economic analysis of rules are to do some approximation of benefit-cost analysis will need dedicated, professionally trained staff.

¹¹⁵ BONFIELD, *supra* note 4, at 214.

¹¹⁶ Act of Apr. 8, 1994, ch. 598, section 2, 1994 Miss. Laws 1038 (codified at [MISS. CODE ANN. section 49-2-11](#) (Supp. 1995)).

¹¹⁷ Telephone Interview with Sam Mabry, Planning and Policy Coordinator, Mississippi Department of Environmental Quality, Office of Pollution Control, Jackson, Miss. (Oct. 5, 1994).

¹¹⁸ N.J. Exec. Order No. 27, *supra* note 2.

¹¹⁹ Telephone Interview with Sue Shannon, Office of the Commissioner, New Jersey Department of Environmental Protection, Trenton, N.J. (Sept. 12, 1995).

¹²⁰ *Id.*

¹²¹ Mass. Exec. Order No. 384, *supra* note 2.

¹²² Telephone Interview with Carol Rowan West, Director of Research & Standards, Massachusetts Department of Environmental Protection (Apr. 8, 1996).

¹²³ A notable exception is Paul R. Portney, The Benefits and Costs of Regulatory Analysis, in ENVIRONMENTAL POLICY UNDER REAGAN'S EXECUTIVE ORDER: THE ROLE OF COST-BENEFIT ANALYSIS, *supra* note 10, at 226. For a theoretical model of the problem, see Thomas D. Crocker, Cost-Benefit Analyses of Cost-Benefit Analysis, in COST-BENEFIT ANALYSIS AND WATER POLLUTION POLICY 341 (Henry M. Peskin & Eugene P. Seskin eds., 1975).

¹²⁴ George J. Stigler, Imperfections in the Capital Market, 75 J. POL. ECON. 287, 291 (1967).

¹²⁵ The experience in North Carolina suggests that proponents of analysis will resist turning the analytic lens on their own proposal. Even the fiscal note for the new North Carolina economic analysis requirement was ignored in the legislative negotiations over the bill; the ultimate appropriation was less than five percent of the estimated cost of the program. See The Expansion and Capital Improvements Appropriations Act of 1995, 1995 N.C. Sess. Laws. ch. 507, section 6.6. This appropriation created two positions in the central Office of State Budget and Management to handle analysis for all state agencies, *id.* section 27.8; no additional resources were given to any of the program agencies.

¹²⁶ These figures were gathered as part of an ongoing analysis conducted by the Environmental Law Institute for the Office of Policy Analysis, Office of Policy, Planning and Evaluation, U.S. Environmental Protection Agency.

¹²⁷ An Act Relating to Implementation of the Recommendations of the Governor's Task Force on Regulatory Reform, ch. 249, 1994 Wash. Laws 1378 (codified at [WASH. REV. CODE ANN. sections 19.85.011-19.85.090](#) (West Supp. 1996)).

¹²⁸ [WASH. REV. CODE ANN. section 19.85.030\(1\)](#) (West Supp. 1996).

¹²⁹ Telephone Interviews with Kathy Carruthers, Economist, Washington Department of Ecology, Olympia, Wash. (Dec. 1995).

¹³⁰ *Id.*

For state agencies faced with these resource constraints, the problem of how to carry out economic analysis of rules is not as simple as whether a state should do more or less analysis in a given area. Stringent resource constraints may mean that certain parts of any analysis get no attention. If the goal of the analysis, or the role of the analysis in the overall rulemaking framework, is inconsistent with information gaps, or methodologically-objectionable decisions, then the entire system of analysis may be fatally compromised. On the other hand, a system designed with the knowledge that resources are very scarce, data will be very limited, and analytical expertise may not be ideal, may still attain a degree of success in achieving less ambitious goals, particularly if the analysis is not critical to the legal efficacy of the rule.

IV. FITTING ANALYSIS INTO THE STATE RULEMAKING CONTEXT

A third background question is how economic analysis of rules fits into the institutional scheme for making law. Does the economic analysis provide one more set of information that is used or rejected by decisionmakers as they see fit? Or does the economic analysis provide the primary criteria used to judge whether a rule is promulgated? Who decides how the analysis is used? Who reviews the analysis and its use? In sum, does the economic analysis supplant or supplement other standards for agency rulemaking--such as those standards in organic agency-authorizing legislation--and is the analysis judicially reviewable? Is analysis [*722] an iterative process? Or is economic analysis purely ex ante or ex post the proposed rule? These institutional questions, like questions about the goals and resources available for analysis, are prior to and more fundamental than the particular methodological choices that will be faced in setting up a program for economic analysis of rules.

The legislature authorizes agencies to promulgate rules and the authorization may be general or quite specific. A rule must meet the standards set out by the legislature in the authorizing legislation, whether or not there is a separate requirement for the agency to analyze the economic impact of the rules. In other words, the legislature may or may not specify the "yardstick" to use in measuring the benefits or costs of a rule. When courts are asked to review the rules, the courts consider specific legislative standards as the primary criteria for judging the rules' acceptability.¹³⁴ Criteria arising out of the economic analysis are secondary and subordinate.¹³⁵ For this reason, unless and until there is legislation establishing the primacy of issues in the economic analysis, it will simply be a problematic supplement to specific authorizing legislation.¹³⁶

¹³¹ Id. A recent amendment to Washington's statute, requiring more rigorous analysis, was not accompanied by any increase in resources for the agency's analytic staff. Id.; see Regulatory Reform Act of May 16, 1995, ch. 403, section 201, 1995 Wash. Laws 2169-71 (to be codified at WASH. REV. CODE section 34.05).

¹³² [MINN. STAT. ANN. section 14.131](#) (West Supp. 1996).

¹³³ Telephone Interview with Robert McCarron, Program Development Section, Air Quality Division, Minnesota Pollution Control Agency, St. Paul, Minn. (Nov. 28, 1994).

¹³⁴ E.g., [Union Elec. v. EPA, 427 U.S. 246, 256-66 \(1976\)](#) (discussing the legislatively mandated criteria upon which the EPA had to base its approval of state implementation plans).

¹³⁵ For example, the state of Washington's new benefit-cost analysis statute acknowledges the need to consider "the specific directives of the statute being implemented," but it is silent on how those directives relate to other costs and benefits. Regulatory Reform Act of May 16, 1995, ch. 403, section 201, 1995 Wash. Laws 2169-71 (to be codified at WASH. REV. CODE section 34.05).

¹³⁶ See, e.g., [American Textile Mfrs. Inst. v. Donovan, 452 U.S. 490, 508-09 \(1981\)](#) ("Congress itself defined the basic relationship between costs and benefits, by placing the 'benefit' of worker health above all other considerations save those making attainment of this 'benefit' unachievable."); [Union Elec., 427 U.S. at 265](#) (disallowing use by EPA of costfeasibility determinations to review state implementation plans under the 1970 Clean Air Act Amendments); Fisher, *supra* note 32, at 195-98. But cf. [Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto Ins. Co., 463 U.S. 29, 54 \(1983\)](#) (addressing agency's analysis costs and benefits of rule rescission and concluding that agency's determination was arbitrary and capricious for ignoring the effects the court deemed important).

Careful consideration should be given to the degree of judicial review provided for a state program of economic analysis because regulators change behavior in response to judicial review standards.¹³⁷ The MSAPA would have the analysis reviewed by courts on an arbitrary and capricious standard, like the rule itself.¹³⁸ But the extent of state court experience reviewing agency economic analysis is quite limited compared to the federal court experience.¹³⁹ Indeed, there is limited experience in any judicial [*723] review of state rulemaking. Thin experience makes state court reactions to analytical choices and problems currently unpredictable.¹⁴⁰ This fact alone--the lack of meaningful judicial review--sets most state economic analysis of rules apart from its federal counterpart.

There are many ways that economic analysis could fit into the existing state regulatory framework. For example, one might try to maintain the evolved hybrid of scientific and political influence on standard setting, while attempting to carve out a limited role for economics in comparing means to achieve standards. The legislature might set a standard, such as "a safe minimum standard (minimum desirable level of wildlife populations, minimum desirable areas of habitat)," or "a fully protective standard (minimize the chance that species will be lost)." Then the primary role of economic analysis would be determining the minimum cost for assuring these standards.¹⁴¹ In the end, the role of economic analysis vis-a-vis political voting and judicial review is itself a political question, but to the extent the sanctioning political authority does not address the question in setting up a program of economic analysis, the resulting uncertainty will compromise the usefulness of the program and the ability to evaluate it.

An intimately related question of how one fits economic analysis into the rulemaking context is "who does the analysis?" The decision whether economic analysis should be done by a central staff responsible for all agencies, or should be done by agency staff in each agency, or both, has important implications. At the federal level, centralized review by the Office of Management and Budget has become the accepted norm.¹⁴² Proponents of this centralized approach cite consistency and political accountability as major advantages;¹⁴³ but the federal structure requires a central staff that has substantial program expertise about each agency that promulgates rules, and those agencies themselves have staff preparing analyses for review. Agency program staff know their programs better than a central staff, which makes it more difficult for any central staff to understand how a rule will change behavior in the regulated community. Thus, even a decision to "centralize" the policy analysts responsible for economic analysis will not escape the problem of each agency having to learn how analysis works, and perhaps having to draft analyses. For states, serious consideration should be given to designing analytic

¹³⁷ This is, at least, DEHNR's experience. But judicial control is limited in important ways. It is only one among many factors that shape agency action. See generally Jerry L. Mashaw & David L. Harfst, Inside the National Highway Traffic Safety Administration: Legal Determinants of Bureaucratic Organization and Performance, *57 U. CHI. L. REV.* 443 (1990); Peter H. Schuck & Donald E. Elliott, Studying Administrative Law: A Methodology for, and Report on, New Empirical Research, 42 *ADMIN. L. REV.* 519, 521-22 (1990).

¹³⁸ 1981 MODEL STATE ADMIN. PROCEDURE ACT section 5-116(c), 15 U.L.A. 127 (1990); see BONFIELD, *supra* note 4, at 580-81.

¹³⁹ For example, there have been at least a dozen federal lawsuits challenging agency analyses of costs in air and water standard-setting. See Baum, *supra* note 42, at 98-99 n.73; Fisher, *supra* note 64, at 110-11. There have been few, if any, similar state suits.

¹⁴⁰ See William Funk, Rationality Review of State Administrative Rulemaking, 43 *ADMIN. L. REV.* 147, 153-56 (1991).

¹⁴¹ In other words, conducting a cost-effectiveness analysis.

¹⁴² See DeMuth & Ginsburg, *supra* note 54, at 1075.

¹⁴³ *Id.* at 1081 ("Centralized review of proposed regulations under a cost/benefit standard, by an office that has no program responsibilities and is accountable only to the president, is an appropriate response to the failings of regulation. It encourages policy coordination, greater political accountability, and more balanced regulatory decisions.").

programs that do not require central staffs. ¹⁴⁴ To put **economic analysis** [*724] solely in the hands of centralized, trained professionals raises the difficulty of communicating facts about the **rules** and their **economic** effects across the professional divide between economists and regulators in other fields. ¹⁴⁵

To avoid hiring a staff of economists, some states, such as California, have hired contractors to develop policy guidance documents which outline how to review **economic analysis** reports. ¹⁴⁶ DEHNR's program is a variant on this approach, with computer software taking the place of paper-based guidance documents.

At DEHNR, and under the North Carolina legislation, there are two internal "gatekeepers" for **economic analysis**, but no clear path for judicial review. One gatekeeper is controlled by the Governor ¹⁴⁷ and the **second** by the legislature. ¹⁴⁸ Both have the ability to shape, and sometimes to veto, the content of **economic analysis**. These gatekeepers serve in lieu of meaningful judicial review. In addition, the boards and commissions that ultimately are responsible for **rule** promulgation generally include some academics and professionals in the particular field of regulation who have their own sense, sometimes highly refined, of how **economic** consequences should be evaluated. The limitation on judicial review comes from a statutory provision that **economic analysis** is treated as a procedural matter in rulemaking, and codification of a **rule** is deemed conclusive evidence that procedural prerequisites to a **rule** have been completed satisfactorily. ¹⁴⁹ This accords with the goals of focusing attention on **rule** writers and commentators early in the process, rather than treating anal- [*725] ysis as an attempt at comprehensive rationality. On the other hand, the North Carolina legislation does not deal with the fact that organic statutory standards for **rules** may depart widely from standards for **economic analysis**.

It is clear upon reflection on the startup efforts at DEHNR that, as Kerry Smith noted in 1984, "no benefit-cost **analysis** is capable of living up to the idealized views of how it should be implemented." ¹⁵⁰ A program of **economic analysis** needs guiding principles--the ends towards which it aims--to help it at least evolve in the right

¹⁴⁴ Still there will be the need for some "watchdog" agency or process; many of these "watchdogs" will be legislative. E.g., KY. REV. STAT. ANN. sections 7.090-7.990 (Michie/BobbsMerrill 1992 & Supp. 1994) (legislative research commission to review all agency impact analyses).

¹⁴⁵ Cf. ALFRED N. WHITEHEAD, SCIENCE AND THE MODERN WORLD 197 (1925). Whitehead states that professionalized knowledge is effective, but

produces minds in a groove. Each profession makes progress, but it is progress in its own groove But there is no groove of abstractions which is adequate for the comprehension of human life. Thus in the modern world, the celibacy of the medieval learned class has been replaced by a celibacy of the intellect which is divorced from the concrete contemplation of the complete facts

Id. Whitehead cites this as a great fact and dilemma confronting the modern world, noting the need for discovery of a method of training professionals. Id. This the general problem for **economic analysis** of **rules** at DEHNR: bringing to bear the useful lessons of economics for regulators trained in the sciences and engineering.

¹⁴⁶ Telephone Interview with Malcolm Dole, California Air Resources Board (Aug. 1995).

¹⁴⁷ The executive branch controls the **economic analysis** through the approval process conducted by the OSBM. [N.C. GEN. STAT. section 150B-21.4\(b1\)](#) (1995).

¹⁴⁸ The Joint Legislative Administrative Procedure Oversight Committee was created by 1995 N.C. Sess. Laws ch. 507 (codified at [N.C. GEN. STAT. sections 120-70.100](#) to -70.103 (Supp. 1995)).

¹⁴⁹ See [N.C. GEN. STAT. section 150B-21.22](#) (1995). The entire North Carolina system for review of **economic** analyses, and **rules** in general, is poorly thought out and largely a product of political compromise, but without the widespread public debate and input that characterizes legitimate political outcomes. Nevertheless, the limits on judicial review do allow the agencies to

direction.¹⁵¹ With a goal or set of goals, an understanding of the resources at hand, and an appreciation of the place of analysis in the overall institutional setting for rulemaking, one can begin making or critiquing the methodological choices.

V. MAKING ANALYSIS WORTHWHILE: CRITICAL METHODOLOGICAL CHOICES

Setting up a program of economic analysis of rules can be daunting when faced with the multitude of choices, all of which are inherently subject to criticism. The diversity of choices is one reason for the varying approaches to analysis of a particular rule.¹⁵² The discussion that follows on this subject is general and designed to make the point that reference to one or more textbooks will not answer the question of how to do economic analysis of rules. Answers to the predicate questions discussed in parts II, III, and IV must be decided first before delving into the methodological choices.

A. Types and Depth of Analysis

1. Qualitative versus quantitative analysis

Economic analysis can be done anywhere along a spectrum from a qualitative study, in which the impacts and the parties affected by a proposed rule are simply listed, to a quantification of all the economic impacts. A qualitative scoping study describes two or more future scenarios, one with the rule and the second without the rule, with the differences between these two scenarios defined as the rule's impact. At the other end of the economic analysis spectrum is a rigorous quantification which may require the use of modeling and indirect valuation methods. Along this spectrum, in between the two extremes, are different kinds of analysis that involve some but not full quantification. The choice of whether to undertake a qualitative or quantitative analysis depends to a large degree on the resources available to undertake the study, the planned use of the analysis and the significance of the rule.

In general, due to the difficulty in putting a number value to many types of benefits and risks, quantitative analysis is much more time consuming and costly than qualitative analysis. Thus, if an agency is faced with a legislative mandate to do economic analysis of rules without adequate resources, a qualitative analysis is more likely and appropriate.¹⁵³ In addition, rule writers and analysts who are not familiar with the language and logic of

begin taking "baby steps" with economic analysis without the paralyzing effect that judicial review would bring in light of the lack of resources and expertise to do orthodox benefit-cost analysis.

¹⁵⁰ Smith, *supra* note 35, at 8.

¹⁵¹ The evolutionary nature of these programs is clear from the federal history. Fisher, *supra* note 64, at 107. Fisher explains that the EPA has moved beyond the use of first-order compliance costs for parties directly regulated, to a broader conception of total opportunity cost to society, with four general categories: private-sector real-resource costs, deadweight welfare losses, government regulatory costs, and adjustment costs. *Id.* Uncertainty is accounted for with costs and benefits by including upper and lower-bound estimates as well as best estimates of costs. *Id.*

¹⁵² See Hahn & Hird, *supra* note 27, at 236 ("This variation [in cost estimates] leads us to conclude that existing tools for estimating regulatory impacts are extremely imprecise, and that most estimates more properly are viewed as 'guesstimates.' The range of uncertainty is even larger for benefit estimates.").

¹⁵³ A theorist might object that this is normatively a question of the value of information, noting there will be instances in any state in which quantitative information is net beneficial and should therefore be sought. In reality, though, this objection ignores the problems of (a) how to determine *ex ante* which rules are more appropriate for quantification and (b) how the putative value to be gained from quantification of a given rule compares with the costs of diverting scarce analytic resources on a rule-by-rule basis. For example, it might be more beneficial to ensure that every rule, or most rules, get some scrutiny; to devote resources to communication of analytical results; or to devote resources to updating those results as information changes throughout the rulemaking process. What states need from information economists are good rules of thumb. At DEHNR, the initial inclination was to preserve resources for use on the relatively few rules that "everyone felt" would impose major costs, and attempt fairly rigorous quantification of those few. But the system evolved to one that required a fairly time-consuming (thus resource-intensive) initial screening analysis for every rule. As with all such decisions in this arena, the "right" choice is the one that

economics will find it difficult to leap into quantitative analysis without first answering the basic questions common to both kinds of review: What is the rule addressing? What parties will be affected by the rule? What is the baseline from which the rule builds? What are the behavioral changes expected from the rule? Solid answers to these questions are more valuable than flimsy attempts at quantification; but the universal desire for the apparent simplicity of a number will drive agencies in states, including North Carolina, to attempt to quantify things whenever possible.

State governments in this era will be on firmer ground with qualitative analysis, because their resources do not match those in the federal government or the private sector. For example, New York agencies must complete a Regulatory Impact Statement (RIS) for all new rules which includes a statement of needs and benefits, an estimate of costs incurred by the regulated parties and regulating agency, and supporting information used to conduct the analysis.¹⁵⁴ The sample analyses DEHNR reviewed from New York are qualitative, tending toward that end of the economic analysis spectrum.¹⁵⁵ On the other hand, Minnesota's Pollution [*727] Control Agency prepares a "Statement of Need and Reasonableness" that attempts to quantify changes in production costs and employment levels for all affected industries.¹⁵⁶ The state of Washington aims for quantitative analysis as well, particularly in screening rules that have small business impact.¹⁵⁷

DEHNR's primary goals--reframing the work of rule writers and improving public debate over rules--do not require a high degree of quantification. They do require attention to complete identification of all affected parties, description of the baseline conditions, and an attempt at quantifying important impacts. The hope is that DEHNR's staff experience in building good qualitative analyses will, over time and with additional resources, provide a better foundation for future quantification.

2. Benefits analysis versus cost analysis

In addition to the distinction between qualitative and quantitative analysis, one can distinguish analysis of "costs" versus "benefits." Costs are more easily measured than benefits since organized markets for benefits such as environmental protection rarely exist and there is no easy way to measure the benefits of clean air, for example.¹⁵⁸ One problem for both benefit and cost analysis of rules is the prospective nature of the analysis. The science is forward-looking and requires an estimate of what a particular rule will cost, which is more difficult than tracking

advances the state's goals, in light of actual resources and the role of economic analysis in the overall rulemaking context--the three predicate questions.

¹⁵⁴ [N.Y. A.P.A. LAW sections 202\(1\)\(f\)\(iv\)](#), 202-a (McKinney 1995).

¹⁵⁵ With the creation of Governor Pataki's Office of Regulatory Reform, there is an indication that New York may be moving towards quantitative analysis through enforcement of the 1983 cost-benefit requirements of New York's Administrative Procedure Act, id. sections 100-501. See GOVERNOR'S OFFICE OF REGULATORY REFORM, FUNDAMENTAL COMPONENTS OF COST-BENEFIT ANALYSIS: A GUIDE FOR NEW YORK STATE'S REGULATORY AGENCIES (forthcoming) (comment draft at 4-15, on file with author) (enumerating various categories of costs to be quantified and noting that "agencies should incorporate a formal quantitative risk assessment as part of their benefit analyses").

¹⁵⁶ Telephone Interview with Robert McCarron, Program Development Section, Air Quality Division, Minnesota Pollution Control Agency, St. Paul, Minn. (Nov. 28, 1994).

¹⁵⁷ See, e.g., WASHINGTON DEPARTMENT OF ECOLOGY, SMALL BUSINESS ECONOMIC IMPACT STATEMENT FOR RULE MODIFYING THE COMPLIANCE DEADLINES FOR GASOLINE VAPOR REDUCTION (1993) (setting out estimates for capital costs, operations and maintenance costs, future interest, and ratio of costs per \$ 100 of sales for six- and ten-nozzle gasoline stations in four counties).

¹⁵⁸ But see Smith, *supra* note 35, at 29 (noting that any economist who closely examined the cost analysis of federal regulatory impact analyses would likely find major problems, suggesting that the cost side is not so straightforward to analyze as is generally believed).

down what an existing rule does cost. ¹⁵⁹ Most states currently address benefits assessment qualitatively, without attempting to quantify the expected benefits from a proposed rule. While this is the typical approach, it raises questions about how a fair comparison can be done between (quantified) costs and (unquantified) benefits.

Three basic types of economic analysis that can be applied to rules, in order of increasing sophistication, are cost analysis, cost-effectiveness analysis, and benefit-cost analysis. [*728]

a. Cost analysis. A cost analysis simply answers the question, "How much will this regulation cost?" This question is the basic building block for more sophisticated types of analysis. At a deeper level of complexity, this question becomes, "Which entities should we include in estimating a regulation's cost?" ¹⁶⁰

Most cost analyses focus on the incremental compliance costs of private parties directly affected by regulation (i.e., capital costs, ongoing operational and maintenance costs, and transaction costs, which reflect the time and costs of completing the paperwork and of administrative compliance). However, cost analyses may also analyze social cost, which is a broader concept that includes the opportunity costs of regulation, government regulatory costs, such as monitoring and enforcement costs, and adjustment costs for displaced resources.

It is difficult to give precise classifications of economic analysis statutes; these classifications should be considered a representation of the focus of a state's statute. States whose current focus is just on cost analysis include Mississippi ¹⁶¹ and Missouri. ¹⁶²

b. Cost-effectiveness analysis. A somewhat more sophisticated type of analysis is a cost-effectiveness analysis, which attempts to examine different regulatory options from the standpoint of how much each will cost to achieve a particular objective. For example, what is the least expensive way to achieve a desired level of particulates in the air? Cost-effectiveness analysis provides estimates of the costs of a particular rule and compares these estimates to other alternatives, but it does not optimize benefits. ¹⁶³ If a primary goal of the system for economic impact analysis is to minimize the regulatory burden on certain groups, then cost-effectiveness analysis may be particularly useful. While numerous states have some [*729] mandate to consider alternatives in their economic analysis statutes, ¹⁶⁴ it is not easy for agencies to do this well. One state which tries nonetheless is Wisconsin. ¹⁶⁵

c. Benefit-cost analysis. Benefit-cost analysis is the most complete form of economic assessment. It involves a comparison of the costs of the regulation with the benefits of the regulation, converted to monetary terms or some other common metric. The benefit from government regulation can usually be grouped into categories such as

¹⁵⁹ For a general discussion of the problems of uncertainty and risk in benefit-cost analysis, see TOM TIETENBERG, ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS 86-92 (3d ed. 1992).

¹⁶⁰ For a discussion of which entities should be included in a cost analysis, see *infra* notes 179-80 and accompanying text.

¹⁶¹ See [MISS. CODE ANN. section 49-2-11](#) (Supp. 1995) (for environmental rules only, any new rule requires an estimate of capital cost and annual cost to regulated entities, initial cost and annual cost to government entities).

¹⁶² See [MO. ANN. STAT. section 536.200](#) (Vernon Supp. 1996) (if costs estimated at more than \$ 500 for a single business entity, agency must estimate the number of persons affected by adoption of the rule; classify the businesses affected; and estimate the cost of compliance for affected firms).

¹⁶³ Washington's new legislation tries to capture the advantage of cost-effectiveness analysis by a general admonition to "determine, after considering alternative versions of the rule and the [benefit-cost analysis] that the rule being adopted is the least burdensome alternative." Regulatory Reform Act of May 16, 1995, ch. 403, section 201(d), 1995 Wash. Laws 2169 (to be codified at WASH. REV. CODE section 34.05).

¹⁶⁴ See *supra* note 2.

¹⁶⁵ Telephone Interview with Betsy David, Management and Budget Office, State of Wisconsin (Aug. 22, 1995).

public health and safety, occupational health, environmental protection, consumer protection, etc.--all of which meet some sort of social goal.

The benefit of a rule is the satisfaction that individuals experience because of the policy improvement that results. This is often measured in economic terms through willingness to pay criteria that assume an individual is better off as demonstrated by the maximum amount someone would be willing to pay or the minimum amount one would be willing to accept as compensation to achieve a particular objective. Usually, this measure is derived from the value of goods and services in private markets.¹⁶⁶ The net benefit of a rule, then, is the difference between the benefits and the costs. According to economic theory, a regulation would not be worth promulgating (from the perspective of economic efficiency) unless the benefits are greater than the costs.

Because attaching a monetary value to benefits can be quite difficult, and often controversial, full benefit-cost analyses of rules are rare on the state level. Most states that do attempt some quantification of benefits use informal judgment or weighting schemes as a proxy for a quantitative comparison of benefits and costs. The resource commitment required and the staff expertise necessary either to prepare or to review a benefit-cost analysis weigh against use of this type of analysis on a systematic basis. However, public interest groups are quick to point out that benefits are often ignored or downplayed in less full-featured forms of analysis. Thus in North Carolina, as in most states, there is an attempt to provide at least a qualitative analysis of benefits.

i. Benefits: market and nonmarket valuation. The approaches to economic measurement of benefits can be broadly classified into direct (market) techniques and indirect (nonmarket) techniques. The former approach looks at improvements such as better levels of water or air quality and seeks to directly measure the money value of these gains. This is done through analysis of a surrogate market in which goods and services are bought and sold and benefits are part of those goods and services. For example, a level of air quality is an attribute of the features of a house [*730] (and therefore its price), and certain risks may be features of certain jobs (and thus reflected in wages). This sort of benefits determination is the province of specialists within the economics profession, and well outside the expertise of non-economists. Even when markets are available or can be constructed, difficult issues arise in "unscrambling the omelette of market-generated information"¹⁶⁷ to retrieve that aspect of market data that economists believe accurately reflect consumer preferences. Economists have devised the concept of "shadow prices" to substitute for market prices that may not accurately reflect consumer preferences due to market distortions; but obtaining "shadow prices" is itself very difficult--some famous economists would say, impossible--and this is but one data problem in economic analysis of rules.¹⁶⁸

As opposed to the direct or market techniques, indirect techniques simulate a market by placing individuals in a position in which they can express their hypothetical valuations of real improvements in environments. In this case, the aim is to make the hypothetical market as real as possible. Since organized markets for environmental quality typically do not exist, techniques such as contingent valuation survey methods are necessary to capture the value of environmental protection. In this method, people are asked what they would be willing to pay to enjoy alternative levels of environmental quality in order to estimate improvements in aesthetics such as visibility or water clarity and the preservation of wildlife and wilderness areas. Given the expense and expertise necessary to conduct hypothetical or contingent valuation surveys and to estimate shadow prices, it is doubtful that a state agency would regularly employ such studies for the purpose of benefits assessment. This leaves states that attempt benefit-cost analysis open to the charge that their analyses inappropriately weight the more easily quantified outcomes--typically direct compliance costs--at the expense of less easily quantified benefits.

¹⁶⁶ For a sociological critique of this preference-based scheme, see BELLAH ET AL., *supra* note 28, at 29. For a summary of the economic debate over willingness-to-pay measures versus other measures of preference, see Pildes & Sunstein, *supra* note 10, at 75-86.

¹⁶⁷ SUGDEN & WILLIAMS, *supra* note 33, at 206-07.

¹⁶⁸ See, e.g., DeVries et al., *supra* note 36.

ii. Costs: direct and indirect impacts. While market and nonmarket valuation techniques are terms used to define how to think about environmental benefits, direct and indirect impacts are different ways to consider the costs of a regulation. Regulations may impose both direct and indirect costs. The phrase "direct costs" refers to the regulated sector's own expenditures on compliance. Survey data is often used to estimate these costs. Those who bear the costs and presumably know the most about them--the firms themselves--are asked to reveal the magnitude of the costs to policymakers. Much of this cost data is retained by the United States Department of Commerce and state economic policy departments. One problem with this estimation approach is the strong incentive for firms to overestimate the cost of compliance in the hopes that an overestimate will lead to less regulation. General engineering informa- [*731] tion may catalogue the regulatory responses and estimate the costs of purchasing and using the technologies. The expertise needed to develop these estimates, though, is not widely available.

Some cost data may be readily available to state agencies through permitting and reporting programs; an inventory of these programs and the system which manages the collected information may identify where cost data is available. Typically, however, state agencies have not created information systems that are well-integrated enough to share cost data across agencies or even across divisions, so good cost information is expensive to acquire. It is even harder to get good quantitative estimates of the response of regulated entities to a proposed rule change. This sort of information necessitates communication with the regulated entities. Thus, it is highly misleading to depict a system for economic analysis of rules as something that can take place in a vacuum, removed from the public and from interested parties. Just as the process for analysis is itself an outcome, so the process of data gathering is a vital determinant of the quality of the ultimate product.

At DEHNR, these twin problems of data acquisition and interested party communication seemed best resolved by use of computer communications. DEHNR has designed its analysis software to make use of and run over the Internet, both to make data acquisition easier (from other Internet sources) and to allow for the possibility of direct electronic communication between the analyst and interested persons with relevant data.

Indirect costs are incurred by firms and households through changes in supply and demand conditions in other markets brought about by the imposition of a regulation. These costs are called indirect because the increase in costs to industry, consumers, and workers is brought about by increased regulation of industries producing their inputs. For example, there may be direct compliance costs in the steel industry from air pollution regulation, and there may also be resulting indirect costs in the auto industry as a result of an increase in the price of steel. The North Carolina economic analysis statute makes no reference to indirect costs. Similarly, most state statutes speak of "direct" costs or "directly affected parties" as the subjects of economic analysis. In contrast, states such as Minnesota that attempt some form of macroeconomic modeling must, implicitly or explicitly, calculate indirect costs and resulting changes in macroeconomic indicators.

3. Partial versus general equilibrium analysis

Partial equilibrium analysis considers short term costs in the directly regulated markets. A dynamic, general-equilibrium analytical framework estimates the total impact of a regulation on different industry segments. General equilibrium analysis incorporates industry interaction effects as well as changes in investment levels over time.

There are regional models that can be used by states interested in [*732] general equilibrium analysis of rule changes.¹⁶⁹ The models have an economic history of the state for a certain period of time, tracing multiple industrial sectors down to the county level of detail. Through a set of interlinked programs, the model will process historical data, forecast the long term progress of the economy, perform policy simulations, and display the results. The models generate changes in production costs and changes in employment levels for all industries affected by a regulation. However, agency staff or other analysts must identify the direct impacts of the regulatory changes, to

¹⁶⁹ Two market leaders are the Regional Economic Models, Inc. (REMI) and Impact Analysis for Planning Models, which typically cost a state a one-time fee on the order of \$ 10,000 and an annual charge based on usage. Minnesota has used the REMI model in its regulatory analysis program. Telephone Interview with Robert McCarron, Program Development Section, Air Quality Division, Minnesota Pollution Control Agency, St. Paul, Minn. (Dec. 1995).

create inputs for the model. In addition, an economist or someone familiar with economic modeling must run the model to generate the results. As with any model, to the extent that the inputs are not accurate, the results will be inaccurate.

Some rules will likely have a rippling affect through the economy, such as rules that make changes to the motor vehicle fleet. However, the time and expenses associated with using the dynamic, general equilibrium approach, in addition to the relatively few number of rules which have regional economic effects, seems to favor the use of partial, static analysis in most states. ¹⁷⁰

4. Thresholds for analysis

The absolute size of the economic impact of a rule, or some other aspect of the rule, may be considered in determining what kind of analysis and how much analysis to undertake. Typically, a federal agency or state program for economic analysis establishes a threshold and rules which fall above this level are considered "major rules." These rules will get more scrutiny due to the larger compliance costs the rule imposes on the regulated community. ¹⁷¹ For example, a closer examination of a major [*733] rule may ensure that alternative regulatory options have been considered and a rule writer has designed a rule that is the most cost-effective. In addition, an agency may want to ensure that it has considered the implementation requirements for the rule; economic analysis forces attention on these requirements.

Major rules are rules which entail significant compliance costs to the regulated community or to some segment of the regulated community thought to deserve special attention, such as small business. The annual economic impact threshold to trigger analysis of "major" rules under existing programs varies from \$ 500 for some state rules to \$ 100 million for federal rules, and may include other components beyond "annual economic impact" such as potential inflationary effects. ¹⁷² At the EPA, approximately ten percent of all rules issued in the early 1990s

¹⁷⁰ For a discussion of partial versus general equilibrium approaches to ex post economic analysis of rules, see Hahn & Hird, supra note 27, at 238; Michael Hazilla & Raymond J. Kopp, Social Cost of Environmental Quality Regulation: A General Equilibrium Analysis, 98 J. POL. ECON. 853 (1990).

¹⁷¹ Florida's "trigger" for analysis is actually comprised of several triggers: A benefitcost analysis must be performed if a rule would

result in a substantial increase in costs or prices paid by consumers, individual industries, or state or local government agencies, or would result in significant adverse effects on competition, employment, investment, productivity, innovation, or international trade, and alternative approaches to the regulatory objective exist and are not precluded by law; or . . . [at the request of] the Governor, a body corporate and politic, at least 100 people . . . or an organization representing at least 100 persons, or any domestic nonprofit corporation

[FLA. STAT. ANN. section 120.54\(2\)\(b\)](#) (West Supp. 1995). Missouri's threshold for analysis is about as low as one gets: A \$ 500 or greater impact on any governmental entity qualifies the rule for analysis. [MO. ANN. STAT. section 536.200](#) (Vernon 1988 & Supp. 1996).

¹⁷² Iowa uses what might be termed the "gatekeeper" approach to threshold determinations: analysis is triggered at the "request of at least two members of the administrative rules review committee." [IOWA CODE ANN. section 17A.4\(1\)\(c\)](#) (West 1995). Federal thresholds since the Carter administration have typically had triggers both from overall predicted economic impacts and from predicted inflationary impacts. For example, the Regulatory Reform Act of 1982, S. 1080, 97th Cong., 2d Sess. (1992) (as passed by the Senate on March 24, 1982), reprinted in 128 CONG. REC. 5297-99 (daily ed. Mar. 24, 1982), provided that a rule would be a "major rule" if the rule would have an annual effect on the economy of \$ 100 million or more in reasonably quantifiable direct or indirect costs; or

were classified as major rules.¹⁷³ The lower the threshold requirement for classification of a major rule, the larger the number of rules that exceed it. Rules that fall under the threshold are exempted from analysis or subject to fewer analytic requirements.

DEHNR's statutory requirement requires the agency to conduct an economic assessment for all rules with a "financial impact on all persons affected of at least five million dollars in a twelve month period."¹⁷⁴ If the threshold is not crossed, there is no statutory requirement for analysis. However, to make better threshold determinations and to force rulewriters to think about the economic effects of rules they propose, DEHNR's approach is to conduct a "scoping" level assessment of likely costs (and qualitative benefits) for all rules.¹⁷⁵ [*734]

B. Categories, Exemptions, and the "Standing" Problem

DEHNR, a single state agency, promulgates rules that can be divided in many different ways: there are environmental, natural resource, public health, and land use regulatory rules; rules that classify, rules that prohibit certain behavior, rules that give information on how the public must interact with the agency, even "rules" that simply set forth general policies and agency preferences.¹⁷⁶ The overall regulatory jurisdiction of state agencies is often broader than federal agencies because states carry out day-to-day duties in nearly all areas of federal jurisdiction, and at the same time have their own state responsibilities. Accordingly, state programs should have separate rule categories to delineate different economic analysis approaches. There are economic issues of special concern to land use regulation, for example, that differ greatly from issues that arise in specifying control technology for discharges into surface waters. Given the breadth of issues that apply to agencies within a state, "one size" does not easily "fit all" when it comes to economic analysis of rules.

The economics literature regarding benefit-cost analysis has not focused on the practical problems of setting up a system for analysis of rules that govern different types of behavior (e.g., discharging waste versus administering medical grant programs versus land use planning).¹⁷⁷ This "grouping" of rules for different types of analysis is itself a methodological problem, since the categorical scheme may determine the depth and quality of analysis. DEHNR's experience is that two or three categories--for this agency, they are (1) rules that regulate behavior, (2)

if it is likely to result in . . . a substantial increase in costs or prices for wage earners, consumers individual industries, nonprofit organizations, Federal, State, or local agencies or geographic regions; or significant adverse effects on competition, employment, investment, productivity, innovation, the environment, public health or safety, or the ability of [domestic businesses] to compete in domestic or export markets.

Id. section 621(4)(A).

¹⁷³ See Luken & Fraas, *supra* note 10, at 100.

¹⁷⁴ [N.C. GEN. STAT. section 150B-21.4\(b1\)](#) (1995).

¹⁷⁵ DeVries et al., *supra* note 36. This report, prepared for DEHNR, states

A qualitative, or "scoping level," assessment of the costs and benefits associated with each proposed rule would provide useful information to DEHNR staff in the process of rule development and to the rule-making commissions. Additional analysis may be useful in some cases; however, because the resource commitment associated with a more comprehensive analysis may be high, the department needs a process by which it determines which regulatory decisions warrant the commitment of significant staff resources.

Id. at 3.

¹⁷⁶ See generally N.C. ADMIN. CODE tit. 15A (Oct. 1994) (setting forth the various rules and regulations promulgated by DEHNR).

¹⁷⁷ See, e.g., FRANK S. ARNOLD, ECONOMIC ANALYSIS OF ENVIRONMENTAL POLICY AND REGULATION 2-3 (1995) ("In the realm of practical applications of microeconomics, the complexities of actual circumstances must be incorporated into the analysis. This stands in contrast to the process of learning economics and public policy"). Or, as one anonymous pundit quipped, "Among economists, the real world is often a special case."

rules that govern administration of grant and loan programs, and (3) special circumstance rules that do not require analysis--seem to be optimal in trading off methodological validity against minimization of category errors.¹⁷⁸

The last of the DEHNR categories, "special circumstance rules that do not require analysis," deserves attention because of the tendency for legislators to exempt some rules from the requirements. There is a clear policy rationale supporting an exemption for emergency rules or rules which make a technical correction. In other cases, though, favored groups are exempted from the economic analysis requirements, either statutorily [*735] or through a system of waivers.¹⁷⁹ There is generally no clear principled basis for these exemptions; they are simply typical political outcomes from the debate over the costs and benefits of doing economic analysis.¹⁸⁰ Congress exempts its pet projects and state legislatures can be expected to do the same. The existence of baseless exemptions is evidence that some political actors desire to slow down or restrain agencies subject to the requirements.

A final methodological problem for states is the "standing" issue: who gets counted as being affected by a rule? In its narrow form, which is the uniquely important one for states, the question is whether citizens and firms outside a state's boundaries should be counted as part of the market that will pay the costs or receive the benefits of a rule.¹⁸¹ This is an issue for federal agencies as well, since there are national boundaries, but the smaller size of states makes it more likely that the first-order consequences from a given rule change will be felt outside a state's boundaries. To ignore persons outside the state obviously biases the analysis from a purely economic point of view: suppose North Carolina were considering a rule that only affects one pulp and paper plant in a watershed area that drains to a neighbor state, and all the costs would be felt by the North Carolina firm, but most of the benefits would be experienced by downstream residents in another state. A benefit-cost calculation that ignored the out-of-state benefits would find it difficult to justify the rule's costs, even though they might easily be justified by inclusion of all the downstream beneficiaries. This problem is sometimes called the "interstate externality" problem, and is a putative basis for federal regulation.¹⁸² One possible cure for this problem is the inclusion of all affected [*736] persons in a state's economic analysis, whether in-state or out-of-state.

¹⁷⁸ At an early point in development of the DEHNR software, the programmers tried a more complex categorical scheme, in order to more precisely tailor the "help" screens that guide the user through analysis, but it proved difficult for users to locate the category into which a rule fit.

¹⁷⁹ In North Carolina, some agencies are exempted entirely from the Administrative Procedures Act, see [N.C. GEN. STAT. section 150B-1\(c\)](#) (1995), and others only from notice and comment rulemaking (and therefore economic analysis), see id. section 150B-1(d), based on the legislature's apparent view that streamlined procedures are more suitable for favored agencies and activities. The federal system is even more lenient:

Of the 2803 regulations and proposed regulations reviewed by OMB between 17 February and December 1981, only 62 were designated "major." Of these, 43 were published in final or proposed form by 31 December, but only 22 required an RIA. The other regulations were exempted. RIAs were prepared for less than 1 percent of all regulations in the first year of EO 12291 and thus are rare events, even among rules designated "major."

Grubb et al., supra note 54, at 132. For a discussion of the waiver issue at the federal level in response to Executive Order 12,291, see LYNDON JOHNSON SCHOOL OF PUBLIC AFFAIRS, POLICY RESEARCH PROJECT ON FEDERAL REGULATORY IMPACT ANALYSIS, FEDERAL REGULATORY REFORM PROGRAMS AND THE USE OF COST-BENEFIT ANALYSIS xi, 26-27 (1984).

¹⁸⁰ See, e.g., DeMuth & Ginsburg, supra note 54, at 1087 ("A rider to OMB's appropriation bill forbids OMB to review agricultural marketing orders under Executive Order 12,291.").

¹⁸¹ This is by no means the only "standing" problem for rule analysts. See Dale Whittington & Duncan MacRae, Jr., The Issue of Standing in Cost-Benefit Analysis, 5 J. POL'Y ANALYSIS & MGMT. 665 (1986).

¹⁸² See, e.g., Richard L. Revesz, Rehabilitating Interstate Competition: Rethinking the "Race-to-the-Bottom" Rationale for Federal Environmental Regulation, [67 N.Y.U. L. REV. 1210, 1222-23 \(1992\)](#).

The problem is that a state has little or no incentive to issue rules that cost its taxpayers--more importantly, its voters--for the benefit of the citizens of other states. The lack of such incentives makes it unlikely that this "count them all wherever they live" approach would really be taken seriously by states. Furthermore, with increasing distance outside a state's boundaries, the costs of accurate information regarding costs and benefits are likely to rise. Finally, adjustments by affected persons outside its jurisdiction will be difficult to predict for a state agency. These factors weigh in favor of avoiding the (potentially pretentious) claim that a state is really concerned about another state's citizens as much as it cares about its own. In the end, it is just as difficult to state a firm rule on this question as it is difficult to state a firm rule on many methodological issues surrounding economic analysis of rules. There will be rules, such as a rule concerning the upstream pulp and paper plant on the state's border, where interstate externalities are so critical that to ignore them nullifies the analysis; there will be other rules in which there may be interstate externalities if one looks hard enough, but their magnitude does not justify the expense of out-of-state data collection and the political problem of dealing with interstate distributional issues. Taken together, a state's answers to standing problems, exemptions from analytic requirements and the different categories of analysis for rule types greatly shape the state's system of analysis.

C. Distributional Issues: Who Gets What from the Rule Change, and When?

The distribution of the costs of a rule on small business, on low income groups, or more generally on individuals, firms or groups may require an economic impact analysis to address important political concerns. To the extent that the costs imposed by rules fall disproportionately on one sector, analysis may help discover whether the rules can be designed to minimize these adverse impacts. In addition, the benefits of a proposed rule may accrue to a single group or have a broader regulatory impact. Often, the costs of a rule are immediate, but the benefits may not accrue for several years. Because of these cases, and because political proponents of regulatory analysis seem to expect it, analysis of distributional effects is important. ¹⁸³

Adding distributional issues to economic analysis adds great complexity to already difficult work. It is not clear how best to analyze and present distributional issues; economists doing traditional benefit-cost analysis tend to ignore them. In considering distributional issues, a program for economic analysis might distinguish "horizontal" issues (treatment of persons with similar economic status the same) from "vertical" [*737] issues (treatment of persons with different needs differently, favoring those who need it most). ¹⁸⁴ To ignore these distributional concerns severely limits the usefulness of economic analysis for policy decisions.

The political process recoils from the "let the chips fall where they may" nature of traditional efficiency maximization. In particular, it attempts conscientiously to redistribute resources so that cost impositions are reduced This pattern of choice is in sharp contrast with the dictates of benefit-cost analysis, which focuses exclusively on efficiency ¹⁸⁵

Economists have not solved the problem of aggregating gains and losses across different individuals or over different time horizons. ¹⁸⁶ Unless the customers of the state analytical program are content to ignore distributional

¹⁸³ At the federal level, the Clinton administration's Executive Order 12,866, *supra* note 10, attempts to improve upon Reagan's Executive Order 12,291, *supra* note 10, by including some concern for distributional effects.

¹⁸⁴ For an example of a project analysis that specifically includes distributional issues in a transparent, accessible way, see David A. Long et al., *Evaluating the Benefits and Costs of the Job Corps*, 1 J. POL'Y ANALYSIS & MGMT. 55 (1981).

¹⁸⁵ Richard Zeckhauser, *Preferred Policies When There Is a Concern for Probability of Adoption*, 8 J. ENVTL. ECON. & MGMT. 215, 218 (1981); see also Bromley, *supra* note 27, at 105. Professor Zeckhauser states:

Progress--or the lack thereof--on air and water pollution turns critically on the distribution (incidence) of different kinds of benefits and costs, not just by income class, but by job category, by location of residence, by education level, and by a number of other variables rarely pondered in economic analysis.

Zeckhauser, *supra*, at 218.

¹⁸⁶ E.g., JOHANSSON, *supra* note 59, at 113, 121.

and intergenerational issues, however, this gap in economic analysis must be bridged by the policy analyst.¹⁸⁷ The analyses done for DEHNR, within the software framework, merely identify which parties gain and which lose through a rule.

A clear presentation of who wins and who loses from a rule change is almost guaranteed to engender political opposition. But persons who may be adversely affected by a rule should have fair notice and chance to comment. This part of an analysis should be the principal concern of any gatekeepers, since they have no direct stake in whether the rule is or is not adopted.

Costs and benefits are rarely, if ever, incurred at the same point in time. A rule may create short-term costs but the benefits may be realized at a much later date.¹⁸⁸ For example, many health and safety rules aim to protect against cancer and other long-latency diseases by imposing costs now that will produce primary benefits in twenty years or more. The temporal differences between the timing of costs and benefits raise difficult distributional issues: how much should one generation pay for the next and future generations' well-being?¹⁸⁹ This debate is typically engaged indirectly by analysts, in the choice of an appropriate discount rate. The technical debate over how to pick a discount rate rages on.¹⁹⁰ This only becomes an issue if the analyst decides to reduce a series of outcomes through time to a single "present value" number. It is quite plausible that the output of the analysis consists of a series of outcomes, with no attempt to combine them. DEHNR has adopted the latter approach, preferring to suspend the political debate about the decision on the appropriate discount rate. As with most methodological choices, however, the acceptability of this decision depends on the goal for the analysis. If DEHNR's goal was to promulgate only rules for which "benefits exceed costs" in an economically demonstrable way, it could not avoid the discounting problem.

D. Accounting for Risk, Uncertainty and Behavioral Change

Perhaps the most difficult analytical problem in analyzing regulations is the twin problem of behavioral change: predicting the behaviors that will change after a rule is promulgated and determining what behaviors would have occurred in the absence of the rule. Both exercises are very difficult and inherently imprecise.¹⁹¹ Treating risk

¹⁸⁷ See Pildes & Sunstein, *supra* note 10, at 9 ("Regulations should be evaluated not only in terms of aggregate costs and benefits, but also in terms that reflect democratic judgments about qualitative differences among qualitatively different risks. By qualitative differences, we mean to include an understanding of whether a risk is voluntarily incurred, especially dreaded or equitably distributed . . .").

¹⁸⁸ Some analytic programs may try to account for these differences by estimating a time horizon over which regulatory effects occur. Arguably, horizons less than a generation in length do not raise substantial discounting issues. But this estimation is itself difficult: if a rule today saves 10 fish this year, will this marginal increase in population continue increasing indefinitely? In other words, how long do the benefits last?

¹⁸⁹ See, e.g., JOHN RAWLS, A THEORY OF JUSTICE 284 (1971) ("The question of justice between generations . . . subjects any ethical theory to severe if not impossible tests.").

¹⁹⁰ See, e.g., Jonathan A. Lesser & Richard O. Zerbo, Discounting Procedures for Environmental (and Other) Projects: A Comment on Kolb and Scheraga, 13 J. POL'Y ANALYSIS & MGMT. 140 (1994) (arguing for the use of the cost of capital--the discount rate on government bonds of a term that matches the life of the project--as an appropriate social discount rate and briefly reviewing literature on the dispute). Note that choice of an appropriate term, not an easy task for all investment projects, is even more difficult for a rule of uncertain duration. See generally Daniel A. Farber & Paul A. Hemmings, The Shadow of the Future: Discount Rates, Later Generations and the Environment, 46 VAND. L. REV. 267, 302-04 (1993). The authors note that the nomination of Douglas Ginsburg to the United States Supreme Court was complicated, in part, by his reported forcing of EPA to withdraw proposed asbestos bans, with the dispute centering over the appropriate choice of discount rate. *Id.* at 268 n.3.

¹⁹¹ For who "can look into the seeds of time, and say which grain will grow and which will not?" WILLIAM SHAKESPEARE, THE TRAGEDY OF MACBETH, act 1, sc. 3, ll. 58-59 (Nicholas Brooke ed., Oxford Shakespeare ed. 1990) (1606). Robert Hahn and John Hird, in their attempt to collect and summarize total costs of economic and social regulation, note that specifying what would have happened in the absence of regulatory change is perhaps the most difficult methodological problem for their

and uncertainty in an economic analysis adds to this difficulty. The typical benefit-cost analysis summarizes its findings in a table or matrix and produces statistics such as "net cost" and "net benefits" that combine all known economic information. This succinct presentation may mask the uncertainty and give false concreteness to the numbers. Unfortunately, there is no simple solution to this problem.¹⁹²

Technological innovation is another issue that an analyst must confront. Nicholas Ashford has documented the tendency to overestimate compliance costs in the regulation of asbestos by ignoring technological innovation.¹⁹³ Another problem to confront is the level of compliance and issues about future levels of enforcement activity. Analysts are tempted to assume that there will be total compliance with any given rule. In the actual state of the world some persons comply fully, others choose not to comply, and still others are simply ignorant of the rule. Many general rules are made with the assumption and expectation of "prosecutorial discretion" by either a literal prosecutor, an agency, or both. This equates to an expectation that less than full and absolute compliance will be tolerated.¹⁹⁴

One way to handle these difficulties is to present analyses as a series of scenarios, with no attempt to aggregate or average the impacts. A rule that required certain treatment for hazardous wastes can be analyzed for facilities that continue with the same waste generation after the rule and separately for the facilities that shift their production to avoid waste generation. This approach avoids guessing how many firms may choose a particular means of complying with the rule. What this scenario method loses in simplicity--from the inability to aggregate impacts and present a simple number--it may make up for in greater comprehension by the reader.

E. The Process Is an Outcome: Procedural Issues

Many of the potential goals for economic analysis of rules require careful attention to the process of analysis, not just to the methodological details.

1. When to "freeze" the rule for analysis

One important question involves the timing of the analysis. The analysis may be performed early in the process of promulgating the rule, when alternatives and text are not yet rigid, or later in the process, when the details of the proposed rule are known. The early approach has the benefit of interweaving the analysis more closely with the rule language, allowing iterative changes and making the analysis more meaningful to the rule writers.¹⁹⁵ But the early approach has as a disadvantage great [*740] uncertainty of whether the rule that finally emerges will actually have been analyzed, since details of the rule text may change and moot early economic analysis. The later approach might reduce this source of uncertainty. In either event, some decision must be made on when a rule will be "frozen" for purposes of analyses. When to "freeze" the rule for analysis is not a simple issue, because proposed rule changes are highly dynamic.¹⁹⁶ Economic analysis must take place within a rulemaking context

analysis. Hahn & Hird, *supra* note 27, at 237. The level of difficulty could only be increased for prospective (ex ante) analysis, since the prospective analyst has no knowledge about future states of the world.

¹⁹² E.g., PEARCE, *supra* note 59, at 88 ("The overriding impression we are left with is that there is no very satisfactory way of treating either risk or uncertainty in [cost-benefit analysis]."). While one may perform sensitivity analyses and present the results from varying individual inputs, it is overwhelming to present all of the scenarios or to change many variables at once and explain to the reader what the effects are.

¹⁹³ See CAMPEN, *supra* note 59, at 67.

¹⁹⁴ See Rubin, *supra* note 1, at 401.

¹⁹⁵ See, e.g., DeVries et al., *supra* note 36, at 5 (arguing "that the earlier an economic analysis is conducted as decisions are made on a particular regulatory approach, the more useful it can be as a tool to inform policy decisions and to ensure that regulations are crafted such that they impose the fewest costs in relation to benefits" on the economy).

¹⁹⁶ Cf. KAN. STAT. ANN. section 77-416(b) (Supp. 1995) (requiring agency to prepare a statement at the time of drafting a rule, then to reevaluate and update it at the time of notice of hearing and again when the rule is filed for codification).

that includes public and interest-group comment and intra-agency review. This comment and review often produces many changes in proposed rules before their final adoption.

2. Public participation

The focus on process is important for another reason. Any attempt at improving rules purely through methods that require greater formalism and aim at comprehensive rationality will fall short of the mark. There is a good argument to be made that incremental reform in this direction has already gone too far.¹⁹⁷ Scholars and proponents of past rulemaking reform efforts, particularly at the state level, would likely agree with the reporter-draftsman of the 1981 MSAPA: "There is a point in almost all administrative law making at which the pseudo-scientific approach of 'comprehensive rationality' cannot resolve for an agency the question of proper choice between competing, lawful alternatives. In the end, those choices are grounded in value preferences."¹⁹⁸ The formalism of devices, such as traditional economic analysis, will not help create better and more informed value preferences unless they are carried out with sensitivity to public needs and concerns about rules. For example, the issuance of a regulatory analysis will not be as beneficial if, by the time the public learns of its existence, the period for public participation in the rulemaking has expired.¹⁹⁹ In general, a program for economic analysis has to be concerned with the temporal and dynamic dimension of policymaking (as opposed to the static, synoptic ideal). The best systems will facilitate the "dialectical evolution of both policy objectives and policy instruments."²⁰⁰

There are many suggestions in the literature for improving participation in rule analysis. Typical devices are formalized executive oversight of analysis, generic rules to limit ad hoc arbitrary analytic assumptions, incorporating all proceedings and materials germane to the analysis in the agency record of decision; making the record easily available to the public; and judicial review for everything that is done in the analytic process.²⁰¹ At least one economist has suggested the need for an adversarial approach to benefit-cost analysis with a view that competing analyses provide more open debate on assumptions.²⁰² Professor Rubin would apply due process standards to rulemaking, and perhaps those standards could provide some protection against arbitrary analyses.²⁰³

North Carolina's approach to this problem is to require that the economic analysis be prepared before the text of the rule change is published for comment, so that the analysis is available to commentators.²⁰⁴ This does not assure that the form and supporting documentation for the analysis will be conveniently available. However, DEHNR will publish its system for analysis widely and, eventually, make the analyses in progress available on the Internet for public comment.

3. How to compile the data and the record for analysis

¹⁹⁷ See supra notes 105-08 and accompanying text.

¹⁹⁸ BONFIELD, supra note 4, at 10.

¹⁹⁹ Id. at 220.

²⁰⁰ Bromley, supra note 27, at 105.

²⁰¹ See, e.g., Michael S. Baram, Cost-Benefit Analysis: An Inadequate Basis for Health, Safety, and Environmental Regulatory Decision-Making, 8 ECOLOGY L.Q. 473, 491-92, 516-17, 527-31 (1980).

²⁰² CAMPEN, supra note 59, at 100.

²⁰³ Rubin, supra note 1, at 406-07.

²⁰⁴ [N.C. GEN. STAT. section 150B-21.4\(b1\)](#) (1995).

Any economic analysis of a rule is only as good as the data used, and good data is often expensive to acquire and manipulate.²⁰⁵ There is a wide discrepancy between the resources available in an academic setting for economic analysis of a rule, with the academy's ability to--and often great desire to--conduct original research to fill data gaps, and the resources available to state agencies' program staff, who are struggling to run a program while proposing a rule change. Thus, a system for economic analysis of rules must take advantage of the best tools for data collection.

There are also important process questions regarding the gathering of data: How formal is the process? Are ex parte contacts allowed? Must sources be documented? The greater the procedural and formal safeguards against acquiring biased or otherwise faulty data, the more costly the analytical process.²⁰⁶

DEHNR's approach has focused on the rule writers themselves and required that analysis be conducted early, in order to advance the internal agency understanding and public discussion of the rule's impact during the period for public notice and comment. Use of the Internet to conduct and maintain the analyses gives the agency a means to allow full public comment and data sharing while rules and analyses are under development. It is interesting, though, to contrast this "open" approach with the North Carolina legislature's concern to protect the confidentiality of their own fiscal data.²⁰⁷ The legislature's desire for openness and accountability in agency analyses has not been accompanied by an acknowledgment of the general need for open sharing and discussion of fiscal notes.

CONCLUSION

At the political level, economic analysis is supported by the compelling, if superficial, argument that rules should be promulgated only if their benefits outweigh their costs. A state struggling to make pragmatic sense of this rationale must decide what are realistic goals for economic analysis. If analysis is to be anything other than a new scene in the Kabuki theater of rulemaking,²⁰⁸ careful thought must be given to the institutional setting in which it takes place and the resources available for the analysis.

Once the institutional and resource constraints are understood and there is agreement on the goals of the system, a state is better positioned to respond to the numerous methodological problems that plague economic analysis of rules. The notion of economic analysis of rules is broad enough to allow persons who are not trained experts in economics to make valuable contributions to the public's understanding of a rule's economic consequences.²⁰⁹ Program staff do not necessarily share the professional norms and assumptions of economists, so their analyses may look flawed to a professional economist. But the design of a state program for economic analysis is not, in the end, supposed to serve the needs of economics or of economists.²¹⁰ It should serve one of the goals outlined

²⁰⁵ See, e.g., COMPTROLLER GEN. OF THE U.S., REPORT TO THE CONGRESS: COST-BENEFIT ANALYSIS CAN BE USEFUL IN ASSESSING ENVIRONMENTAL REGULATIONS, DESPITE LIMITATIONS 7-9 (1984).

²⁰⁶ Cf. Michael S. Baram, The Use of Cost-Benefit Analysis in Regulatory DecisionMaking Is Proving Harmful to Public Health, 363 ANNALS N.Y. ACAD. SCI. 123, 125-26 (1981) (arguing for care and restrictions on the gathering of data for benefit-cost analysis).

²⁰⁷ See N.C. GEN. STAT. section 120-131.1(a) (Supp. 1995) (passed in the same session as the new economic analysis requirement for agencies, this provision keeps fiscal data given to legislative fiscal analysts by agencies and others confidential).

²⁰⁸ Cf. E. Donald Elliot, Re-Inventing Rulemaking, 41 DUKE L.J. 1490, 1492-93 (1992) ("Notice-and-comment rulemaking is to public participation as Japanese Kabuki theater is to human passions--a highly stylized process for displaying in a formal way the essence of something which in real life takes place in other venues.").

²⁰⁹ Cf. AYRES & BRAITHWAITE, *supra* note 43, at 51 ("Robust policy ideas are most likely to be discovered when we pursue areas of convergence between analyses based on Homo economicus and Homo sociologicus.").

²¹⁰ Cf. WHITEHEAD, *supra* note 145, at 200 (discussing the evolution of political economy and its self-limiting focus on abstractions).

in part II above or some other policy end towards which the state aims. Perhaps it is along this path that economists themselves will find greater attention paid to their analyses. ²¹¹ A good system for economic analysis must work within the rough-and-tumble interaction of political ideology and scientific expertise. We hope that DEHNR's system will evolve to promote both of those worlds. ²¹² There will no doubt be critics for whom [*743] the system is insufficiently rigorous, and others for whom it is insufficiently accessible. In answer to those critics, we take refuge in the thought of "the possibility . . . of much good being brought out of an ill-designed and limping machinery of measures." ²¹³ Like many who have considered the problems of benefit-cost analysis and economic analysis of rules before us at the federal level, we are left hoping that an imperfect system can be better than no system at all, and may grow into something genuinely valuable.

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²¹¹ Cf. George J. Stigler, Economists and Public Policy, REGULATION, May-June 1982, at 13, 16.

²¹² See Pildes & Sunstein, supra note 10, at 8 ("The key task for those interested in regulatory performance is to find ways of simultaneously promoting economic and democratic goals.").

²¹³ K. LLEWELLYN, THE BRAMBLE BUSH 9 (1960).