

Fordham Environmental Law Review

Volume 29, Number 2

2017

Article 2

Why Michigan v. EPA Requires that the Meaning of the Cost/Rationality Nexus Be Clarified

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Abstract

This article examines the recent decision in *Michigan v. EPA*, in which the U.S. Supreme Court held that the EPA acted unreasonably in not considering costs at the listing phase of the regulation of power plants' emissions under a specific provision of the Clean Air Act (CAA). In *Michigan*, the Court interpreted the applicable statutory provision based on the principles of rational administrative decision-making, thereby establishing a connection between cost consideration by administrative agencies and the principles of reasonable exercise of administrative discretion. We contend that *Michigan* failed to properly appreciate the logical and axiological connection between cost consideration and administrative rationality (i.e., the *cost/rationality nexus*). More specifically, the Court failed to distinguish between two independent steps of cost consideration: cost determination and cost quantification. Cost determination considers that one set of relevant interests must be made a cost upon someone else, and decides how to allocate rights between competing interests. This decision rests on political considerations and moral factors that are independent of the concept of cost. Cost quantification requires deliberating to what extent one set of interests should be made a cost upon someone else. Unlike cost determination, cost quantification is logically based on the concept of cost. Cost quantification assumes cost determination in order to function. The failure to appreciate this distinction led to illogical reasoning by the Court and to a decision that is inconsistent with Congress' cost determination. This paper contributes to the legal-economic literature on cost-benefit analysis (CBA) by outlining a functional dimension of cost consideration by administrative agencies that is frequently overlooked in legal-economic literature. While CBA proponents often note that cost consideration provides agencies with a method for promoting social welfare maximization, we emphasize that cost consideration enhances the rationality of administrative action by ensuring a transparent and accountable definition of the set of relevant interests that underpins the definition of costs and benefits.

KEYWORDS: cost-benefit analysis; environment;

WHY *MICHIGAN V. EPA* REQUIRES THAT THE MEANING OF THE COST/RATIONALITY NEXUS BE CLARIFIED*

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ABSTRACT

This article examines the recent decision in *Michigan v. EPA*, in which the U.S. Supreme Court held that the EPA acted unreasonably in not considering costs at the listing phase of the regulation of power plants' emissions under a specific provision of the Clear Air Act (CAA). In *Michigan*, the Court interpreted the applicable statutory provision based on the principles of rational administrative decision-making, thereby establishing a connection between cost consideration by administrative agencies and the principles of reasonable exercise of administrative discretion. We contend that *Michigan* failed to properly appreciate the logical and axiological connection between cost consideration and administrative rationality (i.e., the *cost/rationality nexus*). More specifically, the Court failed to distinguish between two independent steps of cost consideration: cost determination and cost quantification. Cost determination considers that one set of relevant interests must be made a cost upon someone else, and decides how to allocate rights between competing interests. This decision rests on political considerations and moral factors that are independent of the concept of cost. Cost quantification requires deliberating to what extent one set of interests should be made a cost upon someone else. Unlike cost determination, cost quantification is logically based on the concept of cost. Cost quantification assumes cost determination in

* An earlier version of this article was presented at the Society for Benefit-Cost Analysis, 9th Annual Conference, Washington DC, March 2017. The authors thank the comments and feedback received at this conference.

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order to function. The failure to appreciate this distinction led to illogical reasoning by the Court and to a decision that is inconsistent with Congress' cost determination. This paper contributes to the legal-economic literature on cost-benefit analysis (CBA) by outlining a functional dimension of cost consideration by administrative agencies that is frequently overlooked in legal-economic literature. While CBA proponents often note that cost consideration provides agencies with a method for promoting social welfare maximization, we emphasize that cost consideration enhances the rationality of administrative action by ensuring a transparent and accountable definition of the set of relevant interests that underpins the definition of costs and benefits.

*Cost and therefore economizing is not a natural phenomenon of the production function but, rather, an institutional artifact.*¹

INTRODUCTION

In *Michigan v. EPA*,² the Supreme Court of the United States held that the Environmental Protection Agency (EPA) acted unreasonably when it refused to consider costs in deciding whether it was "appropriate and necessary" to regulate mercury emissions from power plants under the Clean Air Act (CAA).³ The decision is significant for two reasons. First, the Court established that an agency that ignores costs acts arbitrarily, thus giving costs a more central role

1. A. Allen Schmid, *All Environmental Policy Instruments Require a Moral Choice as to Whose Interests Count*, in *ECONOMICS, ETHICS, AND ENVIRONMENTAL POLICY: CONTESTED CHOICES* 133, 135 (Daniel W. Bromley & Jouni Paavola eds., 2002).

2. *Michigan v. EPA*, 135 S. Ct. 2699 (2015).

3. *Id.* at 2712. The CAA established a comprehensive set of regulatory programs to control air pollution, including the National Emissions Standards for Hazardous Air Pollutants (NESHAP). 42 U.S.C. § 7412(d). Coal- and oil-fired electric utility steam generating units (i.e., power plants) fall within NESHAP's scope. § 7412(n)(1).

in judicial review of rational administrative action. Second, the Court created a new default cost-benefit rule that applies when statutes are silent or ambiguous—i.e., in the absence of an unambiguous statutory prohibition to consider cost, courts must still assume that an agency that ignores costs is acting arbitrarily. In taking these steps, the Court expressly uses the concept of cost to articulate a canon of administrative rationality.⁴ Cost consideration is an essential component of “logical and rational” agency decision making.⁵ Agencies should take this principle account when interpreting statutory provisions. However, *Michigan* leaves unanswered questions concerning the relationship between cost and rationality. Therefore, it is no surprise that the true impact of *Michigan* on the practice of cost consideration remains the subject of considerable debate among legal scholars and practitioners.⁶

4. In this article, we use *rationality* to refer to non-arbitrary/non-capricious administrative behavior in the context of administrative law. The requirement of rationality is rooted in section 706(2)(A) of the Administrative Procedure Act (APA), which established that Courts must hold unlawful and set aside agency actions found to be “arbitrary,” “capricious,” or “otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A). We use the terms *arbitrary and capricious standard of review* and *hard look review* interchangeably. For additional discussion regarding the arbitrary and capricious standard of review, see Cass R. Sunstein, *Deregulation and the Hard-Look Doctrine*, 1983 SUP. CT. REV. 177 (1983); Lisa S. Bressman, *Judicial Review of Agency Discretion*, in A GUIDE TO JUDICIAL AND POLITICAL REVIEW OF FEDERAL AGENCIES 177 (John F. Duffy & Michael Herz eds., 2005); Richard J. Pierce, Jr., *What Factors Can an Agency Consider in Making a Decision?*, 2009 MICH. L. REV. 67 (2009); and Louis J. Virelli III, *Deconstructing Arbitrary and Capricious Review*, 92 N.C. L. REV. 721 (2014).

5. *Michigan*, 135 S. Ct. at 2706.

6. See, e.g., Andrew M. Grossman, *Michigan v. EPA: A Mandate for Agencies to Consider Costs*, 2015 CATO SUPR. CT. REV. 281 (2014); Lindsay Ward, *Michigan v. Environmental Protection Agency*, 6 PUB. LAND & RESOURCES L. REV. 1 (2015), <http://scholarship.law.umt.edu/plrlr/vol0/iss6/12/>; Ruby Khallouf, *Michigan v. EPA: Money Matters When Deciding Whether to Regulate Power Plants*, 27 VILL. ENVTL. L. J. 275 (2016); Jonathan Masur & Eric A. Posner, *Cost-Benefit Analysis and the Judicial Role*, 787 COASE-SANDOR WORKING PAPER SERIES IN L. AND ECON. (2016); Lauren Packard, Note, *Michigan: An Intrusive Inquiry into EPA’s Rulemaking Process*, 42 COLUM. J. ENVTL. L. 117 (2016); Connor Schratz, Note, *Michigan v. EPA and the Erosion of Chevron Deference*, 68 ME. L. REV. 381 (2016); Cass R. Sunstein, *Cost-Benefit Analysis and Arbitrariness Review*, 41 HARV. ENVTL. L. REV. 1 (2017); Adrian Vermeule, *Does Michigan v. EPA Require Cost-Benefit Analysis?*,

In this article, we examine the Supreme Court's reasoning with respect to the cost/rationality nexus. We do not provide a comprehensive discussion of all the points related to the statutory interpretative issues that were relevant in *Michigan*.⁷ We contend that *Michigan* failed to properly appreciate the logical and axiological connection between cost consideration and administrative rationality (i.e., the *cost/rationality nexus*). More specifically, the Court failed to distinguish between two logically independent steps of cost consideration: *cost determination* and *cost quantification*.⁸ Cost determination considers that one set of relevant interests must be made a cost upon a competing set of interests, and decides how to allocate rights between competing interests. Cost quantification requires deliberating to what extent one set of interests should be made a cost upon someone else. The phrase refers to cost-benefit *balancing*. It is not limited to monetized cost-benefit analysis (CBA), but includes a wide array of procedures and practices used by agencies to balance the advantages and disadvantages of agency decisions. This broader meaning allows us to focus on the *functional* dimension common to all cost-benefit balancing techniques, which is assessing the degree of sacrifice imposed on a given set of relevant interests relative to the corresponding benefits accorded to another set of interests.

The lack of distinction between cost determination and cost quantification led to illogical reasoning by the Court. Based on the ruling in *Michigan*, it is evident that the cost/rationality nexus needs to be re-examined; the rationality of administrative action will only be

YALE J. ON REG.: NOTICE & COMMENT (Feb. 6, 2017), <http://yalejreg.com/nc/does-michigan-v-epa-require-cost-benefit-analysis-by-adrian-vermeule/>.

7. For a detailed discussion on this issue, see, for instance, *supra* note 3, and references thereafter. See also Grossman, *supra* note 6; Ward, *supra* note 6; Packard, *supra* note 6.

8. This theory builds on Nussbaum's assertion: "[W]e may note that cost-benefit analysis can actually help us when we are in doubt about *where to set the threshold of citizens' basic entitlements*. In environmental and regulatory areas, for example, seeing the cost of various levels of protection is helpful when we consider exactly what level of protection is a basic entitlement More generally, all rights have costs, so thinking about where to set the threshold level of any right is sensibly done with these costs in mind." Martha Nussbaum, *The Costs of Tragedy: Some Moral Limits of Cost-Benefit Analysis*, 29 J. LEGAL STUD. 1005, 1035 (2000) (emphasis added).

improved once the distinction between cost quantification and cost determination is fully appreciated. Without a clear definition of the cost/rationality nexus, in light of the distinction between cost determination and cost quantification, *Michigan* will likely introduce more confusion to the regulatory process.

This paper contributes to the legal-economic literature on CBA by focusing on a dimension of cost consideration by administrative agencies that is often overlooked in legal-economic discourse. CBA proponents often note that cost consideration provides agencies with a method for promoting social welfare maximization. However, there is a functional element of cost consideration that is distinct from, and logically precedes, the maximization of social welfare: the definition of the *set of relevant interests*. Cost consideration enhances the rationality of administrative action by first ensuring a transparent and accountable delineation of the set of relevant interests that underpins the definition of costs and benefits. When an agency clearly identifies whose interests are made a cost to whom, its regulatory actions are considered transparent and accountable. When it is not clear “whose interests count,” cost consideration has little influence on administrative rationality. When careful attention is paid to the two functional aspects of cost consideration, cost determination and cost quantification, the consistency and transparency of regulatory action can be improved.

By building on observations derived from three separate strands of scholarship, we seek to explain the cost/rationality nexus. First, concepts developed by law and economics scholars are used to identify the institutional nature of costs, noting that the interests of some are made costs to others through the assignment of legal rights.⁹ Cost is a function of assigning rights; rights are not derived from costs. Second, we build on economic literature that has critically examined the issue

9. See A. Allan Schmid, *Law and Economics: An Institutional Perspective*, in LAW AND ECONOMICS 57 (Nicholas Mercuro ed., 1989); WARREN J. SAMUELS, STEVEN J. MEDEMA & A. ALLAN SCHMID, THE ECONOMY AS A PROCESS OF VALUATION (1997); STEVEN G. MEDEMA, NICHOLAS MERCURO & WARREN J. SAMUELS, *Institutional Law and Economics*, in ENCYCLOPEDIA OF LAW AND ECONOMICS: THE HISTORY AND METHODOLOGY OF LAW AND ECONOMICS 418 (Gerrit de Gees ed., 2000).

of ‘standing’ in cost-benefit analysis.¹⁰ This literature has long recognized that value assumptions underlie the decisions made regarding whose preferences have standing. Welfare maximization can be achieved through CBA only because judgments regarding whose welfare should be factored into the social welfare calculus have been made. For this reason, the issue of standing cannot be resolved on technical grounds, but depends on value choices and ethical considerations. Third, we draw on recent administrative law scholarship that has emphasized the multifaceted nature of the arbitrary review process¹¹ and has recognized the role of political considerations in hard look review.¹² Arguably, these insights enable courts to identify more targeted and specific forms of arbitrariness in light of the proposed distinction between cost determination and cost quantification, thereby better serving as juridical safeguards against unrestrained agency behavior.

Taken together, these three strands of scholarship enable us to illuminate the content of the cost/rationality nexus, to recognize the logical relevance and juridical nature of the assumptions underpinning cost consideration, and to deem an administrative action arbitrary if it fails to comport with the set of statutorily defined relevant interests. Ultimately, these insights provide a conceptual framework for enhancing the transparency and consistency of legal-economic reasoning in the context of regulatory action, based on the assumption

10. See Ezra J. Mishan, *Pareto Optimality and the Law*, 19 OXFORD ECON. PAPERS 255 (1967); William M. Trumbull, *Who Has Standing in Cost Benefit Analysis?*, 9 J. OF POL’Y ANALYSIS & MGMT 201 (1990); Richard O. Zerbo Jr., *Comment: Does Benefit Cost Analysis Stand Alone? Rights and Standing*, 10 J. OF POL’Y ANALYSIS & MGMT 96 (1991); Richard O. Zerbo Jr., *The Legal Foundation of Cost-Benefit Analysis*, 2 CHARLESTON L. REV. 93 (2007).

11. See Virelli, *supra* note 4.

12. See CHRISTOPHER F. EDLEY, *ADMINISTRATIVE LAW: RETHINKING JUDICIAL CONTROL OF BUREAUCRACY* (1992); Elena Kagan, *Presidential Administration*, 114 HARV. L. REV. 2245 (2001); T. J. Miles & Cass R. Sunstein, *The Real World of Arbitrariness Review*, 75 U. CHI. L. REV. 761 (2008); Kathryn Watts, *Proposing a Place for Politics in Arbitrary and Capricious Review*, 119 YALE L. J. 2 (2009); Nina A. Mendelson, *Disclosing ‘Political’ Oversight of Agency Decision Making*, 108 MICH. L. REV. 1127 (2010).

that the legislative branch remains the actor whose will and legitimacy should be considered in the political definition of the relevant interests.

This article is organized in four sections. Section 2 briefly examines the *Michigan* decision by highlighting its two major contributions to the practice of cost consideration: the cost/rationality nexus and the new default cost-benefit rule. Section 3 develops a conceptual analysis of the cost/rationality nexus. It examines the logical features of the concept of cost, and articulates the distinction between cost determination and cost quantification. Section 4 applies the proposed conceptual framework to the central issue in *Michigan*. It shows that the proposed institutional understanding of the cost/rationality nexus—centered on the definition of the set of relevant interests and the distinction between cost determination and cost quantification—provides an alternative understanding of the relevant issue in *Michigan* and identifies the inconclusiveness of arguments used by the Supreme Court.

I. MICHIGAN'S IMPACT ON COST CONSIDERATION

The central issue in *Michigan* is whether the EPA unreasonably refused to consider costs at the listing phase, when determining whether the regulation of mercury emissions from power plants was “appropriate and necessary” under §7412(n)(1)(A) of the CAA.¹³ The EPA interpreted this statutory provision as not demanding cost considerations in listing decisions, and so made the initial decision accordingly, reserving the consideration of the cost of regulation until

13. The CAA created a multi-stage regulatory process that the EPA must follow. In the *listing* phase, the EPA determines whether the sources of air pollutants present a threat of adverse effects to human health or the environment, thus warranting regulation:

“The Administrator shall perform a study of the hazards to public health reasonably anticipated to occur as a result of emissions by electric utility steam generating units of pollutants listed under subsection (b) after imposition of the requirements of this Act The Administrator shall regulate electric utility steam generating units under this section, if the Administrator finds such regulation is appropriate and necessary after considering the results of the study required by this subparagraph.”

42 U.S.C. § 7412(n)(1)(A). At the *standard-setting* phase, the agency sets emission standards that major sources must meet to achieve emission reductions.

after it had determined the standards' stringency.¹⁴ Petitioners requested review of the EPA's new rule, arguing that the proper scope of "appropriate" would encompass consideration by the EPA of all "relevant factors, including costs."¹⁵ The U.S. Court of Appeals for the District of Columbia ruled for the EPA, holding that it was reasonable for the agency to not consider costs at the listing phase and stating that section 7412(n)(1)(A) neither requires nor prohibits the EPA from considering costs.¹⁶ In a 5-4 decision, the Supreme Court held that the "EPA interpreted §7412(n)(1)(A) unreasonably when it deemed cost irrelevant to the decision to regulate power plants."¹⁷ Justice Scalia, writing for the majority, bluntly stated, "[I]t is unreasonable to read an instruction to an administrative agency to determine whether regulation is appropriate and necessary as an invitation to ignore cost."¹⁸

Michigan's contribution to the practice of cost consideration is twofold: 1) it established a connection between cost consideration and administrative rationality, thereby giving a primary role to cost in the application of the arbitrary and capricious standard of review; and 2) it articulated a new default rule for interpreting statutes that are silent or ambiguous.

14. Pursuant to § 7412(n)(1)(A), power plants are listed as source categories based on the results of EPA's assessment of the hazards to public health that are reasonably anticipated to occur after other CAA requirements are imposed on power plants. The provision does not further specify what factors are relevant in the listing phase, nor does it mention cost consideration. At the subsequent standard-setting phase, the EPA makes the threshold determination of emissions limits based on the following criteria: 1) the maximum achievable degree of reduction in emissions of pollutants; 2) the cost of achieving such emissions reduction; 3) any non-air quality health and environmental impacts, and 4) energy requirements. It should be noted that the statute explicitly mentions cost as a factor in the *standard-setting phase*, in contrast with the regulation of the listing phase.

15. Reply Brief of Petitioner Utility Air Regulatory Group, et al. at 9-12, *Michigan v. EPA*, 135 S. Ct. 2699 (2015) (Nos. 14-46, 14-47, 14-49), 2015 WL 1247184.

16. *White Stallion Energy Ctr., LLC v. EPA*, 748 F.3d 1222, 1237 (D.C. Cir. 2014).

17. *Michigan*, 135 S. Ct. at 2712.

18. *Id.* at 2708.

A. The Arbitrariness of Cost-Blindness

In *Michigan*, the Supreme Court articulated a connection between cost consideration and the rationality of an agency's administrative action. Consideration of cost is no longer just a feature of reasonable statutory interpretation; it is now an indispensable trait of rational administrative *action*.¹⁹ From this perspective, the (indeterminate) statutory expression "appropriate and necessary" must be read in light of the established administrative rule of law, according to which an agency rule is considered "arbitrary and capricious" if the agency relies on factors that Congress had not intended it to consider, or if it fails to consider an important aspect of the problem.²⁰ Based on this premise, an agency's failure to engage with costs must be regarded by courts as an arbitrary action; this behavior can be referred to as *cost-blindness*.

In this manner, *Michigan* shifted the source of an agency's duty to consider costs (in the case of an ambiguous or silent statute) from statutory authority to the principles of reasoned administrative decision-making. Before *Michigan*, the Supreme Court approached the issue of cost consideration as one concerning the scope of an agency's statutory authority. Using what is known as the *Chevron* two-step test, the Court would apply traditional tools of statutory interpretation to determine whether Congress had spoken directly to the question at issue.²¹ If the Court determined that the statute was silent or ambiguous with respect to the specific issue under agency consideration, it asked whether the agency's construction of the statute was a reasonable one and, as such, warranted *Chevron* deference (i.e., the Court defers to the agency's reasonable interpretation).

In *Michigan*, the Court acknowledged that the statute was ambiguous about the requirement of cost consideration, thereby satisfying step one of the test. It then articulated an innovative interpretation of the second step of the *Chevron* test, based on the

19. See Grossman, *supra* note 6, at 282; Masur & Posner, *supra* note 6, at 35; Packard, *supra* note 6, at 118; Sunstein, *supra* note 6, at 16.

20. See *Motor Vehicles Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

21. See *Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 843 (1984).

rationality doctrine: when determining permissible statutory interpretation, courts should regard cost considerations as required under any statutory framework that does not expressly preclude them. In this way, the area of permissible statutory interpretation overlaps with the area of reasonable exercise of administrative discretion. As Grossman noted, in *Michigan* the “*Chevron* step-two reasonableness analysis parallels arbitrary-and-capricious review.”²² Under this legal framework, the majority found that the EPA went far beyond the bounds of reasonable action when it read section 7412(n)(1) to mean it could ignore costs when making a listing decision.²³

B. The Default Cost-Benefit Rule in Michigan

Michigan alters the structure of the default cost-benefit rule that operates when the relevant statute is silent or ambiguous. Before *Michigan*, the Supreme Court had interpreted silent or ambiguous statutory provisions as reflecting congressional intent to defer to agencies as to whether and how they would engage in cost-benefits analysis.²⁴ *Michigan* flips the default position from one that permits to

22. Grossman, *supra* note 6, at 294. See also Catherine M. Sharkey, *In the Wake of Chevron's Retreat*, GEORGE MASON CENTER FOR THE STUDY OF THE ADMINISTRATIVE STATE REVISITING JUDICIAL DEFERENCE CONFERENCE (1995), https://sls.gmu.edu/csas/wp-content/uploads/sites/29/2016/06/Sharkey_In-the-Wake-of-Chevron_5_20_16.pdf.

23. Justice Scalia wrote, “*Chevron* allows agencies to choose among competing reasonable interpretations of a statute; it does not license interpretive gerrymanders under which an agency keeps parts of statutory context it likes while throwing away parts it does not.” *Michigan v. EPA*, 135 S. Ct. 2699, 2708.

24. In *American Textile Mfrs. Inst., Inc. v. Donovan*, the Supreme Court held that the Occupational Safety and Health Administration was not required to engage in cost-benefit analysis when setting “feasible” public health and safety standards. 452 U.S. 490, 510-12 (1981). In the absence of express statutory authorization, the Court suggested a presumption against the use of CBA. In *Entergy Corp. v. Riverkeeper, Inc.*, the Court found that the fact that the statute did not expressly authorize CBA could not be interpreted as limiting the agency’s discretion. 556 U.S. 208, 222-23 (2009). Justice Scalia, writing for the majority, stated, “It is eminently reasonable to conclude that [statutory] silence is meant to convey nothing more than a refusal to tie the agency’s hands as to whether cost-benefit analysis should be used, and if so to what degree.” *Id.*

one that mandates consideration of costs.²⁵ By enlarging the word “appropriate” to require that the EPA consider cost, the Supreme Court established a strong legal presumption that all agencies are obligated to give adequate consideration to cost in the absence of an express statutory provision to the contrary. In light of this principle, the EPA’s refusal to consider costs could only be deemed reasonable if Congress itself expressly precluded cost consideration, or if costs were not a relevant factor of the issue under the agency’s review. By altering the default cost-benefit rule, *Michigan* incrementally shifted the allocation of law-making powers from agencies to courts.

Two points must be emphasized. First, the Court was unanimous in finding that the EPA is required to consider costs and that this obligation stems from both the statutory scheme and background principles of administrative law.²⁶ However, the Justices disagree on *when* in the regulatory process cost considerations should be taken into account.²⁷ Second, *Michigan* leaves unanswered a number of fundamental questions concerning the content of cost consideration; in particular, why cost consideration must be a requisite of administrative rationality. This question must be addressed in order to specify the prescriptive meaning of the *Michigan* principle that an agency that ignores costs acts arbitrarily. That is the analytical direction in which this article is now headed.

25. *Michigan* contrasts with the Supreme Court’s decision in *Whitman v. American Trucking Ass’ns, Inc.*, 531 U.S. 457 (2001). In *Whitman*, the Court reasoned that ambiguity in the language of the enabling statute *forbid* regulation based on consideration of costs. *Id.* at 467. Justice Scalia, writing for the majority, asserted that agencies could consider costs only if Congress had clearly authorized them to do so. *Id.* The Court ruled unanimously that Section 109 of the CAA *precluded* consideration of implementation costs in setting air quality standards. *Id.* at 477-86. In *Michigan*, Justice Scalia stated that *Whitman* was not applicable, because the “appropriate and necessary” standard is more comprehensive than the “protection of public health” standard used in *Whitman*. *Michigan*, 135 S. Ct. at 2709.

26. *See Michigan*, 135 S. Ct. at 2707-08.

27. Justice Kagan’s dissenting opinion argues that cost should be considered at the standard-setting phase, not the listing phase, and emphasizes the central relevance of cost to reasoned administrative action: *See id.* at 2714-17 (Kagan, J. dissenting).

II. COST CONSIDERATION AS A RATIONALITY REQUIREMENT

In *Michigan*, the need for cost consideration is based upon the normative principle that a rational administrative action is one that produces more good than harm.²⁸ This principle compels an agency to explain why a proposed regulation will be beneficial. However, the logical and axiological connection between cost and rationality remains unclear. The Court does not provide an articulated explanation of the reasons why producing more good than harm should be regarded as a feature of administrative rationality, nor does it mention how cost consideration can help determine whether a regulation produces more good than harm. As a result, the *Michigan* principle that rationality requires cost consideration fails to provide a clear prescriptive meaning.

In order to establish that rationality requires cost consideration, the Court must explain why producing more good than harm is a requisite of rationality and specify what good and what harm matter to whom. “Good” and “harm” are meaningful concepts only to the extent that they are selective normative judgments on whose interests count. Therefore, to conclude that a regulation must produce more good than harm one must first identify *whose interest must be a cost to whom*. Only by doing so will the normative baseline to assess whether good exceeds harm become available. In addition, the Court should have outlined the procedural requirements that are determinative in conferring rationality on the administrative action and how cost consideration as a decision procedure meets these requirements. This step is essential to defining the requirements of rational, non-arbitrary administrative decision-making. These three logical steps are needed to establish a connection between cost consideration and the rationality of administrative action, thereby determining the prescriptive meaning of the *Michigan* principle. Table 1 summarizes the discussion.

28. *See id.* at 2707 (“No regulation is appropriate if it does significantly more harm than good.”).

Table 1. Deconstructing the cost-rationality nexus

Step 1	Based on what notion of <i>rationality</i> is regulation required to produce more good than harm?
Step 2	What is the set of relevant <i>interests</i> that matters in defining what good and harm matter to whom?
Step 3	What are the <i>procedural requirements</i> that confer rationality on administrative action and determine whether cost consideration meets these requirements?

A. Rationality and Social Welfare Maximization

Proponents of CBA hold the assumption that rational administrative agencies should work to increase social welfare.²⁹ In this view, administrative rationality largely overlaps with economic rationality and, in particular, with the notion of social welfare maximization. In its most recent and accurate formulation, this account of rationality carefully distinguishes a moral criterion from a decision procedure.³⁰ The moral criterion defines the features of the morally desirable outcomes. The decision procedure is the technique for making choices that reach these desirable outcomes. From this analytical standpoint, a rational administrative action is grounded on *weak welfarism* as a moral criterion, and on CBA as a decision procedure.³¹ Weak welfarism aggregates individual preferences that are self-interested and survive idealization, producing morally desirable outcomes that maximize overall well-being.³² CBA and other procedures for considering costs provide agencies a means by which to measure the effects of proposed regulatory actions on an affected population.³³

We do not dispute the merit of weak welfarism as a moral criterion. We fundamentally agree, from a philosophical standpoint, that

29. See MATTHEW D. ADLER & ERIC A. POSNER, *NEW FOUNDATIONS OF COST-BENEFIT ANALYSIS* (2006); RICHARD L. REVESZ & MICHAEL A. LIVERMORE, *RETAKING RATIONALITY* (2008).

30. ADLER & POSNER, *supra* note 29, at 62.

31. *See id.* at 25-100.

32. *Id.* at 124-153.

33. *Id.* at 73-100.

administrative action should serve to enhance overall well-being.³⁴ Instead, we comment on the second assumption, that cost consideration must be regarded as a constitutive element of administrative rationality *because* it provides a method for determining whether regulations increase social welfare.³⁵ While this account of the cost/rationality nexus captures one important functional dimension of cost consideration in the regulatory context, it tends to overlook the normative nature of the concept of cost. This involves the risk of potentially misguided applications of both cost consideration by agencies and arbitrary and capricious review by courts.

The cost/rationality nexus, as we have outlined above, comprises three definitional steps: rationality, interests, and procedure. When cost consideration is explained exclusively in terms of social welfare maximization, a jump is made from step one (i.e., rationality as social welfare maximization) to step three (i.e., rational administrative action should rest on cost-benefit balancing), while step two (i.e., what costs and benefits to whom) is overlooked.³⁶ To better illuminate the cost/rationality nexus, step two must be integrated into the more conventional account of the cost/rationality nexus. That is, we need to examine the normative dimension of the concept of cost and its institutional implications.

34. A discussion of the complex methodological issues associated with both the definition and measurement of social welfare construct is beyond the scope of this paper. For a comprehensive discussion, see MATTHEW D. ADLER & MARC FLEURBAEY, *THE OXFORD HANDBOOK OF WELL-BEING AND PUBLIC POLICY* (2016).

35. See ADLER & POSNER, *supra* note 29 at 26, 62-63; Sunstein, *supra* note 6, at 9-10.

36. One could argue that proponents of weak welfarism address step two by using restrictive criteria in the set of relevant preferences. However, it is one thing to refine preferences by excluding non-ideal or disinterest preferences, and another to delimit the welfare space by way of political choices as to whose interests count. The former focuses on the quality of the formation process of preferences and therefore pertains to the qualitative definition of the social welfare construct (step one). The second is a function of a political choice of whose interests count (step two).

B. What Costs and Benefits to Whom?

1. Cost is a Relational Concept

Cost is a metric used to measure the impact of procuring, producing, or acquiring a benefit or utility *on a set of relevant interests*—interests that are registered and valorized as a “cost” to be imposed on someone.³⁷ In addition, cost often emerges in the context of structurally reciprocal relationships, where benefits to someone cannot be considered independently of the cost to someone else.³⁸ The reciprocal nature of costs implies that the decision over whose interests are registered and valorized as costs to others is *necessarily* a function of the process of choosing. The cost is the result of a choice as to who will have the right to impose his or her own interests as costs to others and who will be exposed to the exercise of those rights.

The concept of opportunity costs helps to explain these features. Cost is *opportunity set specific* – that is, the cost of a choice or line of conduct is a function of a set of available opportunities.³⁹ Individuals’ opportunity sets are fundamentally shaped by conflicts between competing interests. Given the existence of constraints on the satisfaction of all interests present in society, the fulfillment of someone’s interests often limits the opportunity set of someone else’s interest.⁴⁰ Hence, it is often the case that one element *x* of A’s opportunity set produces an adverse impact upon B’s opportunity set. That is, *x* represents the interests of A for which B must pay. In short, *interest scarcity* determines the structure of individuals’ opportunity sets.⁴¹

This is an important methodological point: determining a cost requires identifying those individuals whose interests are to become a cost to someone else.⁴² This, in turn, suggests that cost is a *relational* concept. Cost is not a function of any intrinsic substance and does not have an independent ontological status. What is regarded as either cost

37. MEDEMA ET AL., *supra* note 9, at 213-14.

38. *Id.*

39. *Id.* at 233.

40. *Id.* at 228.

41. *Id.* at 229.

42. *Id.* at 228-229.

or benefit is determined by implicit normative assumptions on *whose interest should be made a cost to whom*.⁴³ Rather than being a merely technical assessment, the determination of cost is a positional exercise. Cost is interest-specific.

This relational nature often leads to a serious problem of logical circularity, which arises when normative specifications underlying cost consideration are not clearly articulated. When logical circularity occurs, as Samuels observes, “the analyst assumes something about the object to be determined that governs the determination.”⁴⁴ Applied to cost consideration, logical circularity occurs when costs are used to specify rights and rights are used to specify costs. In this way, logical circularity deprives cost consideration of any meaningful content.⁴⁵

To make normative premises as explicit as possible and to avoid logical circularity, any consideration of costs should define in advance the set of relevant interests. Applied to legal discourse, this principle entails that an obligation to consider costs is deprived of meaningful prescriptive content unless it is preceded by a clear specification of the antecedent normative premises of *whose* interests and *what* interests count.⁴⁶

2. Cost is Right-Specific

Once the normative nature of cost has been clarified, the next step is to determine whether and to what extent the normative premises underpinning the language of cost are *internal* to legal-economic discourse. The structure of legal entitlements shapes the individual’s opportunity set that, in turn, determines the costs structure. More specifically, the law regulates the normative premises governing the selection of both 1) interests to be registered and valorized as costs to others, and 2) interests upon whom these costs should be imposed. The

43. *Id.* at 231.

44. Warren J. Samuels, *Normative Premises in Regulatory Theory*, 1 J. POST KEYNESIAN ECON. 100, 100 (1978).

45. See A. Allen Schmid, *All Environmental Policy Instruments Require a Moral Choice as to Whose Interests Count*, in *ECONOMICS, ETHICS, AND ENVIRONMENTAL POLICY: CONTESTED CHOICES* 133, 135 (Daniel W. Bromley & Jouni Paavola eds., 2002).

46. Amy Sinden, Douglas A. Kysar, & David M. Driesen, *Cost-Benefit Analysis: New Foundations on Shifting Sand*, 3 REG. & GOV. 48, 56 (2009).

interests of some are made a cost to others through the definition, allocation, and enforcement of legal entitlements.⁴⁷ In addition, changes in the allocation of legal rights determine changes in the structure and allocation of costs. In essence, cost is right-specific,⁴⁸ meaning the language of cost cannot be used to specify rights.

C. The Contribution of Cost Consideration to Administrative Rationality

1. Cost as a “Relevant” Factor

Cost consideration is a necessary requirement of administrative rationality to the extent that cost is to be regarded as a “relevant factor” in light of the statute.⁴⁹ In fact, cost is almost always a relevant factor in regulation. It must be recognized, however, that the right- and interest-specific nature of cost affects the content of relevant factor analysis. Due to its intrinsic normative nature, costs are made relevant to the administrative action through a two-step process. First, as stated previously, cost is registered and valorized as such by legally defining the set of relevant interests. Statutes determine whose interests count and whose interests should be made a cost to whom. Then, once the set of relevant interests is defined, cost is made relevant to a specific administrative matter as one of the factors to be considered in articulating a satisfactory explanation for the administrative conduct. Understanding this twofold process of cost “juridicization” is key to truly comprehending the cost/rationality nexus and to identifying the proper degree of judicial deference toward agency cost consideration.

47. MEDEMA ET AL., *supra* note 9.

48. *Id.*

49. To satisfy the requirements imposed by the APA’s ban on arbitrariness, the administration must “articulate a satisfactory explanation for its action.” *Motor Vehicles Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). In reviewing that explanation, courts must consider whether “the agency has relied on factors which Congress has not intended it to consider” or entirely failed to consider an aspect of the problem deemed important in light of the statutory framework. *Id.*

2. Cost Determination Versus Cost Quantification

We identify two logically independent steps of cost consideration: cost determination and cost quantification. They correspond to step two and step three previously identified in Table 1. *Cost determination* involves a decision on how to allocate legal rights between competing interests, recognizing that a set of relevant interests must be made a cost upon the interests of another. This decision rests on political considerations and moral factors that are independent of the concept of cost. Because cost is the outcome of cost determination, *cost determination cannot be based on any consideration of costs*. The recognition that cost determination precedes cost quantification, and that it is legal in nature, indicates that the structure of legal rights is an institutional determinant of the structure of cost. Cost is first determined through the allocation of legal rights by evaluating a series of political and moral factors pertaining to the choice of whose interests count, and then it is quantified using weights and ranks.

Cost quantification, meanwhile, determines how much one set of interests is made a cost to someone else's interest. That is, it measures the degree of burden imposed on one set of interests for the satisfaction or protection of another set of competing interest. *Cost quantification assumes cost determination in order to function*. Unlike cost determination, cost quantification is logically based on the concept of cost.

3. Deconstructing the Rationality Review of Cost Consideration

The distinction between cost determination and cost quantification explains the twofold contribution that cost consideration provides to administrative rationality. First, cost consideration improves the rationality of administrative action by illuminating whose interests count, and whose interests are made a cost to whom. Second, by providing a methodology for determining whether the effects of a proposed administrative action increase social welfare, cost consideration is able to enhance administrative rationality.

These considerations suggest that administrative rationality is reflective of the twofold process of cost juridicization. A strong legal trajectory in favor of CBA recognizes that rational administrative action must rely on an adequate explanation of cost-benefit balancing.

It is arbitrary and capricious to promulgate a regulation without comparing the magnitudes of costs and benefits (i.e., cost-blindness).⁵⁰ Absent statutory provision, any decision to not quantify costs and benefits, or to show that benefits justify the costs, requires the agency to provide a reasoned explanation justifying cost-blindness.⁵¹ However, an administrative action can be deemed arbitrary for reasons beyond simply failing to perform cost quantification.⁵² A reasonable administrative action must be based on a transparent, accountable definition of the set of affected relevant interests. Therefore, a charge of arbitrariness might be leveled against an agency that acts inconsistently with the definition of the set of interests provided by statute; this behavior can be referred to as *cost inconsistency*. A regulation is cost-inconsistent when it is based on a language of costs and benefits that is not consistent with the set of interests set forth in, or taken as inference from, the statutory framework. In brief, the distinction between cost determination and cost quantification brings to light a further distinction between cost-inconsistency and cost-blindness.

This distinction unveils two targeted inquiries of the arbitrariness review of agency cost consideration. One objective of arbitrariness review is to assess the consistency of regulatory action with the cost determination established by statute. Courts ask whether the administrative conduct is consistent with the definition of the set of relevant interests—and therefore relevant benefits and costs—provided by the applicable statute. While the arbitrariness assessment of an agency's cost determination focuses on the definition of the set of *interests* affected by the administrative action, the arbitrariness assessment of cost quantification, the second objective of arbitrariness review, is centered on measuring the *consequences* of administrative conduct on these interests (see Table 2). Cost quantification improves administrative rationality by providing a method for measuring the benefits and costs of a proposed regulatory action,⁵³ and it properly pertains to the institutional scope of the administrative process. Hence,

50. Sunstein, *supra* note 6, at 9.

51. *Id.*

52. *Id.*

53. On the relationship between CBA and arbitrariness review, see Masur & Posner, *supra* note 6; Sunstein, *supra* note 6.

the arbitrariness review focuses on the adequacy of the agency's consideration of the consequences of its action on the set of relevant interests. To make this determination, courts ask whether the agency has specified and measured the relevant benefits and costs, whether it has determined that the anticipated benefits are higher than costs, and whether it has provided a reasoned explanation if not.

Table 2. Rationality Review and the Twofold Process of Cost Consideration

	Rationality Review
Cost Determination	Courts should review whether the agency's decision actually relies on, and is consistent with, the statutory definition of the set of relevant <i>interests</i> .
Cost Quantification	Courts should review the adequacy of the agency's consideration of the <i>consequences</i> of administrative action on the set of relevant interests. ⁵⁴

D. Rationality Review and Statutory Indeterminacy

Any account of the cost/rationality nexus must be qualified in light of the allocation of decision-making powers that pertain to cost consideration across legal institutions. This section identifies *the degree of statutory determinacy* as the major determinant of the institutional allocation of decision-making powers. We argue that arbitrariness review should reflect the varying degrees of statutory determinacy.

Four general directives derive from the structure of the constitutional-administrative system. First, Congress has the exclusive constitutional authority to define the set of relevant interests underlying cost determination. Second, Congress has the exclusive

54. As we will clarify later, "adequacy" is intended both as compliance with the cost-benefit balancing treatment provided by statute and, after *Michigan*, consistency with the principles of reasoned decision-making.

authority to mandate agencies to consider costs.⁵⁵ Third, an agency rule is deemed arbitrary and capricious if it relies on factors that Congress has not intended it to consider.⁵⁶ Fourth, courts strike down agency actions that fail to consider factors that are relevant by statute.⁵⁷ Within the framework defined by these general principles, cost determination is primarily performed thorough the political-legislative process, while cost quantification is performed by agencies and reviewed by courts in the case of judicial dispute.

Based on this institutional framework, which grants priority to statutes over alternative sources of law with respect to cost determination, the allocation of choices involved in the process of cost consideration is largely a function of 1) the statutory definition of the set of relevant interests, and 2) the statutory provisions empowering agencies to use cost consideration. Institutional issues arise when the statutory framework is indeterminate with respect to one or both elements. When a statute is silent or ambiguous, the allocation of decision-making powers deviates considerably from the constitutional architecture outlined above. Arbitrariness review, which provides a check against unrestrained agency power and interference, must therefore be further qualified to reflect the varying degree of determinacy of statutes (and the resulting changes in power allocations) with respect to both cost determination and cost quantification.

1. Cost Determination and Statutory Indeterminacy

When the statutory definition of interests is unclear or indeterminate, agencies might play a role in the cost determination process. Agency's policy judgments underlying the interpretation of the indeterminate statute influence the specification process of the set of relevant interests (i.e., the definition of whose interests should be made a cost to whom). When such ambiguity occurs, arbitrariness review asks

55. According, to pre-Michigan case law, statutory silence or ambiguity should not be interpreted as "mandating" agencies to perform cost consideration. *See Michigan v. EPA*, 135 S. Ct. 2699, 2707-08 (2015); *Id.* at 2716-17 (Kagan, J., dissenting).

56. *State Farm*, 463 U.S. at 43.

57. *See Administrative Procedure Act*, 5 U.S.C. § 706 (2)(A) (1988).

whether an agency's own choices, with respect to the definition of the relevant interests, satisfy the rationality requirements. Indeed, statutory silence or ambiguity regarding the definition of relevant interests makes it even more necessary for agencies to create transparent decision-making procedures and account for the deliberation of whose interests are made a cost to whom. Therefore, when conducting an arbitrariness review, courts should recognize and award credit to political considerations that occur during the agency rulemaking process.⁵⁸ This raises the difficult question of whether rationality review should allow political considerations to explain administrative decision-making. Watts has convincingly argued that courts should distinguish between "rational and logically relevant political influences that we can presume Congress intended the agency to be able to consider" and "those sorts of corrupting political influences that Congress would not intend an agency to consider."⁵⁹ From this perspective, courts should assess whether the political considerations influencing an agency's cost determination are "tied to the public values or policies being implemented by the statutory scheme" and whether "Congress [can] be presumed to have authorized agency reliance on such factors."⁶⁰

2. Cost Quantification and Statutory Indeterminacy

A statutory framework often provides various indications to agencies as to the process of cost quantification. When the content of cost quantification is defined by statute, courts are required to ask whether an agency's cost quantification complies with statutory provisions.⁶¹ However, when a statute is silent or indeterminate on cost

58. See EDLEY, *supra* note 12; Kagan, *supra* note 12, at 2380-2381; Watts, *supra* note 12. For arguments in opposition, see Enrique Armijo, *Politics, Rulemaking, and Judicial Review: A Response to Professor Watts*, 62 ADMIN. L. REV. 573 (2010); Mark Seidenfeld, *The Irrelevance of Politics for Arbitrary and Capricious Review*, 90 WASH. U. L. REV. 141 (2012).

59. Watts, *supra* note 12, at 52.

60. *Id.* at 54.

61. For example, many statutes expressly include cost as one of the factors to be taken into consideration by agency alongside a number of other factors. Other statutes more explicitly mandate agencies to balance costs against benefits. Still others require agencies to regulate "to the extent feasible." For an overview of the

quantification, significant portions of decision-making power are allocated to agencies and/or courts. When this occurs, agencies engage in their own cost-benefit balancing based on “default” principles that have emerged in federal common law.⁶²

When a challenge to a regulation reaches a court, judges assess whether the agency’s cost quantification satisfies the rationality requirements. This raises questions of what, precisely, agencies are permitted to do (given Congress’ silence on cost quantification), and to what extent judges can review agencies’ quantified evaluation of their regulations.⁶³ What must be emphasized is that Congress’ silence on cost *quantification* should not involve an increased allocation of decision-making powers to agencies and courts as to cost *determination*. We will argue in the next section that the line of reasoning followed by the Supreme Court in *Michigan* made this precise error by conflating the logic of cost quantification with that of cost determination in interpreting the relevant statutory provision.

Based on these considerations we draw a four-cell matrix (Table 3) that summarizes the content of rationality review as a function of two variables: the degree of statutory determinacy and the cost determination/cost quantification stage.

various forms of statutory treatment of cost quantification, see Cass R. Sunstein, *Cost-Benefit Default Principles*, 99 MICH. L. REV. 1651 (2001); Masur & Posner, *supra* note 6, at Appendix.

62. See Sunstein, *supra* note 61, at 1655; Masur & Posner, *supra* note 6, at 39-40.

63. A detailed examination about these issues is outside the scope of this paper. For further information, see Sunstein, *supra* note 6; Pierce, *supra* note 4; Jonathan Cannon, *The Sounds of Silence: Cost-Benefit Canons in Entergy Corp. v. Riverkeeper, Inc.*, 34 HARV. ENVTL. L. REV. 425 (2010); Masur & Posner, *supra* note 6; Schratz, *supra* note 6.

Table 3. Cost Consideration and Statutory Determinacy

	Determinate Statute	Indeterminate Statute
Cost Determination	Courts should review whether the agency's decision actually relies on, and is consistent with, the statutory definition of the set of relevant interests.	Courts should review whether the agency's own cost determination satisfies hard look review, distinguishing between legitimate and illegitimate political influence.
Cost Quantification	Courts should review the adequacy of the agency's consideration of the <i>consequences</i> of administrative action on the set of relevant interests.	Courts should review whether the agency's own cost quantification is consistent with the principles of reasoned decision-making.

III. *MICHIGAN* REVISITED THROUGH THE LENS OF INTERESTS

Our proposed conceptual framework of the cost/rationality nexus helps us to analyze the primary question in *Michigan*: whether the EPA acted unreasonably in refusing to consider costs at the listing phase. As previously noted, the Court addresses this issue of statutory interpretation from the perspective of rational of administrative decision-making. The Court establishes a connection between cost and rationality; based on this connection, it reads a requirement of cost quantification into section 7412(n)(1)(A) of the CAA. We contend that the Supreme Court's arguments regarding the cost/rationality nexus were inconclusive, leading to a decision that is inconsistent with Congress' cost determination and that produces problematic institutional implications.

A. The Irrelevance of Cost Quantification at the Listing Phase

In *Michigan*, the Supreme Court held that the EPA acted unreasonably when, in refusing to consider costs at the listing phase, it failed to provide justification that the proposed regulation would produce more good than harm.⁶⁴ However, if one examines the facts in *Michigan* through the lens of the interest- and right-based theory of the cost-rationality nexus, the holding appears problematic. The fundamental flaw of the Court's reasoning was to conflate the logic of cost determination with that of cost quantification. This analytical confusion led the Court to formulate a canon of administrative rationality that is inconsistent with statutory cost determination.

As described above, three steps must be followed to establish a connection between cost consideration and the rationality of administrative action. A rational administrative action is aimed at maximizing one or more dimensions of social welfare (step one). Social welfare is defined through a critical evaluation of *whose* welfare counts (step two). Cost quantification reveals what level of regulation is welfare-maximizing (step three). The decision whether to regulate pertains to steps one and two. It requires defining both the regulatory goal ("what good and harm?") and the set of relevant interests ("whose good and harm?") in light of the relevant statutory scheme. These two steps enable the agency to explain what costs should be imposed upon whom and for what purposes. However, the Court in *Michigan* assesses the rationality of administrative action against the principle that regulation should promote more good than harm. By posing the question, "does regulation do more good than harm?" rather than, "which costs should be imposed upon whom and for what purposes?" the Court loses sight of step two, thereby assessing the rationality of administrative action without *previously* clarifying the content of cost determination.

The decision whether to regulate power plant emissions turns on the issue of cost determination, that is, the choice between competing interests. Benefits to polluters, workers, and consumers associated with the production of coal emissions are reciprocally associated with the unrealized benefits to the public resulting from a reduction in

64. *Michigan v. EPA*, 135 S. Ct. 2699, 2707 (2015).

pollutants emissions. The reciprocal nature of the costs of pollution implies that costs are the result of a choice as to who will have the right to impose his or her own interests as costs to others and who will be exposed to the exercise of those rights. If one wants to register and valorize the public interest in health and environmental protection, that interest must be made a *cost* to producers, workers, and consumers. CAA provisions should be interpreted consistently with this cost determination underlying the statutory scheme. Instead of assessing the rationality of administrative action in terms of the consistency with statutory cost determination, the Court in *Michigan* imposes the requirement of cost quantification onto the agency.

The set of legally relevant interests at the listing phase (and what interests are visited upon by the corresponding costs) is unambiguously *statutorily* defined. Congress, through the language of the CAA, has established that the public interest in health and welfare should be made a cost to producers, consumers, and workers.⁶⁵ Based on this congressional directive, the EPA must conduct a factual inquiry that identifies concrete sources of pollution. Once a source of pollution has been identified, it must be added to the list of major sources of pollution that fall within the objective scope of application of the CAA.⁶⁶ The EPA's decision to include power plants on the list of sources registers and valorizes the public interest in health and welfare as a cost to polluters, consumers, and workers. All the EPA must determine is whether the physical sources of pollution warrant regulation pursuant to statutory cost determination. If so, it must proceed to impose the regulatory burden on power plants with all consequent compliance costs. The assessment is a technical one based on a political and moral framework established by Congress; there is no room for cost quantification at the listing phase. Cost quantification pertains to a subsequent conceptual step and later regulatory stage, wherein it is decided *how much* the interests that count should be made a cost to competing interests.

The EPA acted reasonably, as it made its determination based on, and consistent with, a clear definition of the set of relevant interests provided by the statute. Yet the Court's ruling invoked the assumption

65. *See* 42 U.S.C. § 7412(n)(1)(A).

66. *Id.* at § 7412(b)(2).

that regulation should do more good than harm. By relying on this assumption, the Court assessed the reasonableness of the EPA's administrative action against a principle that pertains to cost quantification. However, as repeatedly noted, the EPA's sole task at the listing phase is to make an empirical assessment based on unambiguous statutory cost determination. Therefore, the Court made a serious error in holding that the EPA acted unreasonably in failing to justify its decision. Because the only cost decision relevant to the listing phase is one of cost determination, the reasonableness of the EPA's action cannot be assessed against the principles of rationality governing cost quantification.

The foregoing considerations enable us to recognize the logical inconsistency of the majority's reasoning. First, Justice Scalia argues that the phrase "appropriate and necessary" entails a larger scope of protection, one that includes compliance costs imposed by the regulation of power plants.⁶⁷ This argument unduly extends the set of interests relevant to the listing phase. According to the comprehensive framework designed by the CAA, the public interest to health and welfare must be made a cost to the interest of polluters.⁶⁸ The CAA embodies Congress' value judgment that the benefits of achieving clean, healthy air are worth the cost to polluters. By interpreting the phrase, "appropriate and necessary," as one that includes the polluters' interests within its scope of protection, Justice Scalia arbitrarily altered the cost determination provided by statute. In registering the polluters' interests as interests to be made a cost to the public's interest to health, *Michigan* defeats the purpose of the CAA.

Second, *Michigan* imposed the requirement of cost quantification on a statutorily pre-determined choice among competing interests. The trouble with this is that, as we have seen, cost determination *precedes* quantification; it is therefore illogical to impose cost quantification as a requirement for cost determination.

Finally, by reading an obligation of cost quantification into the statutory definition of the listing phase, the Supreme Court introduced an additional procedural requirement not mentioned in the APA. One might claim this latter objection is irrelevant because *Michigan* states

67. *Michigan*, 135 S. Ct. at 2709.

68. *See*, 42 U.S.C. § 7412(n)(1)(A).

that an agency that ignores costs acts arbitrarily, and acting arbitrarily is unlawful under the APA.⁶⁹ However, the problem with this counter objection is that the Supreme Court did not convincingly identify a canon of rationality under which ignoring costs at the listing phase should be deemed an arbitrary action. Instead, the Court simply assessed the EPA's refusal to consider costs against a rationality standard (i.e., the EPA should provide reasons that the proposed regulation would do more harm than good) that pertains to the cost quantification stage and does not fit the listing phase. In short, the Supreme Court, not the EPA, foisted cost inconsistency on agencies, by rendering a decision that subverts the statutorily prescribed value choices as to whose interests should be made a cost to whom made at the statutory level.

B. Does the Michigan Default Rule Produce More Harm Than Good?

If courts read *Michigan* as establishing that reasonable regulation requires cost quantification at each regulatory stage, then *Michigan* will have costly repercussions. By imposing cost quantification at the listing phase, *Michigan* may undermine the effect of many regulatory schemes, thereby defeating congressional intent. This is not an incidental effect of the Supreme Court's ruling, but the *inevitable* result of a rule that anticipates the cost quantification phase.

Additionally, conditioning the listing decision on cost quantification might significantly increase the transaction costs associated with the regulatory process. Because costs depend on regulatory options that the EPA can only choose after an initial listing decision, cost quantification may be unfeasible at the listing phase. Until the EPA knows which standards it will set, it cannot know what costs such standards will impose. Cost calculations are highly variable and depend on several factors, including the targets being set, the

69. For example, Sunstein, *supra* note 6, at 16, argues that: "*Michigan v. EPA* has the great virtue of identifying the fatal weakness in [the] tempting objection . . . that courts lack the authority to impose procedural requirements As *Michigan v. EPA* suggests, the problem with the objection is that under the APA. . . . [i]f an agency ignores costs, or imposes a risk that is greater than the risk that it is reducing, it would seem to be acting arbitrarily."

technologies and methods that will be utilized, and the stringency of the standards. Moreover, premature cost considerations could be misleading, because “the more stringent option is not necessarily the more costly.”⁷⁰ Finally, technological developments, which contribute to the decline of compliance costs, cause cost estimations to become quickly outdated. It should be noted that no reasonable methodologies on how to include cost calculations at the listing phase have been presented by the Court.

The new default rule also raises concerns as to its institutional implications, which may prove critical to future environmental and public health regulations. *Michigan* applies a presumption in favor of cost consideration by the Court, based on the argument that in the regulatory context a *reasonable* understanding of the relevant statutory factor is almost always conducive to the conclusion that cost is a relevant factor.⁷¹ The broad language used by the Court suggests that cost consideration must be regarded as a requirement of *any* reasonable regulation, unless Congress clearly speaks in favor of cost-blindness.⁷² That is, an agency’s duty to consider costs is rooted in judicial understanding of the APA’s ban on arbitrariness and is largely independent of the statutory scheme. As Justice Scalia states, “consideration of cost reflects the understanding that reasonable regulation ordinarily requires paying attention to the advantages and the disadvantages of agency decisions” and the

70. Brief of the Institute for Policy Integrity at New York University School of Law, as Amicus Curiae Supporting Respondents at 36, *Michigan v. EPA*, 135 S. Ct. 2699 (2015), (Nos. 14-46, 14-47, 14-19).

71. Justice Scalia states, “Consideration of cost reflects the understanding that reasonable regulation *ordinarily* requires paying attention to the advantages and the disadvantages of agency decisions.” *Michigan*, 135 S. Ct. at 2707 (emphasis added). Justice Kagan’s dissenting opinion agrees with the majority on this point and emphasizes: “Cost is almost always a relevant—and usually, a highly important—factor in regulation.” *Id.* at 2716 (Kagan, J. dissenting).

72. “This language is not tied to the particular facts or statutory scheme in *Michigan*. Instead, it seems to create a presumption that ‘reasonable regulation’ *in general* necessitates some attention to cost . . . the majority’s aforementioned broad language suggests the . . . possibility that cost may now be a ‘relevant factor’ or ‘important aspect of the problem’ *whenever* an agency decides whether or how to regulate.” Note, *Clear Air Act—Cost-Benefit Analysis—Michigan v. EPA*, 129 HARV. L. REV. 311, 317-18 (2015).

“[s]tatutory context *reinforces* the relevance of cost.”⁷³ Therefore, in the Court’s view, the relevance of cost supersedes the specific statutory scheme at issue. However, in failing to clearly distinguish between the two separate steps of cost determination and cost quantification, the *Michigan* decision unduly extends the power of courts to interfere with both an agency’s decision-making and the statutory definition of legal rights.

This rule increases the costs for Congress of legislative inertia by imposing on the legislative branch the burden to expressly preclude cost quantification when it intends to exclude cost-benefit balancing at a given regulatory stage. While this may not be a concern in cases where cost quantification produces effective regulation, it is an issue when cost quantification is required of agencies surreptitiously, as an antiregulatory device. Furthermore, as we have seen, the more indeterminate the statutory definition of rights, the more penetrating the Court’s rationality assessment. In brief, by increasing the intrusiveness of the arbitrary and capricious standard of judicial review, *Michigan* may significantly hinder the effectiveness of regulatory action. In her dissenting opinion, Justice Kagan acknowledges this point when stating that the majority’s reasoning resulted in “a decision that deprives the American public of the pollution control measures that the responsible Agency, acting well within its delegated authority, found would save many, many lives.”⁷⁴

CONCLUSION

In time, *Michigan* may create more harm than good. By conflating the logic of cost determination with that of cost quantification when assessing the EPA’s administrative action, and by imposing the latter at the listing phase, the Supreme Court failed to safeguard the interests Congress intended to protect. The Court defeated the purpose of the statute when it registered polluters’ interests as interests to be made a cost to the public’s interest to health, despite Congress’ unambiguous determination to the contrary. By establishing the general principle that cost consideration is a requirement of administrative rationality,

73. *Michigan*, 135 S. Ct. at 2708 (emphasis added).

74. *Id.* at 2726 (Kagan, J. dissenting).

without properly clarifying the meaning of the cost/rationality nexus, *Michigan* invites agencies and the judiciary to second-guess statutory cost determinations. This might have been avoided had the Court considered the distinction between cost determination and cost quantification. A coherent conception of this distinction would have enabled the Court to clearly articulate the prescriptive meaning of the cost/rationality nexus and that administrative action remained consistent with the congressional definition of legitimate interests. Ultimately, *Michigan* highlights the importance of properly appreciating the juridical assumptions underpinning cost consideration, and the relevance of these assumptions in the context of rationality review of administrative action.