11 Mechanism choice

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I. Introduction

Mechanism choice can generally be described as the selection of some way to structure rules for social behavior. Nobel Laureate Eric Maskin recently described a mechanism as 'an institution, procedure, or game for determining outcomes' (Maskin 2008, 568).

In the realm of public law, mechanism choice is synonymous with 'instrument choice' or policy design. The selection of the policy instrument can be as important to success or failure as the intended policy outcome. Good intentions or objectives are not enough: the choice of tools matters. A large and growing literature in instrument choice and mechanism design examines both the normative criteria for correcting market failures, matching optimal instruments to different types of problems, minimizing costs, and overcoming incomplete information; and also the positive political factors that may influence the actual selection of instruments, and the pattern of such choices across issue areas, governance systems, and time.

Public policy instruments are selected and designed by public bodies – legislatures, executive agencies, and courts – that are comprised of individuals with their own policy preferences, and that are subject to pressures from private interests through lobbying, campaign contributions, and elections. Thus, it is no surprise to the student of public law that the mechanisms actually selected to implement public policy are not necessarily the ones that best pursue the public interest.

This chapter begins with a brief summary of normative mechanism choice, including the legal literature on instrument choice and the economics literature on mechanism design. It then moves to a more detailed discussion of positive mechanism choice, also called public choice, political economy, or positive politics. This positive literature explores how political institutions and pressures shape the selection of mechanisms to implement policy, notably when the selected instrument departs from the normative ideal. We find that standard positive theories are insufficient to explain the observed policy choices; more complex models and empirical research are needed across diverse institutional settings.

II. Normative mechanism choice: which instruments should we choose?

A. In general

Mechanism choice is a kind of social 'engineering', the task of designing optimal instruments to achieve social objectives (Maskin 2008, 567). But as the history of engineering demonstrates (and as mechanism design theory corroborates), there is no such thing as a perfect design. Every design involves choices among features that correspond to trade-offs among competing objectives (Petroski 2003).

In economics, a core concern is mechanism design in the face of incomplete information. The significance of research addressing this concern was reflected in the award

of the 2007 Nobel Prize in economics to Eric Maskin, Roger Myerson, and Leonid Hurwicz. If preferences were known and outcomes were controllable, the designer could simply mandate actions and results. But if the designer has incomplete information, s/he needs some mechanism to achieve optimal results by eliciting from actors their private information (honest preference revelation) via a mechanism design that is 'incentive compatible' (Maskin 2008, 568, 571; Myerson 2008, 586–87). Neoclassical theory argues that markets are presumptively best at this information-elicitation task, so long as they are competitive, are free of significant externalities, and without information asymmetries (Hayek 1945; Maskin 2008, 572).

But if markets are flawed or incomplete, due to problems such as externalities, transaction costs, free riding, or incomplete information, then the theory of mechanism design seeks to choose the best form of government intervention to correct the market failure (Baliga and Maskin 2003). Such market failures in competition, externalities, and information, and the need to correct for those failures, are among the basic rationales for public law (Stiglitz 1989).

At the same time, government policies to correct market failures can pose their own problems, that is, government failures. Incomplete information about preferences and outcomes also confronts government decision-makers. Eliciting voters' true preferences through voting may be elusive or even unattainable (classic studies include Arrow 1963; Gibbard 1973; and Satterthwaite 1975; more recent treatments include Barberá et al. 1997; Benoit 2000; Reny 2001). Foreseeing policy outcomes involves risk and uncertainty, so government incurs both the costs of information and analysis as it tries to assess regulatory impacts in advance and the costs of flaws in policy choices as they arise over time. Government failures in policy design can include policies that are excessively costly, that disproportionately benefit parochial constituencies at public expense (rent-seeking) or government bureaucracies themselves (internalities), that allocate burdens unfairly (inequity), or that induce adverse side effects (derived externalities or risk-risk tradeoffs) (Wolf 1993; Graham and Wiener 1995; Mueller 2003). The challenge for optimal policy is thus to minimize the sum of market failures and government failures.

One response, not uncontroversial, to mitigating the problem of government failure is to add a layer of supervisory oversight of the institutions developing policy interventions – that is, a system of regulatory review of those regulating the public. In the United States, this has been implemented through both judicial review (at least since the Administrative Procedure Act of 1946) and White House oversight of agency rulemaking (at least since the administration of Jimmy Carter). President Carter issued Executive Order 12044 and signed the Paperwork Reduction Act of 1980, creating the Office of Information and Regulatory Affairs (OIRA) within the Office of Management and Budget (OMB). President Reagan gave OIRA the power to apply benefit-cost analysis to regulatory review under his EO 12291, and President Clinton reaffirmed that approach in his EO 12866 (with notable improvements). (See generally Breyer 1993; Kagan 2001; Graham 2007. For a recent critique, see Revesz and Livermore 2008.) In early 2009, President Obama called for updating the system of regulatory review and nominated legal scholar Cass Sunstein to lead that effort. In the European Union, similar oversight mechanisms have recently been established through the 'Better Regulation' initiative that created the Impact Assessment Board (Lindseth et al. 2008; Wiener 2006; Renda 2006) and greater use of judicial review of administrative action (Lindseth et al. 2008; Alemanno 2008).

Internationally, regulatory oversight occurs in institutions including, notably, the World Trade Organization (WTO) and its dispute resolution bodies.

Such oversight of regulatory design is a partial answer to the Roman poet Juvenal's ageless question, 'Quis custodiet ipsos custodes?' ('who will watch the watchers,' or 'who will guard the guardians?'). It is only a partial answer because the additional oversight introduces another layer of costs (especially delay) and because the oversight body itself may require watching. To avoid an infinite regress of oversight bodies, a combination of transparency, public democratic participation, and perhaps litigation can ensure responsible and acceptable governance. In other words, the public, regulated entities, and advocacy groups also help watch the watchers (the oversight bodies) of the watchers (the regulators) (Hurwicz 2008).

B. The regulator's toolbox

Together, these contending concerns and institutions shape the choice of regulatory mechanisms. Policymakers and academics collectively have developed a large menu or 'toolbox' of instruments to correct for market failures.

Perhaps the most common regulatory mechanism in historical practice has been the imposition of conduct standards, in which government specifies the behavior or technology that firms must adopt. Examples include administrative regulations mandating technological standards, such as pollution filters or types of fish nets. But the long history of research on mechanism design has developed many alternatives to conduct-specifying regulations, including taxes and subsidies (Pigou 1920; Weitzman 1974), property rights (Coase 1960; Demsetz 1967; Hardin 1968; Libecap 1989), tradable allowances or 'cap and trade' (Crocker 1966; Dales 1968; Montgomery 1972; Ackerman and Stewart 1985; Tietenberg 1990; Wiener 1999a; Stavins 2003; Tietenberg 2006; Tietenberg 2007), tax-allowance hybrids (Roberts and Spence 1976), information disclosure (Hamilton 2005), process-enhancing procedures (Richman and Boerner 2006), regulatory 'nudges' that guide cognitive heuristics (Thaler and Sunstein 2008), education and training (Dijkstra 1999), and bureaucratic control (Williamson 1999).

Each of these policy instruments has associated pros and cons; none is a costless intervention or perfectly efficient solution. The challenge is to develop criteria and evaluation methods that identify the policy instruments that would be comparatively superior to achieve particular social objectives under particular market conditions. We discuss these criteria further below.

The many instruments in the regulator's toolbox can be categorized along several dimensions (for a taxonomy along transaction cost criteria, see Richman and Boerner 2006). A standard categorization of available instruments offers policymakers the following six types of regulatory mechanisms.

1. Conduct rules Conduct instruments involve government commands to firms and individuals, prescribing specific technologies, practices, methods, or behaviors that must be employed or must be avoided. These instruments mandate conduct, rather than outcomes. (Related labels have included 'command and control', design standards, and technology-based regulation.) Examples include administrative regulations mandating prescriptive design standards for technology to employ (for example pollution filters, catalytic converters, types of boilers or fuels, standards in information and communications

technology) or technology to avoid (for example types of fish nets). Some conduct-based statutes and regulations mandate specific technologies or designs. Others set standards requiring firms to attain performance levels based on what such technologies or designs would achieve, and represent a mix of both conduct and performance instruments. (Pure performance instruments, discussed below, mandate the quality of performance but not the method of achieving such performance, leaving firms flexibility in how to do so.)

The judicial version of conduct rules was reflected in the traditional negligence standard in civil tort liability, in which 'due care' is defined as particular conduct or technology that private actors must adopt. This is still the approach in some areas of law, such as medical malpractice. The more modern version of the negligence standard defines due care as 'reasonable' conduct, evaluated by a benefit-cost test that asks if the marginal costs of precaution are justified by marginal benefits of precaution, but leaving flexibility to private actors in how best to undertake precautions.

2. *Quantity/property rules* Property- or quantity-based instruments limit the use of a resource or entry into a market by setting a quantity limit on such use or giving a property rightsholder the right to exclude. If the market failure is overuse of an open-access resource (such as grazing commons, a fishery, or the atmosphere) that imposes external harms on others, then quantity/property instruments can remedy such failures by limiting access to the socially optimal amount.

Such limits might involve spatial parceling of a resource ('private property'), limited permits to use a resource, or limits on entry into a market. They include property rights (such as rights to land, objects, minerals, airspace, and patents and copyrights), ambient standards (limiting the concentration or abundance of use or of pollution), emissions or effluent standards (limiting the amount of additional pollution that can be added in a period of time), and use or extraction licenses (such as for patents, copyrights, fishing and hunting licenses, airplane tickets, and broadcast spectrum licenses). Quantity use limits can be fixed (non-transferable) performance standards (for example fixed pollution limits, highway speed limits, or airplane tickets); or they can be transferable among users in a system of tradable permits or tradable allowances (also called 'cap and trade'; for example pollution emissions allowances, fisheries catch quotas, broadcast spectrum licenses, and aviation landing slots).

Tradable allowances can be issued by the government to private actors for free (such as 'grandfathered' in proportion to historical users), or they can be sold or auctioned by the government to raise revenues and help offset the cost of the regulatory restriction (Goulder et al. 1997; cf. Parry 1995), or some mixture of free and auctioned allowances can be designed. A significant focus of the economics of mechanism design involves the design of auctions to try to elicit honest preference revelation by bidders (for example Athey and Levin 2001) (another key consideration in cap and trade policies, constraining costs, is discussed in the next section regarding the comparison between taxes and tradable allowances).

Critics of incentive-based instruments such as tradable allowance mechanisms have worried that these instruments may lead to 'hotspots' of concentrated pollution (for example if one firm purchases many allowances), may soften the stigma associated with polluting by 'licensing the right to pollute', and may have high administrative costs. Advocates of tradable allowances respond that hotspots are unlikely if the aggregate

cap is stringent, that hotspots are only an issue where local emissions cause local harms (which is not the case, for example, with most greenhouse gases), and that hotspots can be limited through the design of the allowance trading system to restrict high ambient levels. They add that far from licensing the right to pollute, incentive instruments like taxes and tradable allowances make polluters pay for every unit of pollution – directly or by foregoing the revenues of selling an allowance (whereas command technology standards and fixed performance standards allow residual pollution to be emitted for free) – and do better at motivating innovation, thus reducing pollution more effectively. And advocates argue that the administrative costs of incentive instruments (chiefly monitoring emissions and collecting taxes or tracking allowance trades) are no higher than, or even considerably lower than for command technology standards (developing engineering analyses of best technologies and litigating those choices), and in any event are dwarfed by the social cost savings delivered by incentive instruments.

3. *Price/liability rules* These instruments limit use of a resource not by limiting the quantity or spatial terms of use, but by setting a price on use. If the market failure is overuse of the resource, then price/liability instruments can remedy that problem by setting a price for use that equals the social marginal harm of use. Such price instruments include taxes on use, subsidies for abatement, and strict liability in tort.

A classic contrast pits taxes versus tradable allowances. Under a quantity-based system of tradable allowances, government sets the aggregate quantity of use, and the market then determines the price of an allowance. By contrast, under a tax, government sets the price for use, and the market then determines the quantity of use. As Weitzman (1974) showed, if the government knows the true marginal cost of abatement, then it can set either the quantity or the price and achieve the same result. But under uncertainty about the true marginal cost curve, the quantity instrument risks fluctuations in the cost of use, and the price instrument risks fluctuations in the quantity of use. Which instrument is preferable depends (all other things equal) on whether one is more concerned about the costs escalating or the use escalating (that is, on the relative slopes of the marginal cost and marginal benefit curves).

If cost escalation is a key concern (favoring a tax), but a quantity limit on total use is desirable or taken as given, then a quantity-based tradable allowance system can be designed to constrain costs in several ways: setting the stringency of the quantity cap appropriately (not too tight); enabling firms to enjoy 'how' flexibility in methods of abatement, 'where' flexibility in the location of abatement across users, and 'when' flexibility through banking and borrowing over time; ensuring a broad and competitive market for allowances; and setting price ceilings ('safety valves') at which extra allowances will be sold (that is, by creating a tax-allowance hybrid instrument) (Roberts and Spence 1976), perhaps coupled with price floors that maintain at least some incentive for innovation and also help constrain price volatility in both directions (Burtraw et al. 2009). Although taxes and some other price instruments have the additional benefit of raising public revenues, tradable quantity allowances (noted above) can also raise revenues by being sold or auctioned.

One key difference between taxes and tradable allowances is their ability to engage participation by users, especially where the voting rule for adoption of the policy requires parties' consent to be bound (as it does at the international level). This feature is discussed further in Part III below.

Subsidies also act as price instruments, by offering users a payment to abate (hence a foregone payment from failure to abate), or by supporting basic research and development (R&D) in which private firms would not invest adequately. Subsidies for abatement can reduce resource use at the margin, but unlike taxes or tradable allowances, they may also reduce the average cost of operating in the subsidized industry and thereby attract greater investment that perversely increases output in that sector (Oates 1990). Subsidies for basic R&D can help overcome the market failure in incentives for innovation, but unless the price of the new technologies can be driven down below the price of conventional technologies, the R&D subsidy will need to be paired with some instrument (such as a tax or tradable allowance system) to correct the market failure in resource use by internalizing the external costs of the conventional technologies and thus to encourage diffusion and adoption of the new technologies (Jaffe et al. 2005; Pezzey et al. 2008). And government subsidies for the deployment of particular technologies run the risk of picking a losing technology.

4. *Information disclosure rules* If a market failure involves asymmetric information, or obstacles to bargaining because of incomplete information, then an information disclosure instrument can help remedy the problem and facilitate more efficient market transactions. Information, transparency, labeling, and related instruments are widespread. For example, information disclosure is currently required in sales of securities, sales and leases of real estate, loans, sales of consumer products (such as appliances, motor vehicles, food, prescription and over-the-counter drugs). Some of these disclosure requirements are highly detailed. Additional versions of information instruments include Environmental Impact Statements, Regulatory Impact Assessments, the OSHA Hazard Communication Standard, and the Toxics Release Inventory (Hamilton 2005). The function of regulatory oversight itself involves disclosure of decisionmaking rationales and evidence – by the agency in its notice and comment rulemaking process, by OIRA, and by the courts through judicial proceedings.

5. *Government ownership* If regulation of market transactions is not sufficient, government can acquire ownership of a resource or enterprise. Government may acquire ownership through negotiated purchase, or through the power of eminent domain to take property (and pay compensation). Public parks and lands, public works and utilities, and various services (including the Postal Service, Amtrak, and air traffic control) are currently operated by the public sector in the USA; various sectors are government-owned in other countries. Market failures in financial markets have recently led to increased government ownership of banks, lenders, and insurers. Government ownership may enable wider public access to resources, but it may also replace market incentives to invest in conservation of resources with bureaucratic procedures that let resource values dissipate or become captured by private users. Government acquisition or compensation in response to private losses can create an expectation of relief that generates 'moral hazard', excessive risk-taking by the insured (Akerlof and Romer 1994).

6. *Private ordering* Industry custom, trade association codes of conduct, professional codes, and group property management systems are all examples of mechanisms that private actors may adopt to regulate conduct. Where actors face low transaction costs

of developing, agreeing on, monitoring and enforcing such codes, they can be attractive mechanisms (Ostrom 1990; Ellickson 1990; Richman 2004). The question of instrument choice remains: private codes of conduct and social norms typically take one of the mechanism design options described above.

The relationship between government policy and private ordering may vary. In some cases, government adoption of regulatory policy may supersede or crowd out private codes and norms. In these cases, private codes are sometimes meant to fend off government regulation; an example is the history of self-regulation by the movie industry meant to avoid government-imposed content ratings or restrictions. In other cases, government policy may serve an expressive function that helps establish and strengthen social norms.

Other instruments are also possible. For example, Dijkstra (1999) classifies education and training as a regulatory instrument.

C. *Criteria for optimal instrument choice*

As a general matter, there is no universally optimal mechanism or policy instrument, not only because frictionless hypothetical ideals are nonexistent (Williamson 1999) but also because the success of particular mechanisms depend highly on the attributes of a specific market failure (Breyer 1982; Baumol and Oates 1988). The economics and legal literatures have offered useful, though not exhaustive, theories for optimal mechanism choice and the criteria for selecting the optimal instrument to correct a particular problem.

Perhaps the most common method of normative mechanism selection, at least as advocated by economists and invoked by OMB regulatory review, is benefit-cost analysis (Stokey and Zeckhauser 1978; Munger 2000). The debate over benefit-cost analysis is extensive, and it goes beyond the scope of this chapter because benefit-cost analysis seeks to answer how much regulation is desirable, whereas mechanism choice typically seeks to select the best policy instrument to achieve a given degree or objective of regulation (with that goal having been given by the legislature). Thus, mechanism choice in regulatory policy often involves cost-effectiveness analysis rather than full benefit-cost analysis.

In either case, a full analysis of benefits or effectiveness would include both targeted and ancillary consequences (Graham and Wiener 1995; Revesz and Livermore 2008); and a full analysis of costs would include compliance costs (Glaeser and Shleifer 2001), general equilibrium social costs (Hazilla and Kopp 1990), and administrative costs (Ackerman and Stewart 1988). A full analysis of benefits and costs would also include dynamic considerations, such as the degree to which an instrument spurs innovation (Jaffe et al. 2003) or encourages absorbing new information and adapting to changing circumstances. Distributional criteria, such as fairness or justice, can also inform a benefit-cost comparison of alternative mechanisms and policy outcomes. Benefit-cost analysis can aim to maximize aggregate net benefits (the Kaldor-Hicks criterion), or can be applied to a more stringent test that would increase net benefits for some while ensuring that no individual is made worse off (Pareto-improving) (while side payments can compensate losers from policy measures and can thus transform any Kaldor-Hicks improvement to a Pareto improvement). Broader versions of benefit-cost analysis embrace all of these considerations, and both qualitative as well as quantitative analysis, in a 'cognitive' or 'warm' approach to pragmatic decision-making that sees benefit-cost

analysis as a tool, not a rule, to inform sound judgment by responsible officials (Sunstein 2000; Farber 1999; Wiener 2006; Graham 2008).

On these benefit-cost criteria, it is possible to compare alternative mechanisms. For example, many economists argue that for most externality problems such as pollution, incentive-based instruments such as taxes and tradable allowance (cap and trade) systems are superior to conduct rules that specify behavior or technology. Incentive-based instruments achieve results at lower cost, through 'how', 'where' and 'when' flexibility (as described above). Moreover, incentive-based instruments stimulate continuous innovation, while command technology standards may stagnate innovation once the government-selected technology has been adopted (Jaffe et al. 2003). (For surveys of instrument choice comparisons across diverse criteria, see Baumol and Oates 1988; Wiener 1999a.)

Law and economics scholars have developed additional theories to guide optimal instrument choice. For example, Calabresi and Melamed (1972) developed a template for when property rules are superior to liability rules, focusing on transaction costs and judicial errors. Weitzman (1974) identified tradeoffs between price instruments (such as taxes) and quantity instruments (such as tradable permits) when the decision-maker is uncertain about costs and benefits. Breyer (1982) described how matching the type of policy instrument to different types of problems can help solve market failures. Stewart (1986) emphasized the basic choice in public law between replacing markets with bureaucratic controls, versus 'reconstituting' markets through incentive-based regulations that exact performance while preserving substantial flexibility to market actors. Baumol and Oates (1988) synthesized the economics literature on optimal instrument choice for environmental protection. Williamson (1999) employed new institutional economics to suggest when economic and political transactions require administrative management, including regulation or public agencies.

For many years, few empirical studies were undertaken to evaluate the actual impact of policy instruments. According to a GAO report in 1999, of the more than 100 major rules issued by EPA from 1981 to 1998, only five were subject to ex post evaluations, with all of those five reviews occurring after 1997 (GAO 1999). Fortunately, retrospective studies have recently been undertaken more frequently. One such study found that ex ante assessments tend to overpredict both the costs and the benefits of regulation, but that the costs of market-based incentive policies tended to be even more overstated than the costs of command and control technology standards (Harrington, Morgenstern and Nelson, 2000). This suggests that market-based incentive instruments are an even better option than is typically predicted. Like ex ante assessments, retrospective studies remain challenged by the need to estimate counterfactual scenarios of what would have happened absent the policy (Coglianese 2002; Hammitt 2006).

Nonetheless, retrospective studies (or real time monitoring) are important both because they improve the methods of ex ante assessment and because they inform the process of updating and revising policies in light of new information (see Wiener 2006, 513–16). This latter function – learning and revising policies – is an important part of the dynamic considerations in the normative choice among instruments. That is, not only should the normative choice among instruments consider which instrument best promotes dynamic technological and behavioral change in society, but it should also consider the dynamic adaptability of the instrument itself as we learn about its performance over time (Farber 1994; Ruhl 2005; Wiener 2004).

Different instruments may be more or less adaptable, or more likely to adapt in different ways, as circumstances change. Put another way, the positive political economy of regulation continues after adoption and during implementation, which in turn may be relevant to the normative choice of initial adoption. For example, consider the choice between a tax versus a cap and trade system to reduce pollution. Under a tax, every taxpayer has an incentive to lobby to relax or remove the tax. And the tax authority, seeking revenues, has an incentive to keep the taxed activity going and generating tax revenues, and thus to set a revenue-maximizing tax that is lower (less stringent) than the optimal externality-controlling tax (Breyer 1982, 284; Bohm & Russell 1985, 437; Keohane et al. 1998, 314–15). These forces combine to yield pollution taxes that are suboptimally low. Under cap and trade, by contrast, allowance holders quickly constitute a new constituency which will lobby in favor of keeping the allowances scarce – that is, in favor of enforcement of the cap – because lax enforcement means that their allowances lose value. (An example is taxicab medallions in New York City: the city allocated just fewer than 12,000 taxi medallions in 1937, and, under pressure from medallion owners, forestalled the issuance of any additional medallions until 60 years later, when the city added just 400 in 1996 (*The Economist* 1996).) Under these conditions, a cap and trade system seems less likely to be relaxed through political pressure than is a tax. If new information indicates that a more stringent limit on pollution is desirable than was initially adopted, the cap and trade system would then be more optimally adaptable than the tax; but if new information indicates that a less stringent limit is desirable, the cap and trade system might be less adaptable than the tax.

Accordingly, instrument designers should build into initial instrument designs some kind of mechanisms for adaptive management – such as for periodic review of the stringency of the cap and whether it should be tightened or loosened in light of new information. Moreover, this dynamic adaptive consideration returns us to the initial problem of 'mechanism design': how to design instruments that are incentive compatible and elicit accurate information about costs and preferences. Because preferences, as well as technologies and environmental conditions, can change over time, the instrument designer should build into initial instrument designs some mechanism to learn about all of these changes and adapt over time.

In sum, normative evaluations of policy instruments rest on a wealth of valuable theoretical criteria and emerging empirical research. Yet actual policy choices often depart from normative guidance. It is therefore important to understand the political processes that select actual policy instruments.

III. Positive mechanism choice: which instruments actually get chosen?

The main question posed by the robust political economy literature on positive mechanism choice is whether positive political forces actually choose the instruments deemed optimal by normative analysis, or instead depart from the optimal choice to employ some other (suboptimal) instrument. If positive politics do affect the process of mechanism choice, then political forces predictably constrain policy options or raise the costs of certain policy instruments. Accordingly, understanding these political constraints (which may be impossible or too costly to change) should inform the normative instrument choice analysis. As James Buchanan advised, one should understand the political system before prescribing normative instrument choice (Buchanan 1987).

Views of the political process vary widely, and instrument choice predictions depend heavily on the underlying model of the political system. Here we focus on instrument choice in the United States given its particular set of political institutions and players. In this section, we begin with optimistic models in which positive instrument choice emulates optimal normative choice. Then we move to more pessimistic models in which positive instrument choice departs from optimal normative choice. At each step, we assess the relevant empirical evidence and consider complications to positive models; we also address the politics of both administrative regulation and property rights. Further, we examine the roles of public attitudes that might produce results that are more mixed and nuanced than either the highly optimistic or highly pessimistic models. Last, after focusing on positive instrument choice in the United States, we comment on positive instrument choice in international treaties and in the European Union, in order to offer some comparative perspective on the role of basic institutional structures (such as voting rules) in shaping positive choices.

A. Optimal choice

If all individuals' interests are effectively represented in the political system, positive mechanism choice may emulate the normative criteria for maximizing net benefits (and perhaps even compensating losers). Lowi (1979) advanced a vision of pluralist democracy in which all citizens' interests are expressed through organized interest groups, and government decisions thus optimally aggregated and reconciled citizens' preferences. Aidt (1998) arrived at the same socially optimal outcome through a more formal model, in which every individual is effectively represented by an interest group.

Even if all individuals are not effectively or equally represented by interest groups, optimal choice is still possible. Becker (1983, 1985) showed that if the political process is a frictionless competition among interest groups, organized interests will bargain for their desired policy outcomes and, in order to secure adoption of their preferred programs, will propose policy mechanisms that reduce the costs (prices) of achieving their objectives. This competitive bidding process dissipates the interest groups' rents, and socially optimal policies result. Similar intuitions underlie Wittman (1995) and Cowen (1994).

Many observers doubt that such optimistic models depict the reality of American politics. Olson (1971) and others had argued that disorganized or diffuse interests would be unequipped to bargain effectively against concentrated interest groups. North (1990) argued that Becker's model is unrealistic because significant transaction costs of expressing political voice make political influence difficult and unevenly available (see also Mashaw 1997). Hahn (1989, 173–75) observed that, at least through 1989, Becker's optimism had not been borne out empirically in environmental regulation, where suboptimal instruments had often dominated the field (although since 1989, incentive-based instruments for environmental protection have become more widely adopted: see Stewart 2001, Oates and Portney 2003, and further discussion below).

Recently, Croley (2008) has argued that optimistic pluralist models do depict the reality of actual American policy making, provided that the instrument choice and policy process are adequately shielded from the interest group biases of concern to Olson, North, Mashaw, and others. For example, Croley finds that separating regulatory agencies from the Congress, and requiring administrative procedures to transparently and