

Collective Action through Voluntary Environmental Programs: A Club Theory Perspective

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Voluntary environmental programs are institutions that seek to induce firms to produce positive environmental externalities beyond what government regulations require. Drawing on club theory, this paper outlines a theoretical perspective to study the relationship between program design and program effectiveness. Effective programs have rule structures that mitigate two central collective action problems inherent in producing positive environmental externalities: attracting firms to participate in the program and ensuring that participating firms adhere to program obligations. Because program efficacy can be undermined by collective action problems associated with free riding and shirking, effective voluntary clubs should be designed to mitigate these challenges.

Introduction

It is now well recognized that voluntary environmental programs are important policy instruments for environmental governance, with programs sprouting up across continents and policy domains. Program by program, scholars have studied conditions under which firms join the programs and the factors that influence their efficacy. We now have a sense that while some programs are “greenwashes” that do little to encourage firms to do little or nothing to improve their environmental performance, others require participants to take a progressive environmental action they would not have taken in the absence of the program, leading them to improve their superior environmental performance.

Examples of both types abound. Ski resorts participating in the Sustainable Slopes Program were not greener than nonparticipants (Rivera & de Leon, 2004; Rivera, de Leon, & Koerber, 2006). Chemical firms participating in the Responsible Care program did not reduce the emission of toxic chemicals any faster than nonparticipants (King & Lenox, 2000). Participants in the U.S. Department of Energy’s Climate Wise program did not reduce their CO₂ emissions any more than nonparticipants (Welch, Mazur, & Bretschneider, 2000). On the successful side of the ledger, firms that joined the Environmental Protection Agency’s (EPA) 35/50 voluntary program reduced their emissions of toxic pollutants more than the nonparticipants (Khanna & Damon, 1999). Our own work suggests that ISO 14001, the voluntary

environmental program sponsored by the International Organization for Standardization, improved participating firms' environmental performance (Potoski & Prakash, 2005) and compliance with government regulations (Potoski & Prakash, 2004).

The upshot is that while there are several useful studies about the effectiveness of individual programs, scholars have yet to systematically tie these studies and their findings together.¹ Indeed, scholars have begun to recognize this issue and have responded in two ways. First, sensing the absence of theory, some have developed inductive approaches to study voluntary programs, an "area studies approach"² that can go only so far because the theories are tailored and ultimately limited to individual programs (Cashore, Auld, & Newsom, 2004). The second response has been comparative analyses of voluntary clubs (Darnall & Carmin, 2005; Lenox & Nash, 2003). While such cross-program studies can shed light on why some programs are successful and others are not, advancing research and practice requires an encompassing theoretical and analytic framework that identifies voluntary clubs' important features and ties them to program efficacy, thereby leading to a better understanding of what types of voluntary clubs work, where, and why. Such a theoretical framework should facilitate comparisons not only among voluntary programs but also with other policy instruments.

This is where we seek to make a contribution to the study of voluntary environmental programs and the broader environmental governance literature. Drawing on the economic theory of clubs, we outline a deductive framework for the study of voluntary programs, focusing on specific institutional features and analytic dimensions. We highlight the diversity in program design, the variable that policymakers and program sponsors can influence, and relate design to specific collective action issues that influence program efficacy.

After modeling program design as an exogenous determinant of program efficacy, we highlight how the design itself might be endogenous to the institutional and stakeholder context in which the program is established and functions.³ By doing so, our framework clarifies the determinants of program efficacy and identifies empirically verifiable hypotheses. Finally, our perspective can help voluntary program scholars place their work within the expansive and established governance literature and therefore contribute to the broader dialogue on institutions and governance.

Our article is structured in the following way. In the first part, expanding on our previous work (Prakash & Potoski, 2006a), we outline a generalizable framework for the study of voluntary clubs, based on an economic club model. We conceptualize voluntary environmental programs as clubs that require firms to incur costs not required by law that lead to the production of positive environmental externalities. In return, voluntary clubs provide branding benefits⁴ such as shared reputation and goodwill to participating firms that emanate from their association with the voluntary club brand.⁵ In the second part of the paper, we discuss important issues for the study of voluntary environmental programs and illustrate how our club approach can help policymakers design superior voluntary programs.

Collective Action, Program Design, and the Club Framework

Rational actors are generally unwilling to pay private costs to produce positive social externalities. An externality implies that actors do not fully internalize the costs and benefits of their actions. Consequently, goods with negative externalities are overproduced and goods with positive externalities are under-produced. Pollution is a classic negative externality (but see Coase, 1960), and from the other side of the coin, decreasing pollution is a positive externality. A firm might reduce pollution by improving production processes or by adopting new technologies or management systems. In many cases, these are expensive actions for which firms would want some offsetting payoff. The policy challenge for environmental governance is to design institutions that create incentives for actors to incur the costs of pollution reduction, or in other words, to induce polluting actors to internalize their negative externalities.

Ever since Pigou (1920/1960), government regulations have been viewed as the primary mechanism for compelling firms to internalize costs they would otherwise externalize. Regulations change firms' cost calculus by mandating that firms cut pollution, and some regulations stipulate the means for doing so. The case for governmental regulations solving externalities rests on three assumptions. First, public regulations are democratic and fair because governments respond to public concerns (not private interests). Second, governments have the capacities to correctly estimate the cost of externalities and then design regulations to compel firms to internalize them. Third, the state has the capacity to enforce regulations and firms tend to adhere to the law.⁶

These assumptions are all too often problematic (Coglianese & Nash, 2001; Fiorino, 1999), particularly in the context of developing countries. Many countries are not fully functioning democracies,⁷ and even in established democracies, governments might be unduly influenced, if not captured by, interest groups. In most developing countries, governments have little power to enforce regulations or even maintain internal order and protect property rights.⁸

An effective voluntary environmental program can be a corrective for government failure. In Mexico, which ranked well in the bottom half of the failed state indexes, Dasgupta, Hettige, and Wheeler (2000) report that adopting environmental management practices along the lines prescribed by ISO 14001 significantly improved Mexican facilities' self-reported compliance with public law. Haufler (in press) shows how the international diamond industry has developed a voluntary club (Kimberly Process) to curb the flow of "blood diamonds" mined illegally in failed African states and used to fund the internal wars.

The upshot of this discussion is that governance mechanisms should be carefully scrutinized for their strengths *and* deficiencies: one should not compare "imperfect" voluntary clubs with a "perfect" governmental regulation or vice versa. If we accept that all institutions can fail, the scholarly and policy challenge is to identify the conditions and institutions that lead to success and failure.

Voluntary clubs are an important policy instrument in this regard because they can induce participating firms to produce positive environmental externalities not

only in response to legal mandates but also to exceed them. They implicitly respond to the externality problems resulting from governments' failure to adequately supply or enforce regulations. But how do these programs induce firms to pay the costs of solving externality problems? We explain in the succeeding discussions how voluntary clubs mitigate collective action problems inherent in the voluntary provision of such externalities.

Buchanan Clubs and Voluntary Clubs

Clubs are institutions that supply impure public goods. The club literature is well established in public finance and dates back to at least the 1950s (Pigou, [1920] 1960; Tiebout, 1956; Wiseman, 1957). James Buchanan (1965) is generally credited with introducing the theoretical concept of clubs. In the Buchanan theory, clubs are institutions for producing and allocating goods that are neither fully private (rivalrous and excludable) nor fully public (non-rivalrous, non-excludable). Unlike pure public goods where the benefits one recipient receives are made available to all, club goods provide excludable benefits that are given only to those who join (and pay for) the club and withheld from all others. Club goods are non-rivalrous in that what one individual consumes is still available for others to consume as well. A good example of a club in this traditional sense is a movie theatre: the excludable benefit that club members receive is the opportunity to watch a movie on a big screen with excellent acoustics. Purchased tickets offset the cost of the movie and facilities. If you do not purchase the ticket, you are excluded from watching the movie (excludable benefit) and several patrons can watch a movie at a time (non-rival benefit). Club membership can be allocated efficiently because if there are persistent, long lines for tickets, the theater owner can hike ticket prices while entrepreneurs can construct new theatres.

Unlike traditional "Buchanan" clubs whose central purpose is the production of club goods, the central purpose of voluntary clubs is to produce positive social externalities. Voluntary clubs provide club goods to firms that produce positive externalities beyond what government regulations require. Unlike in traditional economic clubs, membership costs in voluntary clubs are not direct payments to sponsors. Rather, they are the monetary and nonmonetary costs of adopting and adhering to the club's membership requirements.

From the perspective of (potential) members, voluntary clubs can generate three kinds of benefits:

- *social externalities* that constitute the policy payoff of voluntary clubs.
- *private benefits* that accrue to a single member firm only.⁹
- *club goods* that accrue to club members only and are the central motivation for members to join the club.

The production of positive social externalities is the important welfare gain to society and the central justification for voluntary clubs. The positive social externalities voluntary club members produce can have the attributes of private goods (a

voluntary club obligating participating firms to pay higher wages to indigenous coffee growers), public goods (a voluntary club obligating participating firms to lower air pollution), common property resources (protecting a fishery), or even club goods (a voluntary club obligating participating forestry firm not to cut trees that are revered by an aboriginal group).

The private benefits of voluntary club membership accrue only to individual club members, not to other club members, and certainly not to nonmembers. For example, a voluntary club designed to protect the environment might require firms to uncover waste in their production process, and thereby increasing profits as Porter and van der Linde (1995) suggest in the context of governmental regulations. Such private benefits, however, have limited analytical utility for evaluating voluntary clubs because an instrumental actor (such as a profit-oriented firm) is likely to take these actions unilaterally, without joining the club, in order to enjoy the private benefits such actions produce. If the private gain from unilaterally taking such action were sufficient to induce the firm to produce enough positive social externalities, then voluntary clubs would not be necessary.¹⁰

The central, analytically salient benefit that the members receive for producing the voluntary club's positive externalities is the affiliation with the club's positive brand reputation, a non-rival but excludable benefit as we discuss later. In its broadest sense, voluntary club membership signals to firms' stakeholders about members' environmental programs, policies, and performance, which can be quite valuable to stakeholders because so much of firms' activities are unobservable (although different stakeholders may have different information about firms' environmental activities). In other words, because outside stakeholders—such as consumers, regulators, investors, and suppliers—are unable to monitor firms' environmental programs and verify firms' claims, voluntary club membership can solve information asymmetries between firms and their stakeholders. Affiliation with a voluntary club and its reputation thus help build firms' reputations, which in turn shapes their relations and interactions with stakeholders (Carpenter, 2001).

While the voluntary club brand reduces information costs for stakeholders to differentiate environmentally progressive firms from laggards, stakeholders vary in their abilities to interpret such brand signals, their preferences for the social externalities the firms produce as club members, and their capacities to translate these preferences into rewards or sanctions for firms. Thus, while we focus on voluntary club design as the driver of branding benefits, we recognize that other factors shape the value of a program's brand benefit, such as the stakeholder and institutional context, firm characteristics, and sponsors' attributes.¹¹

Mitigating Collective Action Dilemmas through Institutional Design

All institutions can fail: governments and market failures have been well documented, and voluntary environmental clubs have been shown to fail as well. From a policy perspective, the objective is to understand the conditions under which voluntary clubs fail and how their institutional design, as the key independent variable in their efficacy, can mitigate their failure.¹² The roots of voluntary club failure are

collective action problems associated with free riding and shirking. Firms may want to enjoy a reputation for environmental responsibility without having to actually pay the costs of being environmentally responsible. Firms hope that the goodwill created by environmentally responsible firms will spill over to them because the stakeholders, who cannot always identify which firms are doing the good deeds, will spread their rewards broadly. Effective voluntary clubs seek to solve such free riding because they make excludable the benefits from producing positive externalities: stakeholders can target their rewards only to firms that have joined the club. Thus, the club's brand curbs free riding; the more credible is the brand, the more attractive it is for firms to join the club and produce the positive externalities it requires.¹³

Another type of free riding pertains to shirking: firms can join a voluntary club and claim to produce positive social externalities but fail to live up to their promises. The club therefore needs to establish mechanisms to compel participants to adhere to program obligations. Widespread shirking undermines the production of environmental externalities and thereby dilutes its credibility. Willful shirking occurs because: (i) the goals of participants and voluntary club sponsors diverge and (ii) participants are able to exploit information asymmetries (regarding their adherence to club standards) between themselves and sponsors and stakeholders.¹⁴ Information asymmetries prevent stakeholders from differentiating program shirkers from non-shirkers.

Voluntary clubs can mitigate shirking by establishing monitoring and sanctioning mechanisms. A voluntary club with a reputation for effectively policing and sanctioning its participants is likely to have a stronger standing among its stakeholders and therefore have a stronger brand reputation among its firms' stakeholders.

The Olsonian Dilemma, Brand Benefits, and Club Standards

With public regulations as the baseline, club standards specify what beyond-compliance actions are required for firms to join the voluntary club and remain members in good standing. Some standards specify performance requirements (sometimes called outcome standards) while other standards may be more process oriented, such as requirements that members adopt a management system, or that members regularly consult with community groups. Finally, club standards may limit membership to those that have already established high standards of environmental performance. In effect, club standards are signals to members' stakeholders regarding what the voluntary club wants members to accomplish, particularly their production of environmental externalities. The standards' stringency serves as a proxy signal for the level of externalities members generate (per capita) and therefore affects the branding benefits members can expect to receive from stakeholders.

While voluntary clubs establish regulations outside the scope of mandatory government law, it is through reference to the requirements of mandatory government regulations that we can observe the "voluntary" component of voluntary clubs and assess the levels of externalities the programs produce. The voluntary nature of these programs stems from firms' behavior that produces "positive" social outcomes—positive social externalities—beyond what public law requires. This

means of course that the same action that is voluntary in a jurisdiction with less stringent public law could be mandatory in a jurisdiction with stringent public law.

Public law also is the analytic referent for measuring the policy contribution of a program to social welfare: how much more positive social externality does a voluntary club compel its members to produce than they would produce in the absence of the program? The marginal contribution to public welfare from a voluntary club is the value added from its participants' activities that are beyond the applicable legal requirements. Again, this means that a voluntary club may contribute to public welfare in a jurisdiction with less stringent public law but may offer little or no contribution in a jurisdiction with stringent public law.

To simplify our discussion, we identify two types of club standards. Lenient club standards require little social externality production from members beyond what government regulations require. These are low-cost voluntary clubs for the members but create marginal levels of social externalities, and therefore the value of their brand among stakeholders is relatively low. Of course, even lenient club standards must mandate that members produce some positive social externality, or else the voluntary club would be a mere empty gesture (as some voluntary clubs indeed are).

Stringent club standards require members to produce high levels of positive social externalities, well beyond what government regulations require. For potential participants, these can be high-cost clubs. The advantage of stringent standards is that the club's brand would be more credible and serve as a low-cost tool for signaling voluntary club members' commitment to the club's social objective. Stakeholders would easily and confidently distinguish leaders (members) from laggards (nonmembers) among firms. Armed with this information, stakeholders could reward and punish firms accordingly.¹⁵

Shirking Dilemma: Monitoring and Enforcement Rules

Shirking is the second source of institutional failure for voluntary clubs. Shirking implies that some participants formally join the club but do not implement and practice the club standards. In doing so, shirkers seek to free ride on the efforts of other members who build the voluntary club's reputation. While nonmembers are excluded from enjoying the benefits of club membership, shirkers enjoy club benefits unless they are discovered and expelled from the voluntary club. As word spreads about large-scale shirking, the club's reputation is likely to diminish and the brand reputation undermined.

Willful shirking is facilitated by information asymmetries between voluntary club participants and club sponsors and/or between participants and club stakeholders.¹⁶ By information asymmetries we mean that voluntary club sponsors and stakeholders cannot observe the levels to which an individual participant is adhering to club standards because such activities are inherently difficult to observe or are observable only at a significant cost. The net effect is that information asymmetries impose costs on sponsors and stakeholders seeking to differentiate program shirkers from non-shirkers.

Shirking violates appropriate behavior norms (March & Olson, 1989), which suggests that shirking can be curbed by sociological pressures (normative, mimetic, and coercive) from other participating firms or even stakeholders. It would be important to understand the general conditions under which such sociological pressures would persuade instrumental firms not to shirk.¹⁷ As scholars interested in studying the consequences of institutional design on collective action, we are more interested in studying how institutional design can address the issue of shirking.

Instead of relying on sociological pressures alone, a voluntary club might seek to mitigate shirking through its institutional design. Monitoring and enforcement mechanisms can compel members to adhere to club standards, particularly if they contain three central components: third-party monitoring, public disclosure of audit information, and sanctioning by program sponsors.¹⁸ It should be noted, however, that some voluntary environmental clubs have none of these components—the Sustainable Slopes Program (Rivera & de Leon, 2004) is an example. Based on the design features, we expect such clubs to exhibit high levels of shirking and therefore generate very small amounts of positive externalities, if any. Indeed, Rivera and de Leon (2004) report that club Sustainable Slopes' participants were no greener than nonparticipants. Our framework suggests that policymakers and stakeholders should be skeptical of clubs without any monitoring and enforcement rules.

Voluntary programs begin to have some credibility regarding their capacity to curb shirking if they exhibit at least one of the three features. Third-party monitoring means that firms are required by the program sponsor to have their policies audited by accredited, external auditors. Thus, the program might stipulate that a periodic approval granted by a third-party auditor is necessary to retain program membership. In some cases, program sponsors may require public disclosure of audit information (as in the European Union's Eco-Management and Audit Scheme [EMAS]). The idea is that by such disclosure, the stakeholders can reward and punish as they deem fit. Finally, the sponsoring organization may itself act upon the audit information and sanction the shirkers.

With a nod toward Hobbes (1651) for his astute observation in chapter 17 of the *Leviathan* that "covenants without swords are but words, and of no strength to secure a man at all," we characterize a club's monitoring and enforcement programs as "swords." Strong sword clubs have all three components—audits, disclosure, and sanctioning mechanisms—and are most likely to curb shirking because they provide for a monitoring mechanism, mitigate information asymmetries between participants and club sponsors/stakeholders, and create a mechanism for sponsors to sanction shirkers. In extreme cases, sponsors may expel participants from the program, an undesirable outcome for firms if they value the benefits of voluntary club membership. While strong sword clubs should experience less shirking, they can impose more costs on members. Thus, in thinking about program design, policymakers need to examine the marginal addition to overall branding benefits by strengthening clubs' swords.

Medium sword clubs require third-party audits and public disclosure of the audit findings. Although they do not provide for sanctioning by the sponsoring organization, they are likely to curb shirking because with public disclosure of audit

Table 1. Analytical Typology of Voluntary Clubs

Enforcement and Monitoring Rules Club Standards	Weak Sword	Medium Sword	Strong Sword
<i>Lenient standards</i>	Social externalities: low Shirking: high Branding benefits: marginal Cost: low	Social externalities: low-moderate Shirking: moderate Branding benefits: low-moderate Cost: low-moderate	Social externalities: moderate Shirking: low Branding benefits: low-moderate Cost: low-moderate
<i>Stringent standards</i>	Social externalities: low Shirking: high Branding benefits: marginal Cost: moderate-high	Social externalities: moderate Shirking: moderate Branding benefits: moderate Cost: moderate	Social externalities: high Shirking: low Branding benefits: high Cost: high

information, external stakeholders can punish the shirkers for failing to live up to their commitments as program members. The EPA's 33/50 program and the European Union's EMAS are examples of medium sword clubs. In both these voluntary clubs, firms are subjected to third-party audits and the information on their environmental performance is available to the public. Because it is not clear whether stakeholders have the willingness and resources to sanction shirkers, we place them in the medium sword category.

Weak sword clubs require only third-party audits. ISO 14001 is an example of a "weak sword" club. The International Organization for Standardization, the sponsoring organization, is not known to aggressively sanction the shirkers. Importantly, the absence of public disclosure of audit information weakens stakeholders' ability to sanction shirking. However, these are also low-cost voluntary clubs and therefore within the financial means of a larger number of firms, as witnessed by the more than 110,000 facilities across 138 countries that had joined the ISO 14001 club as of December 2005.

Based on the earlier discussion, we identify six voluntary club types (Table 1). Important arenas for future research include: How does the institutional-stakeholder environment, along with firm characteristics (the relative salience of leaders versus laggards in the population), influence the emergence of various voluntary club types? What is the aggregate impact of a voluntary club in terms of the production of positive environmental externalities, defined as the product of externalities produced by each firm and the total number of club participants? In some instances, policymakers might favor lenient standard clubs to attract a large roster as opposed to stringent standard clubs with limited membership. In other instances, lenient standard clubs might be labeled as greenwashes and attract few members simply because they cannot generate significant branding benefits. Thus, instead of one-type-fits-all, policymakers should recognize that different voluntary club types are likely to best fit different policy contexts for different types of firms. While stringent standard clubs with strong swords might seem the best from an externality genera-

tion perspective, these are high-cost clubs that most firms might not find worth their while. On the other hand, weak sword clubs with lenient standards might generate low levels of externalities per capita, but by attracting a large roster of firm, might lead to the generation of high levels of externalities in the aggregate.

Theoretical and Analytic Complexities in Studying Voluntary Clubs

Scholars confront a complex web of causal connections among the features of a voluntary club: the club's institutional design, the sponsor's standing, the type of firms that join the club, and their environmental performance. In statistical terms, this means that many of the relationships are likely to be endogenous: firms choose to join a voluntary club (and produce the environmental externalities it requires) in response to the costs of externality production and the returns from affiliating with the voluntary club brand. The reputational benefit of brand affiliation, in turn, is influenced by the sponsors' reputation, the club's institutional design, the practices of other club members, and the firms' stakeholders' effective demand for the externalities. Voluntary club sponsors are likely to design rules and standards in anticipation of likely members. Causal complexities demand stronger research designs that exploit variability across firms, clubs, sponsors, and institutional contexts, particularly as club rules and membership rosters change over time. While quasi-experimental designs have been popular among the empirically oriented scholars seeking to study program efficacy (Khanna & Damon, 1999; King & Lenox, 2000; Prakash & Potoski, 2006a; Rivera & de Leon, 2004), one might design creative experimental techniques to sort out endogeneity issues—a promising approach demonstrated in the common-pool resource literature (Ostrom, Walker, & Gardner, 1994).

In confronting this complexity, rigorous theoretical analysis should guide empirical inquiry by clearly articulating causal contingencies. Harbaugh, Maxwell, and Roussillon (2006), for example, show that uncertainty over what certification means leads consumers to infer that the club's standards are weak, and consequently the taint of association leads cleaner firms to avoid voluntary clubs that dirtier firms have joined. Further empirical and theoretical advances are required to identify not just whether voluntary clubs work, but why and under what conditions. Our aim in the remainder of this essay is to identify several frontiers of this inquiry: club size and crowding, voluntary club governance, building voluntary club brands, and the reputational commons.

Voluntary Club Size and Crowding

The size of a voluntary club's membership roster affects the strength and value of its brand. More members create opportunities to capture economies of scale in building the club's reputation (McGuire, 1972), a dynamic akin to network effects (Bessen & Saloner, 1988). Network effects are the changes in the benefit that an actor derives from a good when the number of other actors consuming the same good changes. Positive network effects create increasing returns to scale: with every

additional unit, the marginal cost of production decreases. Language groups can be thought of as voluntary clubs amenable to network effects: The more people speak a given language, the higher are the benefits from learning it. Having more members helps advertise a voluntary club broadly among stakeholders as one member's socially desirable activities generates positive reputational and goodwill externalities for other members, so that the value a member derives increases as others join.

The benefits of voluntary club membership are non-rival because the positive branding benefits one member enjoys can be simultaneously enjoyed by other members. However, at some point, crowding may set in—a question that has so far not been systematically examined in the voluntary program literature.¹⁹ While a voluntary club with universal membership would do little to identify which firms were producing desirable social goods, industry-sponsored clubs might desire universal membership of the firms operating in their industry, as is the case with National Ski Areas Association's Sustainable Slopes Program, the American Chemistry Council's Responsible Care program, and the American Forestry and Paper Association's Sustainable Forestry Initiative. Thus, similar to the traditional club literature on optimal club size (Cornes & Sandler, 1986/1996), there are significant opportunities to examine this issue in the context of voluntary clubs.

Firms within an industry benefit asymmetrically from affiliating with a voluntary club brand. Large or more profitable firms might benefit more from the club because they are more vulnerable to the negative reputational externalities generated by others in the industry. Firms in a "privileged group" (Olson, 1965) that disproportionately benefit from a shared reputation (or are disproportionately hurt by its degradation) are likely to take the lead in establishing an industry club. Indeed, this is the story of Responsible Care in the chemical industry (Prakash, 2000) and of the Sustainable Forestry Initiative in the forestry industry (Cashore et al., 2004).²⁰ The optimal club size from firms' perspective might vary across firms, even for firms within the same industry.

Voluntary Club Governance and Credible Commitment

Firms constantly look to improve their standing with stakeholders. One might wonder as to what is the point of joining a voluntary club if firms can act on their own to boost their standing with stakeholders. Indeed, it is not hard to think of companies with well-earned reputations for environmental leadership. Club membership offers several advantages over unilateral action for enhancing firms' environmental reputations among stakeholders. Unilateral commitments to desirable environmental action may be less credible because they are less institutionalized. When individual firms make their own rules, they can easily change them as well. Of course, a firm may devise some measure to credibly commit to a rule system and not opportunistically change them—as the "credible commitment" literature suggests (North & Weingast, 1989).

As institutionalized systems, voluntary clubs enjoy a degree of legitimacy that a firm alone may find difficult to acquire. By joining voluntary clubs whose rules they cannot change in the short run, firms signal their willingness to incur private costs to

create positive environmental externalities. However, to capitalize on this legitimacy, clubs themselves must solve two credible commitment problems, one toward firms' stakeholders and a second toward its own members. Failure to solve these problems can undermine the club's standing among firms and stakeholders.

The credible commitment problem toward firms' stakeholders is that after gaining a reputation for strong environmental standards, program sponsors may then surreptitiously dilute the standards—capitalizing on reputations' sticky nature (Schultz, Mouritsen, & Gabrielsen, 2001; Weigelt & Camerer, 1988). Anticipating this possibility, stakeholders may withhold the benefits from members until they are confident that sponsors are committed to maintaining the stringency of club standards. Voluntary clubs established by industry associations may be especially vulnerable to such credible commitment problems.

The credible commitment problem toward potential participants is that the voluntary club may tighten its standards after firms have joined, opportunistically exploiting the fact that exiting the program might be costly for firms. Club membership might require investments in infrastructure, technology or competency assets that are specific to the program and are difficult to apply to alternative uses (Williamson, 1985). Firms may be reluctant to join a club that requires asset-specific investments that would leave them vulnerable to opportunistic exploitation by sponsors. Retribution costs may also impede firms' ability to leave a program, as stakeholders are likely to punish firms for exiting the club. Because the exit option is costly, voluntary clubs, particularly those sponsored by nongovernmental organizations (NGOs), need to signal to potential members that they will not opportunistically tighten the program standards.

We can identify three institutional features voluntary clubs can adopt to counter credible commitment problems. First, voluntary clubs grant external stakeholders—including participating firms and NGOs—political authority in any future changes of its rules, such as the procedures such as the notice and comment provisions of the United States under the Administrative Procedures Act.²¹ Voluntary clubs can therefore stipulate "rules for making rules" or "collective choice rules" as Ostrom (1990) terms them, in ways that assure stakeholders that club requirements will not be diluted or changed surreptitiously. The industry-sponsored Sustainable Forestry Initiative is an interesting example of a voluntary club that has designed collective choice rules to mitigate its credible commitment problem. The club sponsors have sought to tie their own hands by creating an External Review Board comprising of "18 independent experts representing conservation, environmental, professional, academic, and public organizations. . . . The volunteer Panel provides external oversight with their independent review of the current SFI program while seeking steady improvements in sustainable forestry practices."²²

The second credible commitment mechanism is stipulating super-majority voting rules for changing club standards. Consider the case of the International Organization for Standardization, which requires that new standards it develops as well as changes in existing standards need to be approved by two-thirds of the members that have participated in the standards-development process, and by three-fourths of all voting members of the club.²³ Thus, super-majority voting rules mean

that the standards cannot be changed easily. In any case, the transparency of ISO's standard development process allows outside observers to keep abreast of the technical committees' deliberations.

A third institutional feature for addressing the credible commitment problem is to submit the voluntary club to an external certification standard of how the program is managed. Indeed, we can see the beginnings of an interesting example of a supra voluntary club for certifying the quality of other voluntary clubs. The International Social and Environmental Accreditation and Labeling (ISEAL) Alliance is an international NGO made up of international standards-setting organizations.²⁴ ISEAL's Code of Good Practice for Social and Environmental Standard Setting, which was launched in 2004, is a set of program standards to guide the development, implementation, and oversight of voluntary social and environmental clubs. The code's standards specify processes for developing a program's standards, such as extensive stakeholder participation, and procedures for handling disputes. The code's monitoring and enforcement mechanisms are being refined: there is currently a peer-review procedure in place and ISEAL is in the process of developing tools and processes to assess compliance. The goal is to help sponsors develop their clubs by providing best practices benchmarks and to provide governments, NGOs, citizens, and other stakeholders a way to evaluate the quality of different voluntary clubs.

Reputational Commons or Reputations Held in Common?

Voluntary clubs are sometimes tailored for firms in a single industry, such as the chemical industry's Responsible Care program or the forestry industry's Sustainable Forestry Initiative, and at other times for firms across industries, such as ISO 14001 and the Performance Track. Industry club raises important theoretical issues about the nature of the branding benefits. It is clear that an industry can acquire a reputation of its own. The tobacco industry, for example, has a reputation for misleading advertising, stifling research about the health consequences of smoking, and so on, even if individual tobacco companies engage in such skullduggery to varying degrees and perhaps some not at all. Yet an industry's reputation reflects on its individual firms in that people make inferences about a firm based on the reputation of the industry in which it operates.²⁵ It is therefore fair to say that firms operating in a given industry share a common reputation, or to put it differently, the industry reputation is held in common by firms. We conduct a theoretical analysis of industry reputations and the nature of the policy problem underlying them in the succeeding discussions.

Some scholars characterize industry reputations and industry clubs as "reputational commons" and relate their production and appropriation to the broader literature on common-pool resources (Barnett & King, 2006). We believe that a more appropriate characterization would be to say that industry reputations are "held in common" by members of the industry. As we show later, a *reputation held in common* by firms operating together in an industry (or as part of the same cross-industry voluntary program) is not equivalent to a *reputational commons* in a common-pool resource sense (Dolsak & Ostrom, 2003; Ostrom, 1990). The distinction between the

two is not about semantics because the collective action dilemmas—and the institutional means to solving them—are quite different for each.

The reputational commons concept can indeed be confusing, so we begin with some conceptual clarifications. The phrase “commons” has a specific connotation in political economy and public policy. Where a club good is non-rival and excludable, a common-pool resource (often simply called a “common”) is rival and non-excludable.

To illustrate the difference between a good held in common and a common-pool resource, it is useful to return to Hardin’s (1968) pasture, a celebrated example of a common-pool resource. For Hardin, the tragedy of the commons arises because one herdsman cannot exclude others from increasing the flock size, dictated by the non-excludability dimension in the Ostrom (1990) framework. Because the pasture can support only up to a certain number of sheep (rivalry dimension), adding additional sheep decreases the availability of the good for other herdsman, leaving each herdsman with the incentives to increase the size of their own herd because he or she expects others to do so in short order. The herdsman wants to be the first-mover—the first to put more sheep on the common—lest he or she loses out on gains from the commons. The herdsman realizes that by adding a sheep to his herd, he or she enjoys the benefit of raising an extra sheep but bears only a small portion of the incremental cost associated with degrading the pasture. Thus, it is rational for the herdsman to add sheep to his herd without limit. As all herdsman seek to appropriate the resource before others do, the commons are degraded. Note that the rivalry dimension is accentuated by the non-excludability dimension because the first-mover advantage associated with overconsumption compels participants to move quickly.

Hardin’s pastures are open-access resources: Anybody can appropriate them and to any extent they want. To avert the commons tragedy, the access to the resource needs to be limited only to a given group of herdsman. That is, rules are required to create excludability. Addressing the rivalry dimension also reduces the commons tragedy. If rules limit herd size, then every herdsman will be prohibited from increasing the herd size indefinitely and will also have the assurance that others face the same constraint. With the diminished possibility of facing a “sucker’s payoff,” the herdsman is less likely to overconsume the pasture. In sum, the solution to the commons problem is to establish property rights that limit the size of the group allowed to appropriate the commons (excludability) *and* the amount each group member is allowed to appropriate (rivalry).

Applying the herding analogy to industry reputations suggests focusing on whether a given industry’s reputation is rivalrous (as in common-pool resources) or not (as in club goods). We suggest that an industry’s (or voluntary club’s) reputation is a non-rivalrous good held in common by firms of the industry (or club). A firm “consumes” a positive (or negative) industry reputation by enjoying goodwill (or suffering ill will) from stakeholders that see the industry—and consequently the firm—in a positive (or negative) light. While a firm has “consumed” the reputation in this way, this reputation is still available for other firms to “consume”: They too can receive goodwill (or ill will) from stakeholders as a consequence of the industry’s

reputation. If the reputation were rivalrous, once the first firm had “consumed” the reputation, it would no longer be available for the second firm to consume, and firms would consequently race to lower their own environmental standards to exploit the limited and dwindling stock of industry reputation—a dynamic similar to Hardin’s herdsmen racing to add sheep to their herd before the pasture is completely overgrazed by sheep of other herdsmen. Since the industry reputation is non-rivalrous, it is not a common-pool resource.

Actions of one firm in an industry have positive or negative consequences for the other industry firms, which is what we mean when we say that the industry reputation is “held in common” by firms. Environmental mishaps by one firm impose negative reputational externalities on other firms in the industry, thereby diminishing the industry’s reputation. Firms in an industry realize that they all sink or swim together: one firm cannot externalize the costs of the diminished industry reputation onto others. While Hardin’s herdsman bears only $1/n$ th of the incremental cost of his commons consumption, firms all bear the full brunt of the declining industry reputation simply because all firms get tarred by the same negative brush.

The upshot of this discussion is that industry reputations are a shared, non-rivalrous resource. Actions that enhance an industry’s reputation, such as by creating an industry-level club, create non-rivalrous benefits for all and actions that diminish an industry’s reputations impose non-rivalrous costs for all. The implication for institutional design is that clubs rules should focus on the excludability dimension so that the reputational gains of taking beyond-compliance environmental actions are appropriated only by members of the club. Because free-rider incentives are strong—firms in an industry cannot be excluded from enjoying the benefits of a positive industry reputation—industry clubs need to ensure that all firms in the industry join the club. This explains why industry associations such as the American Chemistry Council and the American Forest and Paper Association *require* their members to join their own voluntary clubs.

In contrast, solving the commons problems requires not only an exclusion mechanism, but also a partitioning mechanism for solving the rivalry problem. A partitioning mechanism would enable the division of the reputation among industry members. In the herdsman example, an exclusion mechanism would limit the number of herdsmen allowed to use the pasture while a partitioning mechanism would limit the number of sheep any herdsman can place into the common pasture. The partitioning mechanism would counter herdsmen’s incentives to move first and quickly consume the commons before other herdsmen did the same. We do not think any industry-level club has mechanisms to partition its shared reputation among its members, most likely because the industry reputation is a non-rivalrous good that is quite difficult to partition.

Conclusion

Several policy implications follow from our club perspective and from our typology. Voluntary clubs offer no magic bullet to respond to environmental challenges. Policymakers need to assess the situations under which such programs can

usefully supplement public regulation. Further, there is no single blueprint for a voluntary club. One needs to carefully assess the population characteristics as well as the institutional context in which the club functions to decide about appropriate stringency of club standards as well as monitoring and enforcement rules.

Designing voluntary clubs requires balancing competing imperatives. On the one hand, to enhance the club's credibility with external stakeholders, sponsors may prefer stringent standards. On the other hand, such standards may lead to low membership—and smaller network effects and scale economies in building the voluntary club brand—as few firms are able to meet demanding membership requirements. Further, with a roster of firms with established superior environmental credentials, club membership might not increase environmental externalities simply because the firms already are at the top of the performance continuum. From a policy perspective, while such clubs might serve as a useful signaling tool and help stakeholders to differentiate the leaders from the laggards, the overall welfare gains associated with pollution reduction may be marginal. Thus, voluntary club sponsors might instead pitch club standards at a level appropriate for potential participants and acceptable to key stakeholders. Higher levels of heterogeneity in the pool of potential participants and among stakeholders are therefore likely to be associated with higher variations in standards adopted by voluntary clubs operating in the same policy context.

This special issue of *Policy Studies Journal* on Voluntary Environmental Programs is being published at an opportune time. While much has been written about voluntary clubs, it is time now to take stock of this research and carefully identify concepts that would transform this multi-disciplinary research into a theoretically grounded and coherent research program. We hope our article makes a contribution toward this end.

Our key contribution is to provide a deductive framework for analyzing voluntary environmental programs and tying together the findings generated by the strong first-generation studies. Our framework should help future scholars by identifying voluntary environmental programs' important institutional design features and the collective action problems programs must solve to be effective. Future research can draw on this article as a unifying framework to study how the interplay among varying sponsors' attributes, stakeholder and institutional contexts, and firm characteristics influence programs' efficacy. The second-generation research, we hope, will consider not only specific programs but systematically compare various programs, and hopefully compare voluntary clubs with other policy instruments.

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Notes

We thank the anonymous reviewers, Jorge Rivera, and Peter de Leon for comments on the previous draft. Aseem Prakash acknowledges financial support from the Marc Lindenberg Center for Humanitarian Action, International Development, and Global Citizenship, University of Washington, Seattle.

1. There is a parallel literature that focuses on recruitment to voluntary programs: who joins and why (Arora & Cason, 1996; Delmas & Montes-Sancho, 2007). Because the attributes of the participants are likely to influence program efficacy, recruitment and efficacy issues are linked. Given endogeneity issues, scholars studying program efficacy have sought to adopt a Heckman approach wherein the recruitment issue is dealt with in the selection equation.
2. We owe this point to Tim Büthe.
3. We owe this point to David Baron and Mary Kay Gugerty.
4. This could also be viewed as the “social license” to operate (Gunningham, Kagan, & Thornton, 2003).
5. As Alberini and Segerson (2002, p. 17) note: “[U]nder a voluntary approach, a polluter will not participate unless his payoff (broadly defined) is at least as high as it would be without participation.”
6. We recognize that there is a well-established literature examining how factors such as enforcement frequency, sanctioning, actor preferences, sociological factors, and procedural fairness influence regulatees’ propensities to obey laws (Hoffman, 1997; Winter & May, 2001). Space considerations do not allow us to elaborate on these issues.
7. *The Economist* (2007) labels only 28 out of 167 countries as full democracies.
8. Of the 177 countries examined in the 2007 Foreign Policy Failed State Index, 32 are listed as failed (Alert category) and another 97 in the danger of failing (Warning category). http://www.fundforpeace.org/web/index.php?option=com_content&task=view&id=99&Itemid=140; accessed 08/08/2007.
9. It is analytically important to differentiate benefits that have characteristics of private goods (rival and excludable) from ones that have characteristics of club goods (non-rival excludable). There is a tendency to subsume club benefits under private benefits (see, e.g. Delmas & Keller, 2005).
10. Porter and van der Linde (1995) assume that firms systematically fail to uncover opportunities to reduce costs and well-designed governmental regulations can help firms identify such opportunities. While this might have been true in the 1970s and the 1980s, we are not aware of evidence that suggests that such opportunities continue in the twenty-first century. There is a further danger: an excessive reliance on rosy win-win scenarios distracts the attention from the trade-offs environmental issues entail, and therefore the politics they engender. While firms should certainly be encouraged to identify inefficient pollution, public policy should not put excessive faith in such measures.
11. Regarding the importance of the institutional context for branding benefits, our research on the cross-country ISO 14001 diffusion suggests that ISO 14001 adoption levels in importing countries influence ISO 14001 adoption levels in exporting countries (Prakash & Potoski, 2006b). Further, the commitment to ISO 14001 in the home countries of multinational corporations influences ISO 14001 uptake in the host countries of their subsidiaries (Prakash & Potoski, 2007).
12. In his Nobel Prize acceptance speech, Coase (1991) points to the tendency of his critics to benchmark imperfect markets against perfect governments. He calls for recognizing that all institutions fail and for undertaking comparative analysis of how various imperfect institutions fare in the context of a given objective. This important caution needs to be exercised by detractors (who tend to focus on club failures and ignore governmental failures) and supporters (who tend to focus on government failures and overlook club failures) of voluntary clubs.
13. If stakeholders are unable to distinguish between effective voluntary clubs and greenwashes, they may treat all programs as failures and fail to reward any firm for its program participation. Such problems could lead to a “lemons market” (Akerlof, 1970) for voluntary environmental programs in which weak programs drive effective ones out of the market. What is important for clubs—and perhaps even central—is that they build and communicate a brand identity that stakeholders understand and find credible.
14. Arguably, shirking might be inadvertent. While there might be goal convergence between participants and club sponsors, the participants may not correctly understand club requirements or possess means

- to adhere to them. While this is theoretically possible, we have not found examples in the context of management standards where club requirements are seldom in the form of complex, technical terms that some participants might not comprehend. Club requirements are often quite simple and straightforward. Hence, we expect that much of the shirking is likely to be willful.
15. While it is theoretically simple to talk about club standards, some stakeholders might find it difficult to evaluate the extent to which specific standards generate positive environmental externalities. Sophisticated stakeholders, such as well-funded environmental groups or government regulators, may be able to interpret a club's brand signals. Less sophisticated stakeholders such as ordinary consumers may need some assistance in translating the brand signal into useful information for guiding their purchases. They may take cues from established actors such as NGOs that are known for their technical expertise. Some may seek other types of information shortcuts, such as the attributes of the sponsor, to evaluate a club's brand signal.
 16. This can also be modeled as agency conflict where club participants are agents working on behalf of club sponsors to produce positive environmental externalities.
 17. See Rees (1997) work on communitarian regulations in this regard.
 18. Monitoring can have four variants: first party (internal auditing), second party (conducted by firms in the same industry as in Responsible Care prior to 2002), third party (conducted by accredited auditors but paid for by the audited party), and fourth party (conducted by accredited auditors that have no financial relationship with the audited party). First- and second-party auditing are not considered credible. To keep our framework simple, we do not discuss them. Fourth-party auditing is very rare and therefore less interesting to examine from a policy perspective. By and large, third-party auditing is the gold standard in voluntary programs.
 19. Kotchen and van't Veld (in press) is a notable exceptions.
 20. However, there are situations where industry clubs are established not by firms but by nongovernmental organizations that wish to regulate firms' environmental policies. In the forestry industry, nongovernmental organizations established the Forest Stewardship Council and began lobbying forestry firms to join it. Forestry firms were not comfortable with this club simply because they did not want an adversarial actor to decide the stringency of club standards (Sasser, Prakash, Cashore, & Auld, 2006). Thus, key forestry firms sought to and succeeded in establishing an industry-sponsored club, the Sustainable Forestry Initiative.
 21. Environmental groups might believe that government-sponsored clubs are more credible in relation to industry-sponsored clubs. This might be because they typically have greater access to influence program design and are therefore less prone to industry capture (Ayres & Braithwaite, 1992).
 22. <http://www.sfiprogram.org/erp.cfm>; accessed 08/21/2007
 23. <http://www.iso.org/iso/en/stdsdevelopment/whowhenhow/how.html>; accessed 08/21/2007
 24. <http://www.isealalliance.org/>; accessed 08/21/2007.
 25. In addition to industry reputation, firms have reputations and so do their products. Toyota Camry's aggregate reputation is a function of Camry's reputation, Toyota's reputation, and the Japanese automobile industry's reputation. Which reputation type will dominate in specific contexts and why is a question worthy of further research.

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