

**MODELING RACES TO THE BOTTOM**

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Jagdish Bhagwati and Robert E. Hudec, editors. *Fair Trade and Harmonization: Prerequisites for Free Trade? Volume I: Economic Analysis; Volume II: Legal Analysis*. Cambridge: MIT Press, 1996.

David Vogel. *Trading Up: Consumer and Environmental Regulation in a Global Economy*. Cambridge: Harvard University Press, 1995.

Steven K. Vogel. *Freer Markets, More Rules: Regulatory Reform in Advanced Industrial Countries*. Ithaca: Cornell University Press, 1996.

The advance of global and regional economic integration, although far from complete, has produced new sources of international economic conflict and a new agenda for international economic institutions. Policy regimes that were formerly guarded as domestic have, through a political dynamic, become subject to intensified international scrutiny. On the one hand, regulations and practices that had been viewed as innocuous are now portrayed as barriers to market access. The labels of disguised protectionism or non-tariff barrier have been applied to a longer and longer list of policies, subject to harmonization through international negotiation and unilateral national action.

On the other hand, supporters and beneficiaries of the wide array of protective regulatory regimes that have grown up in the past two decades--labor, environmental, and consumer protection in particular--have voiced

their alarm at and opposition to the advance of economic forces that could undermine these regimes. At the center of their anxieties is harmonization of a different kind: the erosion of these painfully constructed regulatory regimes under the pressures of international economic competition and capital mobility. These fears, usually labeled a race to the bottom, have become significant drivers of the debate over international economic policy and the appropriate scope of international rules.

Apart from the growth of global economic integration, two trends have made these anxieties sharper over the past two decades. Deregulation may characterize some spheres of economic policy in the industrialized countries, but regulations designed to protect the environment, consumers, and (less consistently) labor have only grown. At the same time, those entrenched regulatory acquis have become targets of growing criticism by business and conservatives in domestic politics. As the rich countries have regulated, developing economies have opened to foreign trade and investment, on a scale not seen since 1914. For international capital (and multinational corporations) a credible exit option to economies with sharply different (and usually less stringent) levels of regulation has opened. Regulatory competition seemed less of a threat when the major trading and investment partners of the OECD were other industrialized countries with similar patterns of regulation; much of the rest of the world was relatively closed to foreign investment and hostile to trade promotion. The sea change

since 1980 has been a widening of the international regulatory gap between economies that have become far more open to trade and investment.

Debate in the United States before approval of the North American Free Trade Agreement (NAFTA) was pervaded by the image of footloose capital--Ross Perot's "giant sucking sound"--and unfair competition from an under-regulated Mexican economy. Future negotiations for a Free Trade Agreement of the Americas are stalled in the U.S. Congress because of a deadlock on the implications of trade with developing countries. Democrats, by and large, refuse to grant fast-track negotiating authority to the President in the absence of labor and environmental side agreements; Republicans prefer to keep such issues out of trade legislation. Perceptions of a regulatory race to the bottom will continue to shape political conflict over the consequences of international economic integration or globalization.

Apart from its role in shaping responses to globalization, the image of a race to the bottom (RTB) is also central to two important theoretical debates, one primarily international, the other bridging international and domestic politics. For those who argue that globalization will produce policy convergence among national governments, regulatory arbitrage on the part of economic actors is one of the central engines. In this view, economic openness in the form of growing cross-border trade and capital flows forces the adoption of common policies that are also less interventionist. Governments that do not participate in the race to the bottom risk isolation on a high-cost mountaintop, eroding the competitiveness of their economies.

Critics of this reading of globalization contest the evidence for policy convergence and argue that regulatory competition may even produce a race to the top: greater regulatory stringency rather than less.<sup>1</sup>

A broader debate links international and domestic politics through the consequences of jurisdictional competition and political devolution. As Swire points out, the race to the bottom is a poor label for regulatory or jurisdictional competition, since it collapses a positive (less stringent) with a normative (less desirable) evaluation.<sup>2</sup> For many students of federal systems, jurisdictional competition and the regulatory change that it produces increase economic welfare: the race to the bottom is in fact a race away from the heights of over-regulation. For others, however, the competition among states or localities within national economies replicates the same destructive beggar-thy-neighbor pattern that can occur at the international level. The outcome is a level of regulation that is not desired by any of the competitors. The ongoing debate between these two views of jurisdictional competition influences a range of policies that extend beyond regulation to distributional and legal regimes. The tensions between them are also displayed in the evolution of regional institutions: the Treaty of European Union (TEU) signed at Maastricht reflected both the embrace of greater policy harmonization at the level of the EU and an endorsement of the principle of subsidiarity, which committed the EU to a preference for national and local policy choice (and presumably to some level of jurisdictional competition).<sup>3</sup>

Although the political power of the race to the bottom imagery is clear, little else about these debates is. Modeling of jurisdictional competition and the race to the bottom has often been imprecise. Contenders have often preferred to make the most expansive claims for one model over another rather than specifying the conditions under which one outcome might occur rather than another. Evidence advanced for the existence of RTBs or other regulatory outcomes has been thin. Because competing positions have been painted in terms of stark choices rather than contingent outcomes, the policy options suggested have often been unrealistic or undesirable.

In few areas has the gap between scholarship, impressive in both quantity and quality, and policy debates been so large. This exercise draws on that large and growing body (or bodies) of scholarship to clear away the underbrush covering a political minefield. First, models of regulatory competition, which encompass the RTB, are evaluated and, most important, their conditions and assumptions are assessed. The evidence for the existence of a singular or plural RTB is assessed. The conditions for regulatory competition producing greater regulatory laxity or stringency (a race to the top, David Vogel's California effect, or NIMBYism) can then be suggested. By the end, the clearing of underbrush may leave little but the political minefield, which presents an entirely different set of dilemmas for those proposing policy options. We are left with a world in which the RTB maintains a broad and powerful political hold, even though its theoretical and empirical foundations are highly restricted.

### **Jurisdictional competition and the race to the bottom**

The debate over the existence of a regulatory race to the bottom among nations can best be framed by models drawn from the rich literature of competition within federal systems. Debates over devolution within federal systems, whether welfare reform, environmental regulation, or corporate charters, use the same terminology as debates about globalization: "pollution havens" and "runaway plants" were first discovered within the economies of federal states. These cases are easier tests for all varieties of jurisdictional competition driven by economic integration, since the economies of these political units are far more integrated than the global economy. Both capital and labor are far more mobile; the political units are also more homogeneous. These characteristics may qualify the findings of these models, but they also provide a sharper test of RTB claims: jurisdictional competition should be fiercer; suboptimal outcomes that might emerge from that competition should be clearer. At the same time, federal or national legislation may constrain the race in ways that may at first be invisible.

Most of these models depend on a logic developed by Charles Tiebout in his model of competition among local jurisdictions in the provision of public goods.<sup>4</sup> In this model, consumers are perfectly mobile among jurisdictions, and they select those localities that offer their preferred bundle of taxes and public goods. As jurisdictions choose the public goods bundles offered to attract citizen-consumers, a competitive equilibrium is

established that provides a Pareto-optimal allocation of resources. Similar models have been deployed to estimate the effects of capital mobility on levels of environmental regulation, a regulatory choice that is pitted against higher wages and/or lower tax revenues in a set of competitive jurisdictions.<sup>5</sup> If certain assumptions in these models are met, jurisdictional competition is efficient and socially optimal: localities do not systematically lower their environmental standards in order to increase taxes or wage income. One key assumption is that these jurisdictions are large enough to eliminate environmental externalities. Regulatory competition does not result in a race to the bottom in these competitive situations; environmental policy should therefore be set at the local level, as it is here, reflecting a mix of policies that match the preferences of a local electorate.

The other key assumptions built into these models (and that of Tiebout) are broadly political; if those conditions are not met, then environmental protection will not be set at Pareto-optimal levels. These models rely on government behavior that is purely reflective of the preferences of their homogenous populations. One critic of Tiebout noted that he was not very clear on the motivations of local governments: democratic governments might seek to maximize the welfare of their citizens; entrepreneurial governments could pursue objectives independent of the general welfare.<sup>6</sup> In similar fashion, environmental policies would be sacrificed in the model of Oates and Schwab if governments are assumed to maximize tax revenue rather than representing the median voter. If capital is

taxed at a rate above zero--and there are political circumstances in which one can imagine such an outcome--regulatory protection of the environment will be sacrificed as governments act to lure capital through other means. A further adjustment that adds realism to the model--heterogeneous populations--may also undermine optimal levels of environmental protection.<sup>7</sup> Baumol and Oates pose two coalitions--one of wage earners and one of non-wage earners: if the preferences of either are reflected in policy trade-offs the outcome will not longer be Pareto optimal.<sup>8</sup> Governments that are not democratic or have been captured by particular and partial interests, in sum, will not create efficient policy outcomes when they set environmental policy in competition with other policies that expand wages or consumption. Governments may be biased toward capital subsidies at the expense of environmental protection. Viewed internationally, these revised assumptions characterize a large number of governments; the original assumptions may appear overly restrictive.

These models of regulatory competition do not portray a race to the bottom in either the positive or normative sense even when their political assumptions are revised. Under the assumptions noted, no overall lowering of regulatory standards is observed; rather, a simple sorting process takes place that matches consumers or firms with localities that offer the desired mix of public goods or tax and regulatory policies. In addition, governments are not acting strategically in this perfectly competitive policy market. If environmental policy is adjusted in the interests of attracting capital the

government is simply adjusting its policy mix to a parameter that its behavior cannot change. To introduce a race to the bottom--a regulatory competition that leaves jurisdictions worse off than they would have been if they had set policies cooperatively-- a government must be divorced from the preferences of its own electorate, and it must act with the policy choices of other governments in view. Achieving its desired outcome is dependent on the policy choices of other localities. Governments do not face only or even primarily *inward* toward their own electorates, but *outward* toward other governments and their policy choices.

Although the models of jurisdictional regulatory competition outlined thus far do not include a strategic element, introducing one is not difficult. A model of regulatory competition in the simple form of a prisoner's dilemma can be constructed; with the appropriate payoffs, the competing nations (or states or localities) will end with a non-Pareto optimal equilibrium that could be improved if they cooperate in choosing a higher level of regulation.<sup>9</sup> The model is familiar from other areas of international economic policy, particularly beggar-thy-neighbor trade policies and competitive devaluations. Of course, whether or not a prisoner's dilemma exists and whether it results in a race "to the bottom" or some cooperative outcome then become central questions. With different payoffs, one could observe a "race to the top" (a competition for greater stringency).

Modeling this variant of the race to the bottom is dependent on two sets of assumptions, one regarding firm behavior and a second regarding the

behavior of governments. Capital (or firms) must be mobile and sensitive to variation in regulatory conditions across jurisdictions. (This assumption also underlies the models of efficient sorting and regulatory competition described earlier.) In achieving their aims, governments seek to attract mobile economic actors or factors (typically firms or capital) and respond to the regulatory choices of other governments. Determining the significance of the latter constituent of government behavior is difficult, as many studies of war have demonstrated: did a conflict begin because of the exogenous preferences of a particular state or states or because of the competitive structure of the state system? The competition between the benign image of sorting according to policy preferences and the destructive competition of a race to the bottom hinges in part on the same empirical evaluation.

Although the model outlined provides the dominant image of the RTB, regulatory competition may operate through trade as well as capital mobility and through society as well as directly on governments. In the case of trade, import competition is interpreted by import-competing firms (and their workers) as the result of regulatory laxity in the exporting economy. International competition is employed as an argument for parallel deregulation at home, for harmonization toward equivalent stringency abroad, or for trade protection against social or environmental "dumping". Such pressures for deregulation are not dependent on capital mobility or the threat of exit by firms. Another route to a regulatory race that may produce suboptimal outcomes depends on the asymmetries in mobility between

capital and labor under current conditions of economic integration. That asymmetry is reflected in altered bargaining power between capital and labor, producing changes in negotiation outcomes between the two. This alteration in negotiation and ultimately political power can also be reflected in the political process in other areas of regulation, such as consumer protection or labor rights. In this case, capital mobility remains central, as in the core model of the RTB, but the effect on government is through the domestic political process rather than directly through governments responses to firms or the policy choices of other governments.

Although these alternatives are important supplements to the model based on capital mobility and intergovernmental competition, they do not call into question so explicitly the possibility that international (or interjurisdictional) outcomes would not reflect the underlying political preferences of their populations. Both, therefore could be argued as falling within more benign competitive models that alter regulatory policies in line preferences over enhanced regulation and higher rates of economic growth. In the case of the core RTB model, however, such a misalignment is clear. However, the conditions under which the firm and governmental behavioral assumptions are likely to hold--firm mobility and sensitivity, governmental sensitivity and competition--remain to be established.

In assessing firm contributions to regulatory competition of either the benign or RTB variety, several variables are likely to be important. First is the contribution of regulatory policies to the production costs of the firm. In

the case of environmental policies, for example, effects may be direct (the level of firm expenditure on complying with regulations) as well as indirect (the higher prices paid in a more regulated environment for factors of production).<sup>10</sup> Offsetting these costs may be certain benefits from regulation, discussed below, such as the competitive benefits of operating in a regulatory regime to which one has adapted. The empirical evidence for the United States suggests, as expected, wide sectoral variation in the costs imposed by regulation of different kinds. Presumably, the threat of firm exit to the economy as a whole increases with policies (such as taxation) that affect a large number of sectors and have a large direct effect on costs.

If increased production costs from regulation provide a push for firms to begin shopping among jurisdictions, transactions costs provide an impediment to firm mobility. A principal target of globalization skeptics has been the claim that firms are uniformly footloose across national boundaries. For these critics, the home territory and, secondarily, the home region, remain overwhelmingly important for most multinational corporations.<sup>11</sup> These home country effects range from business culture to subsidies and bailout guarantees, all serving to tie firms to localities and their governments. Evidence is also strong that cross-border transaction costs rise sharply, a further inhibition to firm mobility. Agglomeration effects, illuminated by the "new economic geography," provide positive advantages to firms within a sector that may offset increased production costs. Although those effects may

be regional in scope they bias firms toward concentration rather than dispersion.

Government sensitivity to firm mobility is central to the RTB model. Even if such mobility can be demonstrated, however, it is not clear that the political market in many jurisdictions will reward silent mobility. As Rose-Ackerman points out, Tiebout models have alerted students of local politics to the influence with which mobility endows otherwise "inactive" or unorganized sectors. Nevertheless, politics often concentrates on voice and organization: immobile sectors threatened with political exploitation and few exit options are often highly organized and vocal in their dealings with government (retailers and bankers at the local level, for example).<sup>12</sup> The advantages of mobility in this turbulent political marketplace may be overvalued.

If mobility does not insure governmental sensitivity to the policy preferences of capital, the conditions under which governments behave strategically (and in a self-defeating fashion) toward other governments and their regulatory choices are even more difficult to estimate. Anecdotal evidence within national boundaries indicates that state and local governments actively compete to attract capital through tax breaks and other subsidies; internationally, the establishment of export-processing zones and other special regulatory regimes for foreign investment suggest competition among national governments as well. This competition is clearly uneven across regulatory and policy domains. In order to demonstrate a RTB

governments must offer concessions to capital that will supply capital in excess of the preferences of their populations (distinguishing such competition from benign differentiation of jurisdictions), and governments must reduce levels of regulatory protection rather than deploying more efficient and direct means of subsidizing capital.

For the proponents of a RTB, such as Esty (1996) and Swire (1996) the key explanations for government behavior that produces such a competition are information and political market failures, most often capture of the government by a coherent and organized interest group. In the case of environmental regulation, governments, it is argued, find it difficult to make quantitative welfare comparisons (trading off environmental protection whose benefit lie in the future against the short-term gains from attracting investment) or estimate what level of environmental protection maximizes social welfare. Swire points to "intractable difficulties in measuring people's preferences in such an abstract and complicated point."<sup>13</sup> Stewart argues that uncertainty about the values of one's competitors and their endogenous choice of standards makes pre-emptive competition more likely.<sup>14</sup> He ignores, however, the fact that many regulatory policies are deeply entrenched and difficult to change: policymakers are more often bound tightly in the short term rather than awarded wide discretion.

More important than the informational deficiencies of governments, however, is the assumption that electorates do not control policymakers effectively. As described earlier, models of beneficial regulatory

competition were undermined by political deviations from democratic governments with homogeneous populations. In the RTB model, policy choices reflect disproportionately the preferences those who wish to attract capital in the interests of economic growth, but the menu of options is constrained by popular antipathy to direct capital subsidies. (Such a political constraint is the likeliest explanation for using environmental regulation or a reduction in labor standards rather than direct capital subsidies.) Size of political unit is unlikely to have a clear and systematic effect: policy in smaller jurisdictions is more likely to be accountable to constituent preferences; it may also be more subject to capture by particularistic interests. Overall, however, beyond these broad generalizations, little theoretical or empirical attention has been paid to the political prerequisites of a RTB. Rodriguez (1996) has suggested one hypothesis on those conditions: localities with a more independent judiciary are less likely to decide regulatory issues in a way that responds to interstate competition. (This hypothesis contains assumptions about the incentives of the judiciary and its role in regulation.) Similar hypotheses about political variables that would bias states toward sub-optimal regulatory competition--beyond capture, lack of democracy, and heterogeneous populations--would strengthen predictions of when and in what policy domains RTB-style competition is most likely.

### **Empirical evidence of races to the bottom**

As Bhagawati and Hudec note, without evidence of both firm mobility in response to regulatory differences and governmental competition in regulatory laxity, the race to the bottom "could be a theoretical curiosity."<sup>15</sup> Environmental regulation has received most of the attention from those assessing the evidence of RTB; as representative of other forms of regulation that have grown in recent decades, these findings provide some indication of RTB across a wider range of policies. A second body of evidence relies on policy convergence, which may be attributable to sources other than an RTB. Nevertheless, if policy convergence is absent, the case for a RTB is undermined. Finally, reverse competitive dynamics are of central importance in testing the prevalence of races to the bottom. Races to the top or NIMBYism (an undesirable competition in more stringent regulation) shed light, not only on the models underlying RTB, but also on their frequency. Each of these bodies of empirical evidence cast doubt on the RTB as an important cause of regulatory laxity in a setting of multiple political jurisdictions.

### ***Footloose firms and competitive governments***

In testing for the regulatory sensitivity of firms in making decisions on investment location, environmental policy has received by far the greatest attention. Its rapid growth since 1970 provides an easy benchmark for the growth in regulatory costs. Rafts of studies have examined both interstate (within the United States) and international effects of environmental regulation.<sup>16</sup> The empirical evidence is decisive: "the literature as a whole

presents fairly compelling evidence across a broad range of industries, time periods, and econometric specifications, that regulations do not matter to site choice."<sup>17</sup> Studies of foreign direct investment and investment location within the United States indicate that, although labor costs (unionization in the U.S.) are significant in both cases, taxes were significant only in domestic decisions. Neither internationally nor domestically did there seem to be a significant effect of environmental regulation.<sup>18</sup> At best several heavily polluting sectors demonstrate signs of relocation in response to U. S. environmental regulation. The evidence in other spheres of regulation is somewhat more ambiguous. Low labor standards do not appear to attract multinational investment; however, they do correlate with comparative advantage in labor-intensive goods. Rodrik hypothesizes that regulatory laxity in this case results in subcontracting and outsourcing rather than firm relocation.<sup>19</sup>

Many of these studies are plagued with shortcomings in measurement and data: measuring costs of compliance is very difficult, since many observers argue that the principal burdens of environmental regulation in the United States derive from the "exceptionally complex, burdensome and costly character of its regulatory and legal system."<sup>20</sup> Levinson notes that studies of investment location can seldom rely on data at the level of individual establishments; most suffer from uncertainty over relative environmental compliance costs and reliance on aggregate data.<sup>21</sup>

Nevertheless, in environmental policy the evidence of a crawl to the bottom, much less a race, is absent.

To explain this apparent lack of firm mobility in response to regulatory disparities, one prerequisite for the RTB, one can return to the original model and the issues of production costs (pushing firms to relocate) and transactions costs (restraining their mobility). Costs of compliance with environmental regulation may simply be too small a share of total cost of production in most sectors. Since most investment continues to flow among the industrialized countries, the degree of feasible regulatory arbitrage may be small as well. In addition, pollution-intensive industries in the OECD may be more immobile for other reasons, offsetting the cost advantages of a different regulatory setting. Another explanation, which points in the direction of exporting stringency rather than racing toward laxity, is based on the transaction costs of dealing with multiple standards: given the importance of industrialized country markets, MNCs may choose to reduce such costs by operating globally with the most stringent standards. In addition, they may calculate that even developing countries will in time adopt tougher environmental standards and it is less costly to stay in advance of that trend.<sup>22</sup> None of these explanations explain the striking divergence between RTB rhetoric and this reality. Levinson suggests collusion between politicians and polluters to obtain regulatory breaks through trumpeting threats of exit, an explanation to which we shall return.<sup>23</sup>

***Regulatory competition and policy convergence***

Empirical investigation of the second RTB assumption-- governments sensitive to firm behavior and to the competitive regulatory moves of other governments--has hardly been studied beyond the level of anecdotes. As Klevorick notes, despite the compelling analogy of a "race," little investigation has occurred of the relevant political market: how countries compete and how effective regulatory laxity is as an instrument of competition.<sup>24</sup> The best indirect evidence of government behavior would be given by policy convergence. Even in regulatory domains where the effect of regulation on firm costs is substantial and transparent, such as taxation and financial regulation (e.g., reserve requirements or interest rate ceilings) and the barriers to mobility are relatively low, a race to the bottom has not occurred. If a RTB had been completed, no tax havens, offshore banking, or Delaware effect would remain; the "bottom" would have been reached. Nevertheless, in these domains, particularly taxation, evidence of jurisdictional competition forcing national policies should be more substantial than in social regulation.<sup>25</sup> Even here the evidence is mixed, however: despite predictions of a move away from capital taxation and a forced harmonization of tax systems, there is little evidence of the first trend in OECD statistics (with the exception of the United States) and "no evidence that the cacophony in tax systems is declining on its own through tax competition or implicit cooperation."<sup>26</sup> Of course, evaluating policy convergence or the RTB in taxation is made easier by the clear quantitative indicators at hand.

In other domains of regulation, evaluation of government behavior and analysis of policy convergence is hampered by disagreement over the dimensions of policy that are at issue and by alternative explanations for convergence that may exclude a RTB or the threat of exit by mobile factors of production. Steven K. Vogel's account of regulatory change in Britain and Japan is framed as an explicit challenge to a view of deregulation as a consequence of competition among regulators in the face of growing capital mobility; what he terms the "market-centered approach" of some globalization devotees inaccurately portrays markets as determining regulatory outcomes rather than stimulating national governments to respond in distinctive ways, heavily influenced by "preexisting ideas and institutions."<sup>27</sup> His claims of "reregulation" accompanying liberalization (greater competition) are difficult to evaluate, however, since measures of change on these dimensions are not provided. Reregulated systems may well be more market-conforming, which would be a significant change; they may also fail, as have the efforts of Japan's Ministry of Finance to maintain its position. Vogel does make the important point, however, that the introduction of more competition (often treated as the core of deregulation) may require government intervention of a different sort. The experience of Asian financial systems in the current economic crisis provides a conclusive example: successful liberalization of the capital account required enhanced banking supervision and regulation.

Vogel's argument has been echoed by other skeptics of inevitable regulatory convergence driven by the RTB.<sup>28</sup> To the degree that convergence has taken place, its source cannot uniformly be assumed as induced by the threat of exit by mobile factors of production, whether skilled and professional workers or footloose firms. Emulation and other mechanisms may also be at work.<sup>29</sup>

***Economic integration and the export of regulatory standards***

The resilience of regulatory regimes and the very mixed evidence of regulatory convergence in the face of economic integration supports a final reason for the absence of a RTB: regulation is not only a cost or burden; firms and governments may regard it as a benefit. This observation, hardly a novelty in the study of regulation, is perhaps the most corrosive of a generalized RTB view. Even in financial regulation, where regulatory arbitrage by financial institutions is readily observed, the world has not adopted the standards of the Cayman Islands. As Herring and Litan point out, regulatory competition is limited by the benefits for financial institutions of a home base that can credibly guarantee the safety and soundness of its financial system. If that guarantee is eroded, costs can mount. In recent years Japanese banks have discovered this in the premiums demanded of them by the interbank market. Regulation also provides the opportunity for valuable rents that can be dispensed by politicians. These benefits of regulations for both regulated and regulator provide at least the possibility for races away

from regulatory laxity and toward the maintenance and extension of regulatory regimes in the face of open borders.

Some arguments in favor of the benefits of regulation are narrowly framed (environmental services firms boom when environmental regulation is stiffened); others are controversial, such as Michael Porter's claims that environmental regulation may enhance national competitiveness by spurring innovation and increasing resources devoted to research. Many economists view these arguments, which contain a "high ratio of speculation and anecdote to systematic evidence," with considerable skepticism.<sup>30</sup>

Other models of a competition that results in more stringent regulation are based on assumptions regarding firm behavior that are familiar from the RTB. David Vogel (1995) posits a California (in contrast to Delaware) effect that exports higher standards of environmental and consumer protection as a result of economic integration. Vogel begins with the simple aggregate finding that is so troubling to advocates of the RTB: social regulation has increased over the past three decades as international economic openness has grown. He does not treat this as a puzzle, but as a possible causal relationship, although not one that holds in every industry or every country.

The model of firm behavior that lies behind the California effect is the mirror image of the RTB. Firms in the OECD economies are reliant on a home base that is large and highly regulated (environmentally and in other domains). The size of the OECD markets and their importance to most MNCs

is at the base of Vogel's argument. That market power has two subsidiary effects: firms seek to minimize transaction costs by exporting the higher standards of their home economy; they seek to maximize their competitive advantage by maintaining regulatory standards at home which they have helped to set and to which they have adapted, standards which disadvantage rival firms from less regulated jurisdictions. Essentially, Vogel argues that the scale of the home country market in firm calculations forces transaction cost considerations to the fore, rather than production cost burdens.

Vogel does not assign an automatic value to the advantages of regulation: some home country stringency may not be desirable. His implicit model suggests conditions under which the export of regulatory standards would weaken or fail. The policy preferences of the largest market are for greater regulatory stringency in this model: since affluence and social regulation (environmental, consumer and labor) are strongly correlated, that dimension of the model is not likely to weaken rapidly. In other areas, such as financial and telecommunications regulation, the deregulatory bias of the United States has produced a very different outcome. In addition, the leverage of these larger countries in relevant international institutions reinforces the market pressures toward a ratcheting upward of standards.

At the level of firm calculations, dependence on the home economy (or economies with similar levels of regulation) must remain for the standards effect to outweigh the costs of home regulation. In addition the contribution of home country regulation to production costs must not

outweigh the transaction cost benefits of operating with similar standards abroad and forcing competitors to meet those standards at home. Taxation probably does not pass this cost/benefit calculation in high-tax countries; financial regulation may, although the ability to engage in regulatory arbitrage through subsidiaries may permit financial institutions to have the best of both worlds. Much social regulation does seem to provide more transaction cost advantages than production cost disadvantages. Although Vogel does not mention it, the political power of constituencies endorsing home country regulatory standards and their export abroad can reinforce the benefits to a firm in hewing to a common standard across diverse national jurisdictions.

These conditions suggest a potentially widespread ratcheting up of regulatory stringency through market power and a process that runs counter to the RTB. Swire (1996) suggests that Vogel's California effect cannot cure all environmental ills, but the export of standards was not meant to deal with environmental standards in economies that are relatively closed, nor would it apply to relatively immobile factors. Vogel's model answers a different set of objections: economic openness and capital mobility can serve regulatory ends as well as undermining them.<sup>31</sup>

### **Imagined races to the bottom and real policy dilemmas**

The central race that will drive the policy conflicts captured in RTB rhetoric is a race between opening in the developing world, an opening that

has given capital in the industrialized world a credible exit option, and growing affluence that will be promoted by such capital flows, affluence that will eventually narrow the current regulatory gap between poor and rich nations. A second reality is a consequence of the enhanced credibility of the exit option that capital can claim, as well as increased trade and immigration: an actual or perceived increase in the elasticity of demand for labor, particularly less-skilled labor.<sup>32</sup> The asymmetry in bargaining power between capital and labor that results creates much of the anxiety over shifting political balances and policy outcomes that have driven the RTB debate. The threat is not so much to particular regulatory policies as to "domestic understandings that led to the adoption of the policy. . ."<sup>33</sup>

Much of the "reality" of the RTB is the incorporation of beliefs about this intuitively appealing image into political conflict. As Rodrik carefully notes in his arguments about labor elasticity, a perceived increase in elasticity may have the same effects as a real increase. Throughout considerations of the RTB, the significance of beliefs and perceptions are paramount. In considering the competition among states to avoid becoming "welfare magnets" after 1970, Paul Peterson describes states "acting as if they were in a competitive race with each other"; Stephen Sugarman terms this race "a fear, perhaps a fantasy."<sup>34</sup> Swire concedes that the "perception of a prisoner's dilemma may well be more important than whether one really exists."<sup>35</sup> And Steven Vogel argues that "market pressures are most constraining when leaders believe them to be all-powerful. . ."<sup>36</sup>

The resilience of these beliefs in a RTB dynamic, when empirical evidence is anecdotal at best and countervailing outcomes are prominent, bears explanation. Levinson's political supposition--that polluting industries and their political spokespersons use RTB rhetoric to win domestic regulatory concessions--does not allow for the attachment that many in the environmental, labor, and consumer protection movements display for the RTB image. A more sophisticated political explanation would posit two mirror-image coalitions. On the one hand, much of U. S. domestically based industry finds the RTB claim a useful lever to undermine burdensome regulatory regimes, as Levinson suggests. At the same time, a part of the environmental, labor, and consumer movements also endorses the dangers of an RTB as a means to extend their international reach through upward harmonization of standards in other countries and thwarting trade liberalization. Against this "RTB" coalition is a weaker grouping of internationally oriented business that downplays the significance of the RTB, in order to maintain valuable government subsidies (such as the Export-Import Bank) and an open trading system; their tacit allies in the environmental movement resist RTB rhetoric for exactly the reason that their business opponents endorse it: the threat of downward pressure on domestic regulatory regimes. The RTB is a useful political instrument for parts of both the pro-regulation and anti-regulation coalitions. Its usefulness ensures that RTB will continue to serve as a driver in debates over responses to economic integration. And that in turn ensures that political resolutions

will be required, however spurious its economic status. As Tanzi noted with regard to tax competition:

Economists have often argued that in a world with mobile capital, labor, particularly unskilled labor, will have to bear a greater tax burden because it is a less mobile factor of production than capital. Although the economics of this conclusion may be right, the politics of it is surely worrisome. It is difficult to conceive of a democratic society in which workers agree to be highly taxed while those who receive capital incomes are, even statutorily, taxed at low rates. The world just does not operate this way. In reality, the real incidence of the capital taxes might fall on labor if the statutory taxes on capital lead to the exodus of capital and thus to a fall in real wages. But this conclusion is not likely to impress politicians and to determine political decisions.<sup>37</sup>

Given the political mobilization that the RTB can create in favor of less desirable policies--whether regulatory harmonization imposed by more powerful states or an assault on domestic regulatory regimes--the RTB can only be dealt with by alternative policies that undercut the political dynamics giving it power, not by demonstrations of its empirical fragility.

The most radical means of dealing with the perceived threat is to end not only the RTB but all policy competition in certain spheres. Rodrik, for example, argues that market exchanges have long been blocked in certain domains, slave and child labor, for example. The GATT/WTO permits import restrictions on products produced by either slave or prison labor, but not child labor. Rodrik approves of trade restrictions to deal with cases of conflict with "*widely held norms at home or . . . domestic social arrangements that enjoy broad support.*"<sup>38</sup> Bhagwati and Srinivasan endorse a more demanding test in cases of restricting market access to goods for ethical reasons: if not sanctioned by the WTO, the restrictions should be "paid for"

with other trade concessions to injured partners.<sup>39</sup> Efforts to block competition in arenas where market intrusion is regarded as unethical would immediately produce conflict, given the absence of widely shared norms at the global level. Even among Western academics, the distinction between immoral (in which competition should be banned) and merely undesirable is hardly agreed: while some would add child labor and other violations of labor rights to the immoral category, others would restrict that category to slave labor only.<sup>40</sup>

A less drastic solution in its consequences for international exchange but one that would also effectively end regulatory competition is harmonization. Harmonization in the form of legislated common standards has played an important role in the policy integration of the European Union. Regulatory harmonization in the Social Charter, however, was not driven primarily by fears of a RTB or of social dumping, a mark perhaps higher degree of existing convergence among regulatory systems in Europe.<sup>41</sup> Even in the EU, however, frustration grew over time with the negotiation costs of harmonization as a solution to divergent regulatory standards. Because of the cumbersome nature of negotiations, new national regulations outstripped the pace of European harmonization. With the Single European Act, European governments began to rely increasingly on mutual recognition to clear away the trade barriers that national regulations had imposed. Although mutual recognition moved the European Community toward a

system closer to institutional and regulatory competition, that competition was not unrestrained.<sup>42</sup>

Harmonization to the level of more regulated markets is a favored instrument of those constituencies in industrialized societies who endorse more stringent regulation in the interests of protecting the environment, labor, or consumers. For those who view regulatory competition as a means of reaching more efficient outcomes that are better aligned with the preferences of local units, harmonization is both an inefficient and undesirable means of attaining those goals. Strong arguments are made that efforts at harmonization will sometimes, perversely harm the interests of those it is designed to help. Countervailing duties in the face of lower labor standards in developing countries, for example, may lower wages and worsen working conditions in the country that is the target of those duties.

Harmonization can be justified in the case of clear and consensual agreement that regulatory competition should not be permitted in certain domains or beyond a certain floor. In the European Community, for example, the White Paper on Completing the Internal Market stipulated that "nations should not compete over standards that might adversely affect the public's health and safety or environmental quality"; in "essential" areas, harmonization would still be required.<sup>43</sup> Reaching consensus on those "essential" areas, however, would be difficult in most international settings, when defining immoral practices is far from agreed. Even proponents of tougher regulation do not favor pre-emptive harmonization that would

prevent individual localities or nations to enact standards more stringent than the harmonized standard. Harmonization may also be justified where cross-border externalities can be demonstrated and Coasian bargains are unlikely to be forged, a consideration of particular importance for environmental regulation. To label RTB concerns as "competitive externalities," however, is to accept as demonstrated what is empirically dubious. If a cooperative solution to regulatory competition is not demonstrated to be welfare enhancing, then "any harmonization claim to avoid such an 'externality' boils down to this: because we are unable to make optimal domestic political choices in the face of trade competition, you must change your laws (even if doing so is not welfare enhancing for you)."<sup>44</sup>

The core dilemma remains: RTB is politically powerful, but empirically rare. Beyond the limited instances when harmonization of standards entails low negotiation costs and is justifiable on other grounds (normative consensus, externalities), solutions must be sought that encourage beneficial regulatory competition and provide insurance against RTB. One solution is that of the European Union: permitting regulatory competition (in the form of mutual recognition) within "wide band" harmonization. Such harmonization provides a guarantee that any competition toward more relaxed standards will meet a commonly agreed floor. At the same time, some of the benefits of regulatory competition--satisfaction of different national preferences and regulatory experimentation and innovation--are not entirely lost. Achieving even such "wide band"

harmonization may be difficult at the global level in such contentious domains as labor standards and environmental protection.

Second, rather than harmonizing standards directly, harmonization could be targeted at other ends that are likely to produce second-order competition of the beneficial variety. For example, harmonizing and rendering more transparent national regulatory processes could increase confidence that pre-emptive competition to attract investment was not underway and that regulatory choices reflected national preferences and not those of a constricted set of interests. Just as harmonization could be deflected away from standards, so regulatory competition could be directed away from levels of protection to inefficient modalities of regulation that often create more burdens for the regulated with fewer benefits for society as a whole. Stewart, for example, argues for action in the United States to reduce the costs associated with the peculiar American style of environmental regulation-- litigious, adversarial, command-and-control-- by wider use of environmental contracting and market-based measures.<sup>45</sup>

Given the market-based models employed by proponents of regulatory competition, it is striking that so little attention has been given to enhancing the levels and quality of information available in order to create benign competitive environments. In part anxieties over the RTB result from weak understanding of regulatory burdens and firm preferences. Existing research is limited by its reliance on aggregate studies; firm-level data on location decision is particularly sparse. Given the political utility of RTB

arguments, it may be naive to expect accurate data on the calculus of firms in making their location decisions. Nevertheless, more illumination of this and governmental regulatory processes could serve to allay RTB fears and even prevent certain destructive races from beginning.

Finally, competition in ratcheting up international regulatory levels through market power and the export of standards extends competitive models in a way that counters RTB expectations. Bhagwati and Srinivasan suggest legislating the California effect by requiring MNCs to operate abroad under the same standards that are adopted in the home economy. This model follows the Sullivan principles that were mandated for American corporations operating in South Africa during the era of apartheid. Such national or internationally agreed rules would reinforce the already substantial interest that international corporations have in uniform international standards. The market power of the OECD economies can also be exploited through purely private codes of conduct (sometimes encouraged by government) that serve to mobilize both concern over brand names and images in the rich economies and consumer willingness to discriminate on the basis of corporate conduct. What Debora Spar has labeled the "spotlight phenomenon" has produced commitments to standards on the part of firms in the areas of labor and human rights. If these campaigns are expanded, then corporations operating in multiple national jurisdictions will need to weigh damage to their reputations through negative publicity, recurrent public relations costs, and the risk of consumer boycotts in the balance with the

search for reducing production costs.<sup>46</sup> The export of standards may, as a result, look even more attractive.

Conditions for races to the bottom are stringent; it is impossible to state that they have not occurred in certain regulatory domains, among certain jurisdictions. Evidence is slender for a "race" rather than a more benign competitive process that produces regulatory diversity without persistent downward pressure on regulatory standards in the large, rich economies. The political bases for RTB claims, however, remain sturdy, and that produces a central policy dilemma (but not an unprecedented one): dealing with a "threat" that is more a set of beliefs or perceptions than an established empirical reality. Avenues exist for both honing our understanding of the circumstances under which an RTB may occur and undermining the sources of support for less beneficial responses to the "threat." Those options, which combine regulatory competition with a measure of harmonization and market power with the export of standards, may fail to attract support equivalent to the more intuitively appealing RTB. They should be regarded as important contenders in the most important race, however, against disillusionment with economic openness and misplaced alarm over the erosion of regulatory standards.

**ENDNOTES**

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- <sup>1</sup> Garrett 1998 provides an excellent presentation of the skeptics' case.
- <sup>2</sup> Swire 1996.
- <sup>3</sup> Lenaerts 1995, 95.
- <sup>4</sup> Tiebout 1956.
- <sup>5</sup> Oates and Schwab 1988, Baumol and Oates 1988.
- <sup>6</sup> Bewley 1981, 716.
- <sup>7</sup> On this point, see Rose-Ackerman's criticism of Tiebout (Rose-Ackerman 1983, 62).
- <sup>8</sup> Baumol and Oates 1988, 293-294.
- <sup>9</sup> Bhagwati and Hudec 1996, 171-72; Revesz 1992, 1213-1219. For a better elaborated model of firm location under competitive conditions, see Markusen et al. 1995.
- <sup>10</sup> Jaffe et al. 1995, 138.
- <sup>11</sup> As only one example, Hirst and Thompson 1996.
- <sup>12</sup> Rose-Ackerman 1983, 77.
- <sup>13</sup> Swire 1996, 98.
- <sup>14</sup> Stewart 1993, 2059.
- <sup>15</sup> Bhagwati and Hudec 1996, 173.
- <sup>16</sup> Jaffe, et al. 1995; Levinson 1996; Stewart 1993, 2061-2079.
- <sup>17</sup> Levinson 1996, 450.
- <sup>18</sup> Jaffe et al. 1995, 147-150.
- <sup>19</sup> Rodrik 1997, 46.

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- <sup>20</sup> Stewart 1993, 2041.
- <sup>21</sup> Levinson 1996,
- <sup>22</sup> Bhagwati and Srinivasan 1996, 173-174; Levinson 1996, 450-452; Jaffe et al., 158.
- <sup>23</sup> Levinson 1996, 453.
- <sup>24</sup> Klevorick 1996, 461-462.
- <sup>25</sup> See Tanzi on the effects of economic integration on taxation.
- <sup>26</sup> Slemrod 1996, 288-291, 306.
- <sup>27</sup> Vogel 1996, 262, 256.
- <sup>28</sup> For example, many of the contributors to Berger and Dore 1996.
- <sup>29</sup> Bennett.
- <sup>30</sup> Jaffe et al. 1995.
- <sup>31</sup> NIMBYism, less applicable to international regulatory competition than Vogel's model, is another example of more stringent regulatory outcomes (undesirably so) produced in a context of jurisdictional competition.
- <sup>32</sup> Rodrik 1997, 16-25.
- <sup>33</sup> Leebron 1996, 58.
- <sup>34</sup> Peterson 1996, 117; Sugarman 1996, 136.
- <sup>35</sup> Swire 1996, 104.
- <sup>36</sup> Vogel 1996, 262.
- <sup>37</sup> Tanzi 1995, 138-139.
- <sup>38</sup> Rodrik 1997, 80.
- <sup>39</sup> Bhagwati and Srinivasan 1996, 180.

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<sup>40</sup> See Cass and Boltuck 1996, 400-401.

<sup>41</sup> Sapir 1996, 564-564.

<sup>42</sup>

<sup>43</sup> Cited in Vogel 1995, 34.

<sup>44</sup> Leebron, 1996, 59.

<sup>45</sup> Stewart 1993, 2090-2097.

<sup>46</sup> Spar 1998, 8.

## References

- Abbott, Kenneth W. 1996. Defensive Unfairness: The Normative Structure of Section 301. In *Fair Trade and Harmonization: Prerequisites for Free Trade?*, Volume II: *Legal Analysis*, edited by Jagdish Bhagwati and Robert E. Hudec, 415-471. Cambridge, MA: MIT Press.
- Baumol, William J. and Wallace E. Oates. 1988. *The Theory of Environmental Policy*. Second edition. Cambridge: Cambridge University Press.
- Bennett, Colin J. Review Article: What is Policy Convergence and What Causes It? *British Journal of Political Science* 21: 215-233.
- Berger, Suzanne and Ronald Dore, editors. 1996. *National Diversity and Global Capitalism*. Ithaca: Cornell University Press.
- Bewley, Truman F. 1981. A Critique of Tiebout's Theory of Local Public Expenditures. *Econometrica* 49, 3: 713-740.
- Bhagwati, Jagdish and T. N. Srinivasan. Trade and the Environment: Does Environmental Diversity Detract from the Case for Free Trade? In *Fair Trade and Harmonization: Prerequisites for Free Trade?*, Volume I: *Economic Analysis*, edited by Jagdish Bhagwati and Robert E. Hudec, 159-223. Cambridge, MA: MIT Press.
- Braden, John B. 1995. The Economics of Environmental Policy-making in a Multi-Layer Government Structure. In *Recent Economic and Legal Developments in European Environmental Policy*, edited by Filip Abraham, Kurt Deketelaere, and Jules Stuyck, 49-74. Leuven: Leuven University Press.
- Brown, Drusilla K., Alan V. Deardorff, and Robert M. Stern. 1996. International Labor Standards and Trade: A Theoretical Analysis. In *Fair Trade and Harmonization: Prerequisites for Free Trade?*, Volume I: *Economic Analysis*, edited by Jagdish Bhagwati and Robert E. Hudec, 227-280. Cambridge, MA: MIT Press.
- Butler, Henry N. and Jonathan R. Macey. 1988. The Myth of Competition in the Dual Banking System. *Cornell Law Review* 73(4): 677-718.
- Butler, Henry N. and Jonathan R. Macey. 1996. Externalities and the Matching Principle: The Case for Reallocating Environmental Regulatory Authority. *Yale Law & Policy Review* 14 (2): 23-66.

- Cass, Ronald A. and Boltuck, Richard D. 1996. Antidumping and Countervailing-Duty Law: The Mirage of Equitable International Competition. In *Fair Trade and Harmonization: Prerequisites for Free Trade?, Volume II: Legal Analysis*, edited by Jagdish Bhagwati and Robert E. Hudec, 351-414. Cambridge, MA: MIT Press.
- Eaton, Thomas A. and Susette M. Talarico. 1996. Testing Two Assumptions About Federalism and Tort Reform. *Yale Law & Policy Review* 14 (2): 371-410.
- Esty, Daniel C. 1996. Revitalizing Environmental Federalism. *Michigan Law Review* 95 (3): 570-653.
- Fischel, Daniel R. 1982. The "Race to the Bottom" Revisited: Reflections on Recent Developments in Delaware's Corporation Law. *Northwestern University Law Review* 76 (6): 913-945.
- Garrett, Geoffrey. 1998. The Nation-State in the Global Economy: Obstinate or Obsolete? *International Organization* 52, forthcoming.
- Hirst, Paul and Grahame Thompson. 1996. *Globalization In Question*. Cambridge MA: Blackwell Publishers.
- Jaffe, Adam B., Steven R. Peterson, Paul R. Portney, and Robert N. Stavins. 1995. Environmental Regulation and the Competitiveness of U.S. Manufacturing: What Does the Evidence Tell Us? *Journal of Economic Literature* 33 (March): 132-163.
- Klevorick, Alvin K. 1996. Reflections on the Race to the Bottom. In *Fair Trade and Harmonization: Prerequisites for Free Trade?, Volume I: Economic Analysis*, edited by Jagdish Bhagwati and Robert E. Hudec, 459-467. Cambridge, MA: MIT Press.
- Langille, Brian Alexander. 1996. In *Fair Trade and Harmonization: Prerequisites for Free Trade?, Volume II: Legal Analysis*, edited by Jagdish Bhagwati and Robert E. Hudec, 231-261. Cambridge, MA: MIT Press.
- Leary, Virginia A. 1996. Workers' Rights and International Trade: The Social Clause (GATT, ILO, NAFTA, U.S. Laws). In *Fair Trade and Harmonization: Prerequisites for Free Trade?, Volume II: Legal Analysis*, edited by Jagdish Bhagwati and Robert E. Hudec, 177-230. Cambridge, MA: MIT Press.
- Leebron, David W. 1996. Lying Down with Procrustes: An Analysis of Harmonization Claims. In *Fair Trade and Harmonization:*

- Prerequisites for Free Trade?, Volume I: Economic Analysis*, edited by Jagdish Bhagwati and Robert E. Hudec, 41-117. Cambridge, MA: MIT Press.
- Lenaerts, Koen. 1995. The Principles of Subsidiarity and the Environment in the European Union: Keeping the Balance of Federalism. In *Recent Economic and Legal Developments in European Environmental Policy*, edited by Filip Abraham, Kurt Deketelaere, and Jules Stuyck, 11-48. Leuven: Leuven University Press.
- Levinson, Arik. 1996. Environmental Regulations and Industry Location: International and Domestic Evidence. In *Fair Trade and Harmonization: Prerequisites for Free Trade?, Volume I: Economic Analysis*, edited by Jagdish Bhagwati and Robert E. Hudec, 429-457. Cambridge, MA: MIT Press.
- Markusen, James R., Edward R. Morey, and Nancy Olewiler. 1995. Competition in Regional Environmental Policies When Plant Locations are Endogenous. *Journal of Public Economics* 56: 55-77.
- Oates, Wallace E. and Robert M. Schwab. 1988. Economic Competition Among Jurisdictions: Efficiency Enhancing or Distortion Inducing? *Journal of Public Economics* 35 (3): 333-354.
- Peterson, Paul E. 1996. Devolution's Price. *Yale Law & Policy Review* 14 (2): 111-122.
- Revesz, Richard L. 1992. Rehabilitating Interstate Competition: Rethinking the "Race-to-the-Bottom" Rationale for Federal Environmental Regulation. *New York University Law Review* 67: 1210-1254.
- Rodriguez, Daniel B. 1996. Turning Federalism Inside Out: Intrastate Aspects of Interstate Regulatory Competition. *Yale Law & Policy Review* 14 (2): 149-176.
- Rodrik, Dani. 1997. *Has Globalization Gone Too Far?* Washington: Institute for International Economics.
- Rose-Ackerman, Susan. 1983. Beyond Tiebout: Modeling the Political Economy of Local Government. In *Local Provision of Public Services: The Tiebout Model after Twenty-Five Years*, edited by George R. Zodrow, 55-83. New York: Academic Press.
- Sapir, André. 1996. Trade Liberalization and the Harmonization of Social Policies: Lessons from European Integration. In *Fair Trade and Harmonization: Prerequisites for Free Trade?, Volume I: Economic*

- Analysis*, edited by Jagdish Bhagwati and Robert E. Hudec, 543-570. Cambridge, MA: MIT Press.
- Schuck, Peter H. 1996. Some Reflections on the Federalism Debate. *Yale Law & Policy Review* 14 (2): 1-22.
- Spar, Debora L. 1998. The Spotlight and the Bottom Line: How Multinationals Export Human Rights. *Foreign Affairs* 77(2): 7-12.
- Stewart, Richard B. 1992. International Trade and Environment: Lessons from the Federal Experience. *Washington and Lee Law Review* 49 (4): 1329-1371.
- \_\_\_\_\_. 1993. Environmental Regulation and International Competitiveness. *Yale Law Journal* 102 (8): 2039-2106.
- Sugarman, Stephen D. 1996. Welfare Reform and the Cooperative Federalism of America's Public Income Transfer Programs. *Yale Law & Policy Review* 14 (2): 123-148.
- Swire, Peter P. 1996. The Race to Laxity and the Race to Undesirability: Explaining Failures in Competition Among Jurisdictions in Environmental Law. *Yale Law & Policy Review* 14 (2): 67-110.
- Tiebout, Charles. 1956. A Pure Theory of Local Expenditures. *Journal of Political Economy* 64: 416-424.
- Vogel, David. 1995. *Trading Up: Consumer and Environmental Regulation in a Global Economy*. Cambridge: Harvard University Press.
- Vogel, Steven K. 1996. *Freer Markets, More Rules: Regulatory Reform in Advanced Industrial Countries*. Ithaca: Cornell University Press.
- Wilson, John Douglas. 1996. Capital Mobility and Environmental Standards: Is There a Theoretical Basis for a Race to the Bottom? In *Fair Trade and Harmonization: Prerequisites for Free Trade?*, Volume I: *Economic Analysis*, edited by Jagdish Bhagwati and Robert E. Hudec, 393-427. Cambridge, MA: MIT Press.
- Winter, Ralph K. 1989. The "Race for the Top" Revisited: A Comment on Eisenberg. *Columbia Law Review* 89 (7): 1526-1529.