

## **Regulatory Races:**

### **The Effects of Jurisdictional Competition on Regulatory Standards**

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## **Executive Summary**

Businesses often greet attempts to pass new regulatory legislation with dire forecasts about the large number of enterprises that will leave the jurisdiction if the rules are imposed. Such forecasts are an example of what Albert Hirschman has termed “voice.” They are attempts to influence the course of political action and prevent the regulations from being adopted. If the attempts are unsuccessful, business enterprises may or may not actually “exit,” but whether they will is something that policy makers need to be able to predict.

The purpose of this paper is to develop a better understanding of when such threats are likely to be credible by surveying the literature on regulatory races. Although we review the literature on international regulatory competition, our strategy is to focus in particular on competition among the various U.S. states. The states are a good laboratory for research on the problem of regulatory arbitrage because they share a common language and institutional environment and because trade barriers among them are minimal. The costs of moving a business from one state to another are likely to be much less than from one country to another, so all things being equal, one would expect that a regulation that does not lead businesses to migrate across states is unlikely to incite movement between countries. We also focus our attention on four specific types of regulation that are thought to be especially likely to cause businesses to exit: rules to protect the environment; rules to protect workers; rules governing banks and the issuance of financial securities; and rules regulating corporate governance.

The classic race to the bottom is most likely to arise in situations where regulation in one jurisdiction imposes costs on firms that competitors in other localities do not have to bear. It has often been claimed, for example, that the enactment of strict labor and environmental regulations

will spur businesses to move their production to states or countries with laxer rules. Taken as a whole, however, the studies we review suggest that differences in the regulatory burden seldom cause significant numbers of firms to relocate. There are a variety of reasons for this result. First, the relative cost of more stringent rules may not be large enough relative to other costs to matter for locational decisions. Second, regulatory regimes usually consist of complex bundles of rules which may simultaneously affect firms' competitiveness in very different ways. Third, stricter regulatory standards may have benefits that offset their costs. For example, better protections for workers can lead to higher productivity, or consumers may reward companies that conform to higher labor or environmental standards. Fourth, context matters, and the same law can have different consequences depending on where (and when) it was passed. Thus California and other large states may succeed in imposing rules where other jurisdictions would fail because businesses do not want to forego access to their markets.

Regulatory races are more likely to occur in situations where firms can respond simply by changing their corporate identity or the market in which they raise capital—that is, where they do not have to relocate their operations in order to benefit from the change. The classic example, of course, was corporate chartermongering by New Jersey and then Delaware. There is also some evidence for similar, though much more attenuated, races in the regulation of both banking and securities issues. Even in the case of corporate chartermongering, however, the claim that there has been a regulatory race to the bottom has not withstood scholarly scrutiny. Although Delaware attracted corporate charters by reducing restrictions on management, investors' response (as indicated by the price they were willing to pay for shares in Delaware corporations) indicates that stockholders did not perceive the changes to have disadvantaged them. Over time, moreover, Delaware's courts and bar have developed such unparalleled expertise in corporate

law that they have effectively put a stop to the competition. In the case of banking, the direction of regulatory competition has tended to be toward the bottom; in the case of securities regulation, to the top. In both cases, however, the nature of the regulatory regime in any given jurisdiction has been shaped more by conventional interest-group pressures than by considerations of regulatory arbitrage, and there has been comparatively little geographic convergence in regulatory practice. Finally, governments are not like prisoners locked in separate rooms as in the famous prisoner's dilemma game. As the Basel accord setting minimum capital requirements for banks illustrates, they can and sometimes do cooperate to stem pressures to reduce regulatory standards.

In sum, though businesses will continue to respond to regulatory initiatives by threatening "exit," these threats should be taken for what they really are: examples of "voice." Regulatory changes are only likely to lead to exit in cases where exit takes the form of a relatively costless act, such as changing the legal domicile of a corporation. They rarely in and of themselves spur large numbers of businesses to move their plants or otherwise cause significant job losses. The more salient danger is that worries about these kinds of threats will provide government officials with an excuse not to act or, even worse, political cover for actions taken at the behest of particular interests.

## **Regulatory Races: The Effects of Jurisdictional Competition on Regulatory Standards**

Businesses often greet attempts to pass new regulatory legislation with dire forecasts about the large number of enterprises that will leave the jurisdiction if the rules are imposed. Such forecasts are an example of what Hirschman (1970) has termed “voice.” They are attempts to influence the course of political action and prevent the regulations from being adopted. If the attempts are unsuccessful, business enterprises may or may not actually “exit,” but whether they will is something that policy makers need to be able to predict.

The purpose of this paper is to develop a better understanding of when such threats are likely to be credible by surveying the literature on regulatory arbitrage. Businesses will exit in response to new regulations only if they have somewhere to go—that is, if there is another jurisdiction that does not impose similarly undesirable rules. If policy makers believe that businesses will relocate in response to differences in the regulatory burden, in order to forestall exit they may decide not to impose stricter rules, however socially valuable. Even more drastically, policy makers in some jurisdictions may deliberately make their rules laxer in order to encourage businesses to move there.

In the current era of globalization, there is considerable worry that economic activity will move across countries in response to such arbitrage opportunities. We survey the evidence that is available on these international movements, but because much of this experience is so very recent, it is difficult to get a sense of how international regulatory competition will play out over time. To obtain a longer time frame, we focus our attention on regulatory competition among the various U.S. states. The states are a particularly good laboratory for such research because they share a common language and institutional environment and there are minimal trade barriers

among them.<sup>1</sup> The costs of moving a business from one state to another are likely to be much less than from one country to another. All things being equal, therefore, one would expect that a regulation that does not lead businesses to migrate across states is unlikely to incite movement across countries.

We also focus our attention on four specific types of regulation that are thought to be particularly likely to cause businesses to exit: rules to protect the environment; rules to protect workers; rules governing banks and the issuance of financial securities; and rules regulating corporate governance. Our aim is to understand whether efforts to tighten regulations in these areas have caused businesses to migrate to jurisdictions where standards were lower, and, if we find that they did, whether such moves have instigated a general reduction in regulatory standards (a race to the bottom). We are also interested in exploring alternative versions of the arbitrage hypothesis: that competition among jurisdictions can actually promote better regulation (a race to the top); or that it can lead to regulatory heterogeneity as firms sort themselves across jurisdictions according to their own specific preferences. Finally, we discuss other possible processes that can lead to regulatory uniformity (or heterogeneity), processes whose outcomes might mistakenly be attributed to regulatory arbitrage.

## **An Overview of the Theory**

The theory of regulatory arbitrage has a long history that can be traced through the writings of such prominent thinkers as Adam Smith and Karl Polanyi (Drezner 2001). Since the early twentieth century it has played a central role in discussions of state regulation of

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<sup>1</sup> Although the U.S. Constitution prohibits internal tariffs, states can use their inspection powers to erect trade barriers. Since the late nineteenth century, however, such barriers have had to pass quite stringent constitutional tests. See McCurdy 1978.

corporations, and in recent decades has received prominent attention in the debate over government oversight more generally. The theory's core prediction is that, in a global economy, regulatory policies will tend to converge across countries over time. The basic cause of this convergence is the mobility of capital. Businesses attempt to influence regulatory policy to suit their interests, and if they do not succeed, may move their operations to a location with a more favorable regulatory environment. To prevent the out-migration of capital, policy makers in one jurisdiction must be mindful of what their counterparts in other jurisdictions are doing. When this mindfulness leads them to relax regulatory standards, they are participating in a race to the bottom. When it leads them to improve standards, the race is to the top (Murphy 2004).

The underlying logic is that regulation both imposes costs and confers benefits, with the incidence of the costs and benefits on the firms being regulated, as well as on others in the society, varying from one type of regulation to the next (Kane 1987; Schooner and Taylor 1999). Some rules benefit everyone in a geographic area (for example, by improving the quality of the water or the air), but reduce firms' profits by forcing them to bear costs that their competitors in other localities do not incur. These kinds of regulations potentially lead firms to migrate to laxer jurisdictions and hence can stimulate a race to the bottom. However, other types of regulations can benefit the firms that are subject to them—for example, by certifying the quality of their products or their worthiness to investors. These kinds of benefits are particularly likely to arise in situations where there are substantial informational asymmetries that prevent consumers from judging the value or potential harmfulness of a product (as is the case with pharmaceuticals, for instance) or that cause investors to worry that insiders will take advantage of them or misuse their funds. If firms perceive that the benefits of such regulation outweigh the costs, they may migrate to jurisdictions with more stringent rules, encouraging a race to the top.

Although the logic of regulatory competition is compelling, there are nonetheless good theoretical reasons for believing that the chain of actions that a race requires (firms moving and regulators responding, both in the home location and abroad) will not be very important, may not happen at all, or may even occur in the wrong direction (Klevorick 1996). Whether firms migrate in response to regulatory differentials depends on the magnitude of the costs versus the benefits of the rules to which they are subject relative to the other factors that determine firms' locational decisions (Drezner 2001). For example, the attractions of convenient access to raw materials, abundant labor with appropriate skills, or lucrative markets may make firms relatively insensitive to changes in the regulatory burden. Indeed, there is a voluminous literature on the so-called California effect, whereby large jurisdictions can impose costly regulations without penalty because firms cannot afford to forego access to their markets (see especially Vogel 1995). Rather than a race to the bottom, such impositions may even spark a race to the top as other jurisdictions raise standards to insure that their firms do not lose access to these important markets (Radaelli 2004).

Even in cases where firms migrate to laxer jurisdictions, whether or not a regulatory race materializes may depend on the type of governmental entity that determines the rules or on the structure of the government more generally. For example, one might expect courts whose judges have life-time appointments to be less responsive to the threat of local job losses than legislatures whose members are popularly elected by the very people who might lose their jobs. By a similar logic, one might expect democracies to be more susceptible to regulatory races than more autocratic forms of government, though some scholars have argued that corporatist alliances between left-of-center parties and large-scale business organizations can successfully resist race-to-the-bottom pressures (Garret 1998; Swank 2002). It is also possible that forward-looking

policy makers will be able to cooperate with their counterparts in other jurisdictions to prevent such competition from developing in much the same way as communication among players can prevent bad outcomes in a prisoners' dilemma game (Genschel and Plumber 1997, Radaelli 2004). Under some circumstances, such cooperation may lead to the construction of overarching institutions with the power to dampen regulatory competition among constituent units (Trachtman 1993).

Whether a particular state participates in a race also depends on the relative political power of the local interest groups who stand to benefit or lose from the change in regulation (Drezner 2001). For example, large firms may prefer to operate under a more stringent regulatory regime if it puts smaller competitors at a disadvantage and, to insure that the regime remains in effect, may combine forces with other groups who perceive a social benefit from the regulation (Murphy 2004). Rather than exit, the result of the higher standards may be an increase in economic concentration. Moreover, as the numerous trade disputes in the food and drugs sector illustrate, governments sometimes deliberately deploy higher regulatory standards to protect local enterprises from competition.

Firms may vary in their preference for regulation in other ways as well. For example, firms in the same industry may target very different segments of the market. In some of these segments consumers might value the signals that regulation can confer about quality or good corporate citizenship more than consumers in others, so firms that serve those segments may be more willing to bear the costs of conforming to government rules. Similarly, firms that intend to go to the capital markets for funds may benefit from the reassurance that securities regulation can offer investors, whereas those that intend to rely exclusively on borrowing may not. Rather than convergence, such heterogeneity in preferences may lead to the persistence of different

regulatory regimes in different places. To the extent that the costs and benefits of regulation determine locational decisions, firms will sort themselves across jurisdictions according to their specific preferences in much the same way that Tiebout (1956) hypothesized citizens would sort themselves geographically according to their preferences for schools and other local public goods (Bratton and McCahery 1997). If governments behave strategically, they might seek to enhance the distinctive attractiveness of their regulatory niches rather than imitate the policies of other governments.

In sum, there are many good reasons for doubting that states will automatically be driven by competitive pressures from other jurisdictions to lower or raise their regulatory standards. The extent to which regulatory races occur in actual practice is an empirical question, and in the next several sections we review the literatures relevant to specific types of regulation in order better to understand the extent to which businesses have exploited regulatory arbitrage opportunities and forced governments to adjust their policies in response. It is important to emphasize at the start, however, that existence of similar regulatory regimes across jurisdictions is not in itself evidence that a regulatory race led to convergence. As we will show, there are a number of other ways in which convergence in regulatory policy can occur—the most obvious in the U.S. case being the movement toward uniform state laws. Conversely, it is equally important to note that a lack of convergence should not be taken as evidence of the absence of regulatory-race type pressures. Indeed, it is quite possible that governments attempt strategically to distinguish themselves from rival jurisdictions. For the regulatory arbitrage hypothesis to hold, therefore, we must find evidence that firms migrate in response to geographic differences in the costs and benefits of regulation *and* we must also be able to observe governments shaping their regulatory policies with the aim of affecting those migration flows.

## **Labor Regulation: The Race Model is Too Simple**

Arguments about regulatory races are now regularly deployed in assessments of globalization. Among other things, critics of globalization assert that mobile investors leave, or threaten to leave, countries whose stringent protective labor regulations significantly raise labor costs and reduce corporate profits. Governments respond to actual or threatened disinvestment by weakening their regulations and creating a more attractive investment climate. As each government pursues the same strategy, it sets off a competitive race to the bottom. The outcome is weak labor regulation around the globe. Much of the literature on this issue is journalistic, highly normative, and relies on limited or selective evidence (for example, Harrison 1995, Ross 2006, Simkins 2004, Singh and Zammit 2004, Stern 2008). But a growing body of social science literature has tried to consider the issue more dispassionately.

One difficulty in considering this issue arises from the fact that labor regulations possess many dimensions, and therefore there are many ways in which they can raise or lower costs or shape other aspects of the employment relationship. Labor laws can set minimum wages, restrict child labor, set hours and conditions of work, vary job security, offer protection from workplace hazards, determine the ease with which unions can organize or operate, prohibit various kinds of employment discrimination, affect collective bargaining, bestow a role on unions in corporate governance, or set various work-related social welfare benefits (health, unemployment insurance, etc.). Not only does this complexity make measurement of regulation a tricky business, but it also opens the possibility of very mixed patterns, where some labor regulatory outcomes go “up” (for example, higher minimum wages) and others “down” (weaker safety standards) at the same time. It also poses the problem that sometimes *de facto* standards differ from *de jure* standards,

and so a country that on paper has high labor standards may have weak standards in practice because they are poorly enforced or not implemented.

Much research on labor regulations is done cross-nationally, and at this level there are considerable barriers to the migration of investment. Legal, linguistic, political and cultural differences inhibiting movement could all swamp regulatory differences that motivate such movement. Because of these cross-national barriers, when considering arguments about regulatory races researchers almost always consider how integrated a nation is into the global economy. They will, for example, measure foreign trade as a percentage of gross domestic product (GDP), factor in foreign direct investment (FDI) as a percentage of GDP, or focus on industrial sectors that are particularly involved in foreign trade (for example, textile manufactures). There are a number of ways to measure how exposed countries are to foreign competition, and this complicates the literature.

At the international level, Neumayer and De Soysa (2006) examine the effect of globalization on labor outcomes rather than just on formal labor rules. They find that a country's openness to trade lowers the use of child labor and also reduces the number of times that labor rights of association and collective bargaining get violated. However, inflows of FDI had no significant effect in their analysis, and they suggest that the effect of FDI may depend on whether it goes into manufacturing or into the natural resources sector of the economy. By contrast, Mosely and Uno (2007) find that the amount of FDI increases labor rights, while openness to trade weakens them. They suggest that the multinational corporations that make foreign direct investments can raise labor standards by pressuring host governments to support the rule of law, by importing best practices for workers' rights, or by focusing on the quality of labor rather than just its cost (Mosely and Uno 2007: 926). The discrepancy between these two

papers may be due to different methods (a cross-sectional analysis versus time-series analysis), different data (the former include developed countries in their data set while the latter focus only on developing economies), or a combination of the two.

Rodriguez and Samy (2003) consider how labor standards affected U.S. export performance during the 1950-1998 period: in some respects, lower standards improved exports (by reducing costs), but in other respects lower standards had an adverse effect because they lowered productivity. Martin and Maskus (2001) reinforce the latter finding and challenge the idea that stronger labor protections reduce the profitability of employers. According to them, weak core labor standards (prohibition of child and forced labor, prohibition of discrimination, freedom of association, right to organize and bargain collectively) raise costs, lower efficiency, and reduce output. Bartley (2007) shows how anti-sweatshop social movements in the 1990s helped to produce a “private” type of regulation in which overseas apparel factories were certified by third parties if they conformed to a code of labor standards. This certification then became part of product’s brand image in the eyes of consumers, who were eager to know that their clothing had not been manufactured in a sweatshop. Thus compliance with higher standards enhanced the perceived quality of goods. But in a simple comparison of two countries, Mexico and China, Chan and Ross (2003) document that in export-oriented apparel production, wages have declined as exports to the U.S. increased. Although they do not look too closely at alternative explanations, they argue that their findings imply that international races to the bottom will occur unless governments embrace multilateral labor agreements. Finally, Huberman (2004) examines the cross-national convergence of worktime (average annual hours worked) during the pre-World War One period and concludes that no simple race to the bottom was at work, despite a highly integrated global economy.

Less has been written directly about regulatory races among state labor laws, but scholars have addressed a number of relevant topics, including minimum wage laws, right-to-work laws, anti-discrimination laws, protective legislation, and safety laws. On the latter topic, Moss (1994) points out that in the early twentieth-century state governments were reluctant to prohibit phosphorus matches, even though phosphorus was clearly a severe health hazard to the workers who manufactured them. Given what they were hearing from match manufacturers, state governments feared that match manufacturers would simply leave any state trying to regulate match manufacturing. But rather than be mired at the “bottom” with no state regulation, in this case, opponents of phosphorus matches were able to use prohibitory federal taxes to drive them out of the marketplace. Federal taxation became a (successful) form of *de facto* health and safety regulation for workers, in part because it did not set off any races to the bottom.

In the Progressive Era, a number of states passed legislation to regulate employment by restricting the hours of child and female workers, and setting their minimum wages (Holcombe 1917). By 1939 most, but not all, states had some version of this legislation on their books (Stitt 1939). Goldin (1988) specifically addresses the effect of hours legislation on female employment. Using state-level data from 1920, she takes issue with prior research (for example, Landes 1980) and finds that such legislation had a minimal effect on hours of work performed by women in the manufacturing sector. Interestingly, using the law to reduce hours for women had a spillover effect that reduced hours for men, too. Furthermore, this legislation was associated with a rise in women’s employment in sales, perhaps because limiting hours made it easier for women to reconcile domestic work with paid employment. These relatively benign effects may help explain why passage of restrictive legislation in one state did not set off a race in other states.

After the 1947 Taft-Hartley amendments to the New Deal-era Wagner Act, states were permitted to pass laws that prohibited union shops (which meant that new employees no longer had to join and pay dues to the union that had previously organized their workplace). In effect, states could undercut federal regulation of employment relationships. Such laws came to be known as “right to work” (RTW) laws, and they were clearly intended to undermine the ability of unions to organize a firm’s workforce. In the 1940s and 1950s RTW laws were passed in many but not all states, and are prevalent among Southern, Plains, and Rocky Mountain states. The last states to pass such laws were Louisiana, in 1976, and Idaho in 1986 (Ellwood and Fine 1987: 251, Abraham and Voos 2000).

A number of studies have examined the effects of RTW laws, but it is worth noting that whatever those effects have been, their magnitude has not been strong enough to compel all states to pass RTW laws in a collective race to the bottom. Earlier research raised the possibility that RTW laws were largely symbolic (Moore and Newman 1985), but Ellwood and Fine (1987) find that they do in fact reduce union organizing, and estimate that overall union membership is reduced between 5 and 10 percent. Moore (1998) agrees that RTW laws reduce unionization, but claims that there is little effect on wages in either the private or public sector. Using county-level data, Holmes (1998) examines the border regions that separate RTW states from non-RTW states to estimate the local effect of the law, and finds that manufacturing employment is about one-third higher on the RTW side of the border than on the other side (for example, South Dakota versus Minnesota). Abraham and Voos (2000) use an event-study method to examine the impact of passage of a RTW law. They compare the stock-market valuations of companies with substantial operations in Louisiana and Idaho, both before and after the passage of RTW laws,

and estimate that such laws increased shareholder wealth 2.9 percent in Louisiana and 2.4 percent in Idaho.

States can also regulate the ease with which employers can fire their workers. Many, but not all, U.S. states regulated employment via anti-discrimination laws well before the federal Civil Rights Act of 1964. These laws constrained the common law doctrine of “employment at will” under which employers could fire employees for good reasons, bad reasons, or no reason at all. Starting with New York in 1945, twenty-two states passed their own “fair employment” laws before the landmark federal legislation of 1964. Not surprisingly, no southern state passed such a law. According to Collins (2003a), these laws were passed in non-southern states with the support of unions, various religious groups (especially Jews), and over the opposition of employer groups. Interestingly, the size of the black population in a state, arguably those most likely to benefit from anti-discrimination laws, did not raise the likelihood of passage. But states with larger numbers of politically mobilized blacks (that is, members of the NAACP) were more likely to pass fair employment laws. Collins (2003b) examines the effects of these laws and finds that these varied depending on whether the law was passed in the 1940s or the 1950s. The first group of laws generally raised the income of minority workers, especially for black women, but the second group did not. The latter finding may have more to do with which states passed laws in the 1950s than the fact that the laws were passed in the 1950s. In addition, fair employment laws from the 1940s did not raise minority unemployment rates or reduce labor force participation. But the laws from the 1950s did adversely affect unemployment of black men. Overall, Collins concludes that fair employment laws had different effects for black men and black women, and that those effects varied depending on when the laws were passed.

Autor, Donohue and Schwab (2004) provide an important extension by noting that state courts can also impose new employment regulations. Through their rulings during the 1970s and 1980s, state judges created new restrictions on the ability of employers to fire their employees (see also Krueger 1991). Autor et al. estimate that the development of these three new classes of restrictions (“public policy,” “good faith,” and “implied contract”) had only a small effect on overall employment within a state, but note that it did increase demand among employers for temporary help agencies (as a way to secure labor outside of a formal employment relationship). Autor et al. recognize that legislatures are not the only ones creating regulations, and we should note that the political dynamics that encourage regulatory races probably work differently for courts than for legislatures, governors or other elected politicians. Judges are less beholden to the electorate (they may or may not be elected, and their terms of office can be lengthy and even unlimited), and in their decision-making they are constrained by legal precedent.

In stylized races up or down, politicians respond mostly to business preferences. In actuality, the political coalition that pushes for new regulations is a key link in a regulatory race. Drawing on his own studies of worker’s compensation (Fishback and Kantor 1998), and surveying Progressive Era labor markets, Fishback (1998) indicates that legal interventions into labor relations occurred when they were in the interest of all the major stakeholders. Worker’s compensation laws, for example, passed in states because they were deemed advantageous by labor groups, employer groups, and the insurance industry, and the reform wave to adopt worker’s compensation was relatively quick. Fishback (1998) also notes several patterns to state-level labor market regulation: regulations often “certify” pre-existing practices (that is, the law follows rather than leads the market); employer groups can often “veto” new regulations, and so it is important to gain their support to have a realistic chance of passage; employers sometimes

have divided interests about a new regulation, and those who already comply can be used to pressure those not in compliance.

Finally, minimum wage laws are a form of regulation that ought, according to orthodox theory, to produce very simple and direct effects: if the minimum wage is set above the “market wage” for entry-level work, then in response employers will hire fewer workers and unemployment will increase. In the extreme, employers hire no workers at all. Minimum wage laws allow researchers to see how dramatically markets respond to regulatory changes. Card and Krueger (1995, 2000) took advantage of a natural experiment in which the minimum wage in New Jersey was raised from \$4.25 to \$5.05 per hour (in 1992), while in neighboring Pennsylvania it remained at \$4.25. By comparing employment in fast-food establishments near to the state border, Card and Krueger were able to assess the impact of a higher minimum wage on low-wage work in local labor markets. Their general conclusion, first asserted in 1995 and then reaffirmed in 2000 after an extensive reanalysis of data and response to critics, was that: “modest changes in the minimum wage have little systematic effect on employment” (Card and Kreuger 2000: 1398). This surprising result is due to “frictions” in the labor market. Since employers almost always object to higher minimum wages, this result illustrates that firms’ response to regulation via “voice” may diverge from their response via “exit”: their bark may be worse than their bite.

### **Environmental Regulation: Races or Niches?**

Globalization has also been criticized for its environmental effects: environmental regulations raise costs and reduce corporate profits, and therefore firms migrate to countries where laws are weaker and costs are lower. Then, governments respond by weakening their laws.

As with labor regulation, there are many sweeping claims about inevitable races to the bottom, often made without benefit of systematic evidence. The issue has also arisen in the context of whether the appropriate level for domestic U.S. environmental regulation is with state governments or with the federal government. Some have argued that regulatory competition among states will lead to efficient or optimal environmental regulations, while others claim that federal regulation is necessary precisely because competition among states will lead to weak environmental regulation (Levinson 2003, Revesz 1997, Saleska and Engel 1998). As the issue is sometimes posed: will there be a race to “laxness” or to “strictness” (Swire 1996)? For environmental regulation, there is also the NIMBY (Not In My Back Yard) effect to be considered, in which citizens oppose the presence of hazardous sites or pollution sources in proximity to themselves and work hard to have these put elsewhere (out of their town, out of their state, etc.). The NIMBY effect occurs when the fears of politically-mobilized residents about proximity to pollution trump the employment and investment advantages of such proximity, and residents are able to push the polluting source outside of their jurisdiction (Potoski 2001).

Empirical examination of these arguments is as complex as in the case of labor. There are many ways to measure environmental regulations, and there are many relevant environmental outcomes to consider (air versus ground versus water-born pollution, multiple toxic substances, etc.). Vulnerability to regulatory races varies depending on how, and to what extent, a country is integrated into the world economy. Furthermore, it is not always clear whether the race is about environmental regulations, environmental outcomes, or both.

Porter (1999) extends the international version of the race to the bottom argument by claiming that sensitivity to regulatory differentials is greater in industrializing countries than in

those with highly developed economies. Consequently, he says, industrializing countries do not so much race to the bottom as remain stuck there. Busch et al. (2005) focus on industrialized countries and argue that widespread adoption of a variety of environmental policies and regulations over the last several decades was due largely to policy diffusion rather than a competitive race. In a diffusion process, an innovator country is emulated by the rest of the countries so that eventually all adopt the innovation, but not necessarily because failure to adopt makes investors move elsewhere (adoption could be driven by status or legitimacy, for example). Furthermore, diffusion unfolds through a series or network of contacts that link the population together. In some of the cases examined by Busch et al., countries were “encouraged” to adopt policies through the explicit use of conditionalities attached to World Bank loans, sometimes countries adopted measures that had been endorsed by supra-national entities like the UN or EU, and in the case of FAI (free access to information) the regulation improved public accountability in environmental policy without substantial consequences, positive or negative, for firms or investors.

Prakash and Potoski (2006) consider how international trade affects the adoption of private environmental regulations. They find that the likelihood of a firm adopting ISO 14001 (which stipulates environmental process standards for *how* products are produced rather than imposing standards on the products themselves) within an exporting country is higher when that standard has also been adopted by firms in the corresponding importing country. This suggests that suppliers are more likely to embrace private regulations when their customers have already done so. Carpentier (2006) summarizes the results of many studies of NAFTA and concludes that passage of NAFTA had no strong environmental effects, good or bad. Looking at the costs of pollution controls in a variety of industries and their effects on net exports, Jaffe et al. (1995)

also concluded that environmental regulations have had no great impact on the competitiveness of U.S. manufacturing.

Shah and Rivera (2007) looked at the environmental performance of chemical and oil-and-gas firms in and outside of Trinidad and Tobago's export processing zone and found that firms inside had stronger environmental reputations among key stakeholders than those outside. This suggests that the creation of special economic zones, whose rules are specifically designed to attract foreign investors, need not lead to worse environmental outcomes. Vogel (2000) simply notes that global economic integration over the last several decades has not been associated with a systematic race to the bottom in the sense that most countries now have stricter environmental rules than in the past, and they devote more resources toward environmental protection. Among other reasons, the costs of compliance with environmental rules are generally not very significant compared to other kinds of costs. The business community has mixed interests since some firms find compliance easier than others, and may support regulation as an indirect way to challenge their rivals. Furthermore, what he and others call the "California effect" means that big jurisdictions, with big markets, can dictate higher environmental standards to the marketplace secure in the knowledge that they are simply too important to ignore. Firms subject to these higher standards do not have a credible threat of exit.

Among U.S. states, Stafford (2000) examines the location of hazardous waste facilities to see how it is affected by state-level environmental regulation. Her findings are mixed: on the one hand, firms were less likely to locate in states that spent more on environmental programs; on the other hand, they were more likely to locate in states that had more stringent and numerous environmental programs (perhaps, Stafford suggests, because this made the regulatory environment more certain). Berman and Bui (2001) study the effect of local air quality

regulations and find that they have virtually no impact on employment, but when Keller and Levinson (2002) examine the effect of pollution abatement costs on levels of FDI going to specific U.S. states, they find that higher costs do deter investment (whether or not this sets off a race to the bottom is clearly another matter). According to Levinson (2003: 96), while a number of empirical studies have examined the impact of state-level regulation on economic activity, no one has really considered the second key connection in the race-to-the-bottom argument, namely, whether regulations in one state are influenced by regulations in competing states. The regulatory consequences are considered by Saleska and Engel (1998), who state (without strong evidence) that location decisions by industry are largely unaffected by state environmental standards, but that state legislators nevertheless relax such standards in order to attract industry. Legislators, in other words, sometimes weaken regulation even when they really do not have to. Konisky (2007) makes a stronger case by examining state enforcement of various federal pollution control programs, and finds that states will adjust their level of enforcement, either up or down, depending on what competing states do. Millimet (2003) claims that the Reagan-era devolution of environmental policy from federal to state government set off a race to the top (expenditures on pollution control grew, once state finances improved in the mid-1980s), although because of various confounding factors the impact on levels of air-borne pollutants was less clear. At the county level within the U.S., List, McHone, and Millimet (2003) find that local air quality standards did affect firms' decisions to relocate: more stringent regulations encouraged firms to relocate elsewhere.

Some new regulatory initiatives do not map very clearly onto the up versus down dimension of regulatory change. That directional dimension rests upon the stringency of prescriptive rules that constrain firm behavior (greater stringency means "up" and lesser means

“down”). New style regulations are permissive and enabling rather than prescriptive and constraining. In the case of environmental regulation, this is particularly true of cap-and-trade systems, where government creates a new form of property in the right to emit a certain amount of pollutant in a given year, then creates a market in that property, and finally regulates overall annual emissions by setting a cap on the total number of emission rights (Gorman and Solomon 2002). As a policy, it does fix the overall level of pollution (for example, only so much sulfur dioxide emitted per year) but it gives firms who pollute the flexibility of a market – they decide on their own how much to pollute and therefore how many permits to purchase, and can easily fold this decision into their other spending decisions. The system as a whole constrains the overall amount of pollution, but it gives individual firms considerable freedom. Does creation of a cap-and-trade system mean that regulation has become more stringent? The answer is not simple, but it raises the possibility that regulatory convergence may be neither up nor down.

In both regulatory areas, labor and the environment, there has been strong rhetoric about the dangers of a race to the bottom. The causal relations that underpin a race to the bottom (or top) are quite complex, and many studies of regulation at best tease out only a subset of them. But overall the evidence seems to suggest that full blown races are unlikely to break out. If it is true that regulatory differences can affect where firms locate, it is also true that firms’ locational decisions are heavily determined by non-regulatory considerations (and, obviously, the importance of regulatory costs will vary from one industry to the next, and will depend on the type of regulation). For international regulatory races, the fact that most FDI flows among North America, Europe, and Japan suggests that higher regulatory standards in these regions are not such a significant liability as compared to the much lower standards in place elsewhere in the world. Furthermore, if it is true that in democratic polities politicians care about investment and

economic growth, it is also true that citizens in those polities care about the environment (as inhabitants of a physical space), about labor rules (as workers), and about the quality of the products they purchase (as consumers). In addition, firms care about market access, and if the market is big enough they will live with higher regulatory standards (Vogel 2000: 269). This is called the “California effect,” in recognition of the state of California’s ability to set emissions standards for automobiles that are higher than in the rest of the U.S. In fact, compliance with higher standards may be advantageous to some businesses if their competition is out of compliance or finds it harder to comply. And whether elected politicians perceive it as in their interest automatically to match the weaker regulations of a neighboring community sometimes has little to do with whether regulatory differences actually lead to differences in economic growth and investment. Politicians sometimes pursue policies for their symbolic impact, not their substantive effect, especially when symbol and substance are not closely connected. The overall outcome, across different jurisdictions, may not be convergence so much as stable divergence, in which for political and economic reasons nations or states occupy distinctive and largely stable “regulatory niches” (Radaelli 2004). There may be some “racing” within niches, as, for example, countries with high value-added high-quality high-wage production regimes compete with each other in raising standards (or conversely, as low-wage low-productivity countries compete to cut costs by lowering standards), but there is less regulatory competition across niches.

### **Securities Regulation: A Race to the Top?**

As we discussed in the section on theory, races to the top are most likely to occur under circumstances where politically powerful interests estimate that the benefits of regulation will outweigh the costs. Such a calculation is particularly likely where there are substantial

informational asymmetries and the quality of a good or service is difficult for consumers to determine. Because more stringent regulatory standards can be powerful signals of quality, producers may prefer to operate under them even when they are expensive to meet.

One case where one might expect to observe a preference for stricter standards is securities regulation. Corporations issuing equities need to convince potential investors that insiders will not expropriate their returns once the investment is sunk. Although there is no perfect way to make this case, regular disclosures of financial information can go a long way toward reassuring investors. The problem, however, is that corporate insiders cannot creditably commit *ex ante* to publish financial information that it would not necessarily be in their interests to reveal *ex post*. Strict regulations mandating disclosure are a way to resolve this commitment problem. Moreover, disclosure reduces the research costs that those with savings must bear in order to find appropriate investments and in that way further increases the market for securities (Coffee 1984, Stulz 2008).

If disclosure rules enhance corporations' ability to raise funds on the capital markets, then in a competitive context one would expect firms to prefer to issue their securities in places that have them (Mahoney 1995, Romano 1998, Stulz 2008). Although some early research belied this expectation (Stigler 1964, Benston 1973), there is much evidence to support it in more recent studies. After the New York Stock Exchange instituted new rules in 1896 that made the annual publication of audited financial statements a requirement for listing, the share values of firms listed on the NYSE increased dramatically, as did the number of listings, trading volume, and the price of a seat on the exchange (Davis and Neal 2007). La Porta, Lopez-de-Silanes, and Shleifer (2006) coded the laws regulating securities issues for 49 countries and found that mandatory disclosure was strongly and positively associated with the ratio of equity market capitalization to

GDP, the number of listed firms per capita, and trading volume relative to GDP. Similarly, Doidge, Karolyi, and Stulz (2004) found that foreign companies that cross-listed in the U.S. had ratios of equity market to book value (Tobin's  $q$ ) that were significantly higher than others from the same country, even after controlling for specific characteristics of the firms. Firms that issue securities in countries with comparatively lax regulatory standards often attempt to compensate for the negative reputational effect by voluntarily complying with the U.S.'s stricter standards (Jackson and Pan 2001, Coffee 2002).

If stringent securities regulation can increase the market for a firm's securities, then one might expect that jurisdictions eager to attract (and tax) such transactions would race to provide appropriate rules. Critics of the Securities and Exchange Commission (SEC), such as Romano (1998), have argued that regulation in the U.S. could be improved by encouraging states to compete for the business of issuing securities, just as they do for corporate charters.<sup>2</sup> But the simple fact of the matter is that there was nothing to prevent states from running such a race to the top before the passage of federal securities laws in the early 1930s, and they just did not do it. Although general incorporation statutes from the mid-nineteenth century often included some disclosure provisions, these rules largely disappeared from the statutes over time (Kuhn 1912, Cadman 1949, Hawkins 1986, Baskin and Miranti 1997). Indeed, as late as the 1960s, just fourteen states required corporations to make annual reports to their shareholders, and only two required that the reports be certified by public accountants (Cary 1974). Nor were the so-called "blue-sky" laws that states passed in the 1910s and '20s a good substitute for disclosure regulation. These statutes required brokerage firms selling securities in a state to obtain a license and file regular financial reports. Sometimes they also empowered the state's banking commissioner to review securities offered for sale and bar those that did "not promise a fair

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<sup>2</sup> Romano (2001) and Choi and Guzman (1998) have extended this argument to the international context.

return” (Loss and Cowett 1958; Macie and Miller 1991). The problem, however, was that regulators seem to have been unable to distinguish fraudulent securities from those that were simply highly risky. So even in states with strong blue-sky regulations, investors often simply ignored the regulators’ warning. They could still buy high-yield securities marketed by mail or telephone because, as part of interstate commerce, these sales beyond the states’ control (Macey and Miller 1991; Brandi 1987).

Although one might expect states with the largest securities industries to have jumped on the blue-sky bandwagon in order to enhance the reputation of their capital markets, the pattern was just the opposite. Investment banks, which should have been the primary beneficiaries of any imprimatur of quality the legislation conferred, vigorously opposed such laws, as did utilities and other businesses that issued large amounts of securities, and they successfully blocked the passage of strong statutes in states where they had an important presence. According to Macey and Miller (1991), investment bankers and their customers had an interest in curbing disreputable securities issuers, but they recognized that the main proponents of the legislation were small banks and savings institutions who aimed to limit the competition for savings that even legitimate issuers posed. As Murphy (2004) would have predicted, therefore, the legislative pattern owed more to the relative strength of the interests pro and con in each state than to regulatory arbitrage (Macey and Miller 1991; Mahoney 2003).

Blue-sky regulation generally did not apply to securities traded on the organized exchanges, but there does not seem to have been any regulatory race among those bodies either. Three decades after the NYSE instituted its new listing requirements, other important markets in the U.S. still had not followed suit (Ripley 1927).<sup>3</sup> Yet trade on those exchanges was booming,

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<sup>3</sup> Mahoney (1997) has argued for going back to this earlier system of regulation by exchange, but he does not examine the historical evidence for any exchanges but the NYSE.

as was the over-the-counter-market (O'Sullivan 2007; Federer 2008). Large, well-established enterprises stood to benefit from listing on the NYSE, but smaller, more entrepreneurial firms could not meet its size, earnings, and share-value thresholds and, in addition, had relatively little to gain from disclosing their comparatively irregular pattern of earnings. Because investors evinced a willingness to purchase such high-yield securities regardless of the lack of transparency, the regional exchanges had no reason to impose New York's disclosure rules.

The stock market crash of 1929, of course, changed the situation, and the federal government stepped in to regulate securities issues with the passage of the Securities Act of 1933 and the Securities Exchange Act of 1934. These laws required companies that sold stock to the public or whose securities were publicly traded to file detailed annual financial reports. The 1934 Act also created the Securities and Exchange Commission (SEC) to enforce the law, to regulate the exchanges on which securities were traded, and to promulgate regulations for safeguarding investors against corporate fraud and abuse (McCraw 1984). In recent years an increasing number of countries, including all members of the European Union, have imitated the U.S. by creating SEC-type regulatory agencies (Prentice 2006). This emulation may be the product of an international race to the top, but if so, there is evidence that the countries involved may not have a very precise understanding of how the race should be run. Regulatory regimes are complicated bundles of laws, organizations, and administrative practices. Emulators are likely to copy some features and not others (Coffee 2007), and the ones they choose may not be the most significant. For example, La Porta, Lopez-de-Silanes, and Shleifer (2006) find that disclosure requirements are much more strongly associated with the ratio of stock market capitalization to GDP and other measures of strong capital markets than is the existence of an SEC-type regulatory commission. The Netherlands has such a commission, but its disclosure

standards are significantly weaker than those of the U.S. Closing the disclosure gap, La Porta and his co-authors estimate, would increase the ratio of stock market capitalization to GDP in the Netherlands by 0.27!

Even races to the top can cause firms to exit from jurisdictions with stringent regulations. In response to Enron's failure in 2001 and a series of other corporate governance scandals, Congress took steps to beef up financial reporting and disclosure rules by passing what is known as the Sarbanes-Oxley bill in 2002. The action might be seen as an attempt to maintain the regulatory high ground, but the increased stringency came at a cost that some firms chose not to bear. A number of smaller public companies decided to go private, and a number of foreign companies delisted from U.S. exchanges (Wilda 2004; Skouvakis 2005; Coffee 2007; Doidge, Karolyi, and Stulz 2008). In both cases those in control of the firms in effect calculated that escaping the increased regulatory burden was worth the resulting loss of access to capital markets. Doidge and his co-authors (2008) found that the foreign firms most likely to make this determination were those in slow growing industries that were unlikely to need to raise additional funds on the market. Rather than leading to a regulatory race to the top, Sarbanes-Oxley may simply have instigated a rearrangement of firms' regulatory homes according to the preferences of their managers or controlling shareholders. In this example of Tiebout sorting (Coffee 2002), however, minority shareholders in firms that chose laxer jurisdictions could well end up as victims.<sup>4</sup>

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<sup>4</sup> On sorting and the value of geographic differentiation in securities regulation, see Choi and Guzman (1998).

## **Banking Regulation: The Race to the Top that Wasn't**

One might think that bank regulation, even more than securities regulation, would fit the race-to-the-top model. After all, banks always have to worry about attracting funds in the form of deposits from the public in general, and so one might expect them to value a regulatory environment that enhanced savers' confidence that their money would be safe (Smith and Walter 1997). The history of bank regulation suggests otherwise, however. Competition among jurisdictions has played relatively little role in defining regulatory practice, and in the few cases where it has, the effect has mainly been to lower rather than raise standards.

During the nineteenth century, policy makers in one state did not have to worry about how their banking regulations compared to those of other states. The type of commercial lending in which banks specialized required local knowledge, so banks that did not have offices in the areas where they were making loans were at a disadvantage in securing information about borrowers' creditworthiness. Moreover, until the 1860s, banks had to secure charters from the relevant state government in order to be able to operate in an area. (The only exceptions were the First and Second Banks of the United States, chartered by the federal government for the years 1791-1811 and 1816-1836 respectively). There was considerable variation across states in the number of banks chartered, the provisions written into the charters, and the way the banks were regulated—for example, some states had unit banking systems, some allowed branching, some had state monopolies—and there was little convergence in regulatory practice over time (Bodenhorn 2003).

During the Civil War, the federal government created the National Banking System with the dual aim of creating a uniform national currency and inducing banks to buy Union war bonds. The new system was national only in the sense that participating banks were subject to

federal regulation. Banks that took out national charters still could only operate in their home states. They were not allowed to branch until the passage of the McFadden Act in 1927, and then could only do so in states whose own laws permitted branching. Not surprisingly, most banks did not see any advantage in a national charter. When they balked at converting, Congress imposing a discriminatory tax on the currency issues of state banks, and virtually all of them joined the national system.

The growth of deposit banking during the last quarter of the century made currency issues increasingly irrelevant for a bank's profitability, creating an environment in which state-chartered institutions could thrive even if they could not issue banknotes.<sup>5</sup> States began to pass enabling legislation for new kinds of bank-like institutions, most importantly trust companies, and by the 1890s the number of financial institutions with state charters surpassed those in the national system (James 1978, Neal 1971, White 1982). As a general rule, the regulatory costs that states imposed on the institutions they chartered were less than those of the federal government. Capital sufficiency and reserve requirements were typically lower and supervision was inevitably laxer. The differential in the regulatory burden never induced a general shift from federal to state charters, however. National banks tended to be large, well-established institutions with prestigious commercial lending businesses. Not only did they prefer to keep their national charters, but they sought to impose more stringent regulatory standards on the financial community as a whole—in part to prevent entrepreneurial upstarts from taking advantage of lower reserve requirements to offer higher interest on deposits, and in part to protect themselves from the contagion that failures of any of these upstarts could incite (Lamoreaux 1994). Nonetheless, competition between the states and the federal government to

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<sup>5</sup> Of course, after the creation of the Federal Reserve System in 1913 even national banks lost their right to issue currency.

charter new financial institutions does seem to have sparked an erosion of standards, which periodic financial crises and the creation of the Federal Reserve System did little to reverse. To the contrary, the federal government responded to the growth of state banking by lowering its capital and reserve requirements. Many states in turn reduced theirs even further, and the number of state-chartered financial institutions continued to grow relative to national banks (White 1982 and 1983).

This race-to-the-bottom dynamic in a context where one might expect a race to the top is puzzling, but the explanation may reside with the particular policy dimensions along which this competition was waged. The imprimatur of quality that possession of a national charter conveyed does not seem to have been valuable enough in the eyes of the public to offset the costs of higher capital and reserve requirements. Until the Great Depression savers seems to have been perfectly willing to accept a tradeoff between higher interest on deposits and lower reserve requirements, perhaps because they expected the risk of default to be low over their relevant time horizon. In the aftermath of the banking panics of the early 1930s, the terms on which they were willing to make the tradeoff became steeper, and the advent of deposit insurance changed preferences even further, encouraging state banks voluntarily to submit to federal regulatory standards in order to obtain this certificate of quality.<sup>6</sup> As memories of the Great Depression faded, however, there was something of a shift back, and especially during the 1970s banks began to pull out of the Federal Reserve System in large numbers, though not out of the Federal Deposit Insurance Corporation (Butler and Macey 1988).

This time, however, the federal government responded by using the expanded authority it had amassed as a result of the Depression to stamp out any resurgence of regulatory competition.

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<sup>6</sup> Eight western and southern states experimented with deposit insurance during the early twentieth century. Their experiments may have accelerated the shift to state charters, but all these systems collapsed during the 1920s when falling agricultural prices caused large numbers of farmers to default on their loans. See Calomiris 1990.

The Depository Institutions Deregulation and Monetary Control Act of 1980 imposed federal reserve requirements on all banks, whether they were members of the Federal Reserve System or not (Butler and Macey 1988).<sup>7</sup> Although competition for savers' dollars from brokerage houses and other non-bank financial institutions ultimately forced the federal government to relax significantly the rules it imposed on the banking sector, the driver for this change was not a regulatory race but rather pressure from powerful banking interests that wanted to expand into more profitable segments of the financial markets (Butler and Macey 1988). Similar pressures on state governments to allow banks to branch across state lines do seem to have spurred a race to deregulate (Skalaban 1992), but whether this was a race to the bottom or to the top—that is, whether it made the financial system more efficient or undermined the effectiveness with which it served local businesses—is a matter of ongoing disagreement. As Skalaban (1993) has argued, moreover, states with histories of cooperation in other policy areas were able to coordinate their deregulatory moves to their mutual benefit, with the past experiences providing a reservoir of trust and channels of communication that allowed them to overcome the prisoner's dilemma aspects of the regulatory race.

The same kinds of factors that kept states from competing with each other to attract banks for most of U.S. history also kept regulatory competition from heating up in the international arena until the late twentieth century. By the 1980s, however, economic and regulatory changes had increased international as well as interstate competition in banking (Kane 1987, Trachtman 1991, Schooner and Taylor 1999). Financial institutions in the U.S. and Europe complained that banks from countries where capital requirements were lax (most notably Japan) had an advantage in securing business in world markets, and they induced their governments to put a

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<sup>7</sup> By demonstrating that the states no longer had much if any ability to compete with the federal government in this arena, Butler and Macey (1988) convincingly refute Scott's (1977) argument that competition between state and federal authorities in the post-World War II period improved the efficiency of bank regulation.

stop to this incipient regulatory race to the bottom—to cooperate to overcome the underlying prisoner’s dilemma game (Genschel and Plumper 1997). The outcome was the 1988 Basel accords, which pegged capital requirements to the riskiness of the assets on banks’ balance sheets.<sup>8</sup>

The important point to take away from this discussion is that whatever imprimatur of quality stringent regulation of banking may have provided has never been sufficient to spur a race to the top. Banking regulation has sometimes displayed characteristics of a race to the bottom, but more generally the contours of regulatory policy—at the state, federal, and even international levels—have been shaped by the interests of politically powerful banks. Banks generally have favored regulations that protected them from competition, and sometimes those have increased the soundness of the banking system by raising capital and reserve requirements.<sup>9</sup> At times, however, they have also lobbied to relax rules that prevented them from moving into profitable new areas of business (Butler and Macie 1988). As recent events have underscored, the consequence of such changes could be to increase banks’ vulnerability to financial crisis.

### **Is the Direction of the Race (or Even the Existence of a Race) Always Clear?**

One of the most often cited examples of a race to the top, corporate chartermongering, has also been often described as a race to the bottom. During the nineteenth century almost all corporations obtained their charters from the states where their businesses were located. This practice changed in a dramatic way when New Jersey revised its general incorporation laws in

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<sup>8</sup> The Basel treaty seems to have had little effect on the competitiveness of Japanese financial institutions (Wagster 1996), but it had the unintended consequence of encouraging banks to shift risky assets off balance sheet and thus contributed to the recent financial crisis (Eichengreen 2008).

<sup>9</sup> In U.S. history, however, the main form that such efforts to forestall competition took were rules against branching that increased banks’ vulnerability to local shocks. See Bordo, Rockoff, and Redish 1994; and Calomiris 1990 and 2000.

1888. Under existing state statutes corporations generally could not own stock in other corporations, and two corporations could only merge if one of them dissolved and the other purchased its assets. The New Jersey revisions created a streamlined process for mergers and enabled one corporation to acquire shares in another. Over the next couple of decades, large firms involved in the period's successively larger waves of mergers switched to New Jersey charters to facilitate their activities, and the state, which taxed corporations on the basis of their authorized capital stock, found its revenues soaring (Butler 1985, Grandy 1989).

New Jersey's flush treasury inspired a number of other states to copy its statutes in order to attract corporate charters. The result, complained the U.S. Commissioner of Corporations, was a race to the bottom, "an inevitable tendency of State legislation toward the lowest level of lax regulation" (1904: 40). Progressive reformers in New Jersey succeeded in toughening up their state's incorporation law in 1913, but after suffering several years of corporate defections and falling tax revenues, the state backtracked. By then, however, Delaware had already secured its place as "the mecca of corporations" (Grandy 1989, Butler 1985).<sup>10</sup> To maintain that position the state continually revised its incorporation laws. The result, critics charged, was an ongoing "deterioration of corporation standards" (Cary 1974) that allowed managers to take advantage of the growing separation of ownership from control in large-scale enterprises to pursue their own ambitions to the detriment of shareholders (Berle and Means 1932; Nader, Green, and Seligman 1976; Bebchuk 1992; Bebchuk and Ferrell 1999; Bebchuk, Cohen, and Ferrell 2002).

Other scholars have challenged the view that chartermongering led to an erosion of regulatory standards and have insisted to the contrary that it spurred a race to the top (see

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<sup>10</sup> As Christopher Grandy (1989) has argued (building on Romano 1985), Delaware's small size was an advantage in this competition because it enabled the state to undercut other states' tax rates. Once it won the competition, moreover, Delaware's relative dependence on corporate tax revenues enabled it credibly to commit not to tamper with its corporate statutes the way New Jersey had.

especially Romano 1985, 1987, and 1993b). These scholars acknowledge that competition for charters induced states to eliminate restrictions on managerial decision-making (Winter 1977), but they argue that the interests of stockholders and managers were aligned. Hence the only states that would do well in such a competition would be those that enabled the two groups to maximize their joint welfare (Fisher 1982; Easterbrook 1984).<sup>11</sup> If incorporating in Delaware allowed managers to benefit themselves at the expense of shareholders, they point out, the market value of companies switching to Delaware charters should suffer. Yet the empirical record shows just the opposite result. Not only is there no penalty for reincorporation in Delaware (Dodd and Leftwich 1980, Romano 1985), but Delaware corporations have higher market valuations relative to the book value of their assets (Tobin's q) than similar firms domiciled in other states (Daines 2001).

This evidence is not quite as simple to interpret, however, as supporters of the race-to-the-top position claim. Firms that decide to reincorporate in Delaware usually do so at a time when they are making other major changes, such as pursuing important acquisitions or reorganizing their structures (Romano 1985). As a consequence, it is difficult to disentangle empirically the effects of those changes from the decision to shift their charters to Delaware (Bebchuk, Cohen, and Ferrell 2002). It is safe to say, however, that any penalties stockholders impose on companies for incorporating in Delaware are not very large. But, for that matter, neither are any premiums.

It is also possible that the decision to secure a Delaware charter may have less to do with the details of its laws regulating corporate governance than with other benefits of incorporating

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<sup>11</sup> One could argue that the original New Jersey legislation had real benefits as well. Before the law regularized the merger process, a minority of shareholders could extract returns by refusing to approve a motion to dissolve. Also, controlling shareholders could sell out to majority interests in the acquiring corporation, leaving other investors with shares in a company that was little more than a shell. The New Jersey law both prevented holdup and also gave investors who opposed a merger the right to be bought out at fair market value.

in the state. Once Delaware won the chartermongering competition, its courts acquired unparalleled expertise in corporate law through the large number and variety of cases they heard and the legions of talented corporate lawyers who were attracted to the state bar (Kamar 1998, Bebchuk and Hamdani 2002). Because firms making the kinds of major changes that can spur a shift in domicile are likely to face increased litigation, the legal capabilities Delaware has accumulated are particularly valuable to them (Romano 1985). Indeed, according to Bebchuk and Hamdani (2002), Delaware's complementary capabilities in corporate law have given it such a formidable position in the market for incorporations that the race, whatever its direction, is for all practical purposes over.<sup>12</sup> Kahan and Kamar (2002) agree, arguing that the spread of the Model Business Incorporation Act in the late twentieth century is good evidence that other states have effectively abandoned the field to Delaware. Why else would they entrust the design of their incorporation statutes to an expert committee of the American Bar Association? Intriguingly, however, Daines (2002) has found in an analysis of initial public offerings (IPOs) that states that passed the Model Act retained larger numbers of incorporations relative to Delaware than those that did not. He interprets this result as evidence that corporations value stability and predictability in the law, but since the Model Act had converged substantially on Delaware law by the time of his study, it could also be evidence that regulatory-race considerations had affected the drafting of the Model Act (see the discussion of uniform laws below).

To the extent that there is ongoing regulatory arbitrage in the area of corporate law, the contest seems to have shifted to two forums: the first is a bilateral competition between a corporation's home state and Delaware (Bebchuk and Hamdani 2002, Daines 2002); the second

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<sup>12</sup> A recent effort by stockholder activists to restart the race by inducing North Dakota's legislature to pass a stockholder friendly incorporation statute is not thought likely to have much effect. Indeed, even its proponents see it more as a rhetorical effort to influence Delaware law than anything else (Tuna 2008).

is a bilateral competition between Delaware and the federal government (Roe 2003). Taking the second forum first, Roe (2003) has argued that the main threat that Delaware faces to its hegemony is the possibility that federal regulation of corporations could undermine the advantages of its legal system and hence the value of a Delaware charter. Certainly, proponents of the race-to-the-bottom view of corporate chartermongering have repeatedly called upon the federal government to take responsibility for chartering and regulating large corporations (Cary 1974; Nader, Green, and Seligman 1976; Seligman 1990; Bebchuk 1992). Moreover, the wave of corporate governance scandals that followed the collapse of Enron in 2001 resulted in a major incursion by the federal government (in the form of the Sarbanes-Oxley bill of 2002) into areas that had previously been the domain of state law. As William B. Chandler III, Delaware's chancellor, and Leo E. Strine, Jr., its vice-chancellor, have acknowledged (2003), the principles embodied in Sarbanes-Oxley echo "best practices" long supported by the Delaware courts. But, they point out, the prescriptive way in which they are realized in the statute contrasts sharply with Delaware's "enabling" approach, whereby corporate boards "are given wide authority to pursue lawful goals" subject to constraints such as fiduciary duty and stockholders' approval for certain types of key decisions. There is, of course, considerable debate over whether Sarbanes-Oxley's more prescriptive approach, however well-intentioned, represented a move toward the top or the bottom (see, for examples, Ribstein 2002, Holmstrom and Kaplan 2003, and Morrissey 2003). Regardless, Delaware's leading justices consider it a "destabilizing" threat that endangers the traditional "relationship among the federal government, the Stock Exchanges, and the states in shaping our overall system of corporate law" (Chandler and Strine 2003). Their call for the states (read Delaware) to take charge and become "a source of creative and responsible

reform” suggests that the desire to forestall additional federal legislation may well spur a race to the top.

As for the first forum, some scholars have argued that managers of incumbent firms have substantial political clout in their home states and have used their influence to secure favorable legislation, particularly to protect themselves against hostile takeovers. The result, they argue, has been a race to the bottom. States that had strong antitakeover statutes were less likely to lose corporations to Delaware, which was a laggard in this area, though Delaware ultimately responded to this threat to its dominance with antitakeover measures of its own (Bebchuk and Ferrell 1999; Subramanian 2002; Bebchuk and Hamdani 2002; Bebchuk, Cohen, and Ferrell 2002). Proponents of the race to the top view have countered by emphasizing the comparative mildness of Delaware’s statutes and the lack of evidence that stockholders have punished businesses for reincorporating there (Netter and Poulsen 1989, Jahera and Pugh 1991, Romano 1998; see also Kahan and Kumar 2002). They also point out that the most draconian antitakeover statute, Pennsylvania’s, provoked opposition from shareholders who threatened to pull out their funds. The protests kept other states from copying the Pennsylvania law and also induced a majority of Pennsylvania corporations to take advantage of an opt-out provision of the law to mollify shareholders (Romano 1993a and 1998).<sup>13</sup> However, Subramanian (2002) views the experience of Pennsylvania, as well as several other states that also passed strong antitakeover laws, as evidence that there are limits to what is otherwise a race to the bottom—that at some point stockholders impose penalties on states that “overreach” in passing manager-friendly legislation.

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<sup>13</sup> More generally, as Easterbrook and Fischel (1983) have argued, corporations often do not take advantage of provisions that would benefit managers at the expense of stockholders out of fear their market valuations would suffer as a consequence.

Finally, it is important to acknowledge that the antitakeover statutes passed by states such as Pennsylvania may have been less the result of a regulatory race than of standard interest-group politics (see the discussion of other sources of regulatory uniformity below). Stockholders are often scattered all over the country or even the world and thus are likely to have less influence on legislatures than the managers of corporations headquartered within the state (Romano 1993b). Moreover, most states have relatively little to gain from competing for charters. For large states, the additional revenues that could be garnered from challenging Delaware's dominance are too small relative to their overall budgets to provide much in the way of tax relief; for small states, the additional investments that would be needed to upgrade their court systems to be competitive with Delaware's are too costly. States also have relatively little to lose if corporations decide to seek charters elsewhere. When companies change their state of domicile, they typically do not move their headquarters, let alone their production and marketing facilities, and states can (and most do) tax corporations on the amount of business conducted within their bounds, regardless of where they are chartered (Bebchuk and Hamsani 2002; Kahan and Kamar 2002).

### **Other Sources of Regulatory Uniformity**

Races to the top or bottom produce some degree of regulatory uniformity, and so one might be tempted to use such uniformity as evidence for a prior race (and then use regulatory standards to judge whether the race had gone up or down). That would be a mistake, however, because uniformity can result from other processes as well. We discuss three below, but the fact that all can produce similar results underscores the importance of studying all the causal connections that together produce a regulatory race. It is not adequate simply to examine the final regulatory outcome.

One process that can generate uniformity is what we might term “regulatory imitation.” Through much of the 19<sup>th</sup> and 20<sup>th</sup>-centuries, legislators in many states met for limited periods of time, held other jobs, and were in effect “amateurs”. Thus, they possessed little of their own expertise or independent experience in the development of regulatory legislation. One strategy for dealing with complex or novel issues that surpass the expertise of the decision-making body is to consider what others in a similar situation are doing. This “imitation” heuristic is a common feature of organizational decision-making (Levitt and March 1988: 329-331, March 1978: 604), and legislative bodies are no exception. At the same time, highly variable levels of economic and political development meant that some states acted as “leaders” in public policy (frequently New York, Massachusetts, and Wisconsin played this role), while others acted as followers. This raises the possibility that a diffusion-process, engendered by a combination of innovation followed by imitation, could produce regulatory uniformity. States need not be competing with other states, for they might simply be using each other to supply potential solutions to common problems. A leader state discovers or invents one solution (a new type of policy or regulatory apparatus) and then others borrow it in order to deal with their version of the same problem. DiMaggio and Powell (1983) term the resulting pattern “mimetic isomorphism.” Imitation-based regulatory convergence would look like the outcome of a regulatory race but obviously the prior process differs in that it does not centrally involve firms or investors. Furthermore, the particular regulatory standard around which states converge is not subject to a “cost minimization” logic. In races to the bottom, by contrast, all states end up with very weak regulations since those impose the lowest costs on firms. In regulatory imitation, the final regulatory standard will depend somewhat on the idiosyncracies of the particular “leading state” who devises a viable policy and then is copied by others. The final outcome will be path dependent.

Another process that could produce uniformity is “independent discovery.” Whereas regulatory imitation assumes that legislators in one state are mindful of what goes on in other states, if one assumes the exact opposite, namely that legislators are a parochial lot who only pay attention to local considerations and who are uninterested in what other states do (or who think that what other states do is simply irrelevant), then the imitation argument clearly will not work. But similarity of regulatory rules is still possible if legislators independently discover the same regulatory solutions to the same problems. Within a single country like the U.S., purely independent discovery seems unlikely, but however much the outcome looks similar (convergent regulations) the prior causal process would be sharply different from either imitation or a regulatory race. Firms and investors would not have an “exit” strategy, and there would not be the “diffusion” pattern so characteristic of imitation processes (an s-shaped curve as an innovation is adopted by a few leaders who then set off an imitation process that accelerates until most states have adopted, at which point the rate of adoption decreases).

A third possibility consists of “convergence by design.” Uniform laws across states can result from a deliberate legal strategy that has nothing to do with inter-state competition, independent but parallel action, or inter-state emulation. In the late nineteenth century, the American legal profession launched just such a strategy, intending to get all U.S. states to adopt similar laws and thereby achieve an important measure of uniformity. Members of the newly-formed American Bar Association (ABA) argued that standardized and predictable laws were valuable, especially for business, but that in a federal system this could not be achieved directly through national legislation. Rather, similar laws had to be passed in each state. In 1892, the ABA created the National Conference of Commissioners on Uniform State Laws (NCCUSL). This group, which met annually and included representatives from a growing number of different

states, then set about determining a number of legal areas in which uniform laws made sense, focusing mostly on commercial laws but also including several social laws. The general argument made by lawyers in favor of uniform laws was that the legal needs of commerce were universal and that since commerce usually crossed state boundaries, inconsistent laws were a serious problem (Pound 1909, Smith and Chalmers 1916). One prominent author (Stimson 1895: 28-29) made a strong plea for the desirability of a uniform corporation law on these sorts of grounds. Inconsistent legal meanings of “marriage” or “divorce” were also perceived as problematic (situations where people were considered married in one state, but not in another, presented serious difficulties). However, in general the uniform law movement stressed commercial over social legislation (Guild 1920). For example, a Uniform Negotiable Instruments Act was finalized in 1896, and by 1914 had been adopted in forty-five states and territories (Smith 1914). Almost as successful was the Uniform Warehouse Receipts Act, passed in thirty states by 1914. A series of commercially-relevant laws were negotiated separately (a Uniform Stock Transfer Act and a Uniform Bills of Lading Act were finalized in 1909, and others uniform bills followed), but eventually the UCCUSL took a more comprehensive approach and devised the Uniform Commercial Code (Anon. 1910, Dunham 1965).

Procedurally, a special commission of legal experts was appointed for each area, and over a period of years the members would negotiate a draft law. This would be circulated for commentary and reactions, but eventually the commission would settle on a uniform law, and then would urge state legislatures to adopt it. Occasionally, uniform laws would be updated, a new version would be issued, and the adoption process began anew. It is not entirely clear what criteria were used in the early period to select specific legal areas, but some analyses of recent developments (for example, Janger 1998) suggest that reforms can be “captured” by interest

groups and that the areas selected would be determined by the interests of the dominant group. The NCCUSL itself was not a powerful interest group, but it did possess legitimate legal expertise that many state legislatures lacked. The evident neutrality of its recommendations was underscored by the fact that members did their work pro bono, and commissions clearly aimed at crafting laws that were highly enactable. Some recognized that business groups would be natural allies in the pursuit of uniform commercial laws (Brewster 1897: 139), but this inadvertently raised the possibility of capture if the “allies” became unduly influential.

Some uniform laws were more successful than others in the sense that they were adopted by a higher proportion of states. And some states were much more likely to adopt uniform laws than other states (Armstrong 1991: Appendix D). There appears to be no systematic research on either of these patterns, although multiple factors are at work. At least proximately, the “supply” of uniform laws eligible for adoption was determined by the NCCUSL and it surely did not design a uniform law unless it thought states would be receptive to adoption. Why the NCCUSL devised a Negotiable Instruments Act in 1896, a Child Labor Act in 1911, and a Chattel Mortgage Act in 1926, is not obvious, but clearly the NCCUSL prioritized some legal areas over others, and was constrained by limited resources. Learning over time, the NCCUSL may have acquired a sense of which kinds of laws “worked” (that is, were readily adopted), which did not, and so targeted areas where the chances of adoption were better. Nor is it clear why North Dakota was a much more enthusiastic recipient of uniform laws (adopting 107 by 1991), than South Carolina (which adopted 49 by 1991) or Mississippi (only 40 uniform laws). Uniform law promulgation and adoption is a separate topic in its own right, but will be relevant here to the extent that the UCCUSL devised uniform laws with regulatory consequences (for example, a Child Labor Act) and did so independent of regulatory competition among the states.

## Conclusion

Although the four empirical literatures we surveyed cover a wide range of regulatory situations, we nevertheless can draw some useful conclusions about regulatory races. We find few unequivocal instances of regulatory races. Indeed, regulatory races, whether to the top or bottom, are much clearer in theory and in political rhetoric than they are in reality. In many situations a substantial degree of regulatory variation endures (recall the discussion of right-to-work laws), and when there are shifts in regulation up or down they are sufficiently slow and uneven that the term “race” simply misleads. The image of politicians in one political jurisdiction scrambling to reform regulations in order to compete with another jurisdiction (whose politicians also scramble in response), is as unrealistic as it is compelling.

Even in its most stylized form, a regulatory race depends upon a quite complex set of political and economic causal connections. If any of these do not occur, or if their impact is mediated or attenuated in some fashion, or if they are swamped by other factors, what results is not a race. This causal complexity poses a challenge to social science for it is difficult to study the entire process. And in fact, much of the research we surveyed views only one or two parts of the process, and rarely examines the whole chain of connections. A more panoptic research design would clearly be desirable.

At the core of a regulatory race lies a firm’s choice about where to do business. Many factors weigh on a firm’s decision about whether to locate in one jurisdiction versus another. The impact of regulation on the firm’s profits is but one of these, and often it is not the most important. Regulation is one of a large number of attributes that are bundled together in a particular jurisdiction and which affect the performance of the firms positioned there. Moreover, the relative size and salience of regulatory costs will vary by industry and economic sector, and

thus so will the strength of regulatory competition. For example, among U.S. states, right-to-work (RTW) laws can lower production costs sufficiently to encourage manufacturers to make a short distance move from a non-RTW state to an adjacent RTW state. But between U.S. states or among NAFTA countries, variably stringent environmental regulations have had small rather than dramatic effects.

Regulation will weigh more heavily when “location” is more a purely legal matter than a physical reality. It is one thing to move a factory, lock stock and barrel, from one state to another since such a shift will simultaneously affect the firm, and its constituents and stakeholders, along many dimensions. It is quite another to recharter the firm in a different state when that has no effect on operations but subjects the firm to different corporation laws. Physical relocation is much more costly than legal relocation, and so there will be less sensitivity to cost differences produced by regulation in the first case as compared to the second. Thus, we are not surprised to see a stronger regulatory race pattern in the case of corporate charters than in the other kinds of regulation, but even there it is not so clear when a firm decides to shift its charter from New York to Delaware, for example, that its decision is driven narrowly by differences in corporation law. Rather, it appears that other collateral differences (having to do with the expertise of the state bar and predictability of state judges) may weigh more heavily in such a move.

Races to the bottom have received the most attention, but races to the top occur about as frequently. And like races to the bottom, races to the top do not always happen where we would expect them to. Adopting more stringent labor standards to enhance the perceived quality of textile goods reduces sweatshop production in some market niches (for example, college wear) but it does not abolish sweatshop production everywhere. Enduring uncertainties about bank solvency would seem to invite more rigorous regulation that offered some assurance to

depositors, and yet the history of state-level bank regulation shows little evidence of a race to the top. And when other countries adopt U.S. SEC-style securities regulations, they do so in such a selective and even haphazard fashion that the overall process bears little resemblance to a race.

Regulation is shaped by many forces, not just the locational decisions and prospective decisions of firms. In setting their own regulations, political jurisdictions are undoubtedly influenced by what other jurisdictions do. Politicians are selectively mindful of their counterparts elsewhere, and can respond to the actions of peer groups. But internal pressures that come out of the domestic political economy also powerfully influence regulatory decisions. Their continuing importance is one reason why we see an overall pattern that resembles “Tiebout sorting” (Tiebout 1956, Donahue 1997). Elected politicians are responsive to the demands of the business community, and they are also responsive to voters and other interest groups. Different internal configurations of political and economic interests beget distinctive and durable regulatory regimes, despite convergent pressures either up or down. Sometimes voters and interest groups demand public policy that their own business community may not like. Most obviously, voters may seek environmental regulations that raise the cost of doing business in a particular jurisdiction. Or interest groups may press for protective labor legislation, and by redefining the issue from “higher labor costs” to “protecting mothers and children,” were able during the Progressive era to set workday limits for female and child workers. Popular regulatory impositions may be tolerable, and even desirable, to an industry if its public image is enhanced (firms that comply with high standards are viewed as “good corporate citizens”), if regulations set standards that provide quality assurances, or if compliance ensures continued access to large markets (the “California effect”). In such cases, regulation switches from cost to benefit. The internal business community may also have divided interests over regulation, in which case an

internal power struggle can determine the regulatory outcome (recall the difference between small banks and investment banks over the question of securities regulation). Using Tiebout's language, we can view regulation as a public good provided by government, and in offering different levels of regulation different jurisdictions reflect the preferences and political influence of the firms and citizens who inhabit their jurisdiction. Since configurations of domestic political and economic factors are often unique to a jurisdiction, external pressures for regulatory convergence can be offset and even dominated by idiosyncratic internal forces.

Who regulates also varies, and this affects the kinds of political processes that drive regulatory reform. Ordinarily, one thinks of regulations as rules set in statutes passed by state or national legislatures. The legislators who pass those laws are politicians who are subject to the electoral process and vulnerable to political pressure. And according to the simple regulatory race model, they are especially sensitive to the threat of divestment by business. But sometimes the regulatory locus lies elsewhere, and the extent of political accountability may not be as great or as direct. Through their rulings and through the development of case law, common law judges can also set and reform regulations (recall judge-made restrictions on employment-at-will). However, judges are typically not accountable to electorates in the same manner as politicians are, and this would affect their responsiveness to political pressures. And the ability of judges to "make" regulation through case law may vary across legal families, with common law judges stereotypically more able to play an active role than civil law judges. Furthermore, U.S. states vary their rules for judicial selection (for example, whether judges are appointed or elected and by whom, their terms of office), and so within the U.S. common law system we expect that this affects the extent of judicial exposure to political pressures. But these are both issues for future research.

If judges can be creative and reinterpret statutes in a manner that creates new regulations, then others can as well. In fact, *de jure* legislation may not be a very good indicator of how legal rules work *de facto*. Judges, administrative agencies, and bureaucrats can all implement legislation in such a way that the practical effect of regulation can be quite discrepant from the formal letter of the law (much as law-in-action often diverges from law-on-the-books). While implementation of law is harder to study than simple black-letter law itself, the possibility of creative implementation in different directions means that similar laws may not have similar effects. Indeed, those who study legal transplants make exactly this point (for example, Pistor 2002). To take account of this possibility, future research should try to examine formal regulatory rules, and their implementation, in connection with outcomes, and not make assumptions about what sorts of outcomes follow from rules.

As an outcome, a number of distinct processes can produce regulatory convergence. The one of interest here is, of course, a regulatory race. But it would be a serious error to conclude that when regulations have converged across different jurisdictions, that a regulatory race has occurred. Two other possibilities have to be taken into consideration. The first we term “convergence by design.” This occurs when regulatory rules are deliberately harmonized at the behest of a body or organization whose goal is to create greater regulatory uniformity. It can happen when independent lower-level jurisdictions adopt the same rules, or when a higher-level jurisdiction adopts a rule that then applies to lower-level jurisdictions. A clear example of the former concerns the uniform law movement, led by the NCCUSL, which culminated in the promulgation of the Uniform Commercial Code (UCC). Commissions devised model laws, and urged state legislators to adopt them, without inducing or responding to competition between the states. Later adopters of a uniform law may have been responding to other states as well as to the

appeals of the NCCUSL, but the earliest adopters could only be responding to the NCCUSL. Examples of the higher-level approach include use of federal legislation to set uniform standards across states (recall Moss 1994 on phosphorus matches), or creation of international rules that supersede national regulations (for example, the Basel bank capital requirements). We have not investigated the matter systematically, but there are many organizations which, at either the state or national level, attempt to harmonize particular kinds of regulation (examples would include national or international environmental and labor organizations, various national and international trade and business associations). Any thorough study of regulatory races will have to factor in their influence and consider whose interests they represent.

Regulatory convergence can also occur because of a diffusion process. In this instance, regulatory reform spreads like a disease. Jurisdictions are embedded in a network of contacts with each other, and the first one to “catch the disease” (that is, to adopt a regulatory innovation or to undertake regulatory reform) increases the likelihood that other jurisdictions to which it is connected will also “get sick.” The mechanism of transmission can be a variety of things: simple emulation through contact, legitimation of reform because of who has adopted it, or social learning. Over time, the reform or innovation diffuses throughout the network until all jurisdictions have adopted it. Depending on the structure of the contact network, this will often produce the well-known “S-shape” diffusion curve as there is a slow rate of adoption early on, then the rate accelerates, and then it decelerates as the population approaches 100 percent adoption. In a regulatory diffusion process, different jurisdictions influence each other but they do not necessarily compete with each other. Although the outcome looks similar to a regulatory race (that is, convergence), the process is quite different. Empirically, however, it can be hard to

distinguish diffusion processes from regulatory races (for one attempt, see Boehmke and Witmer 2004).

The idea of a regulatory race presumes that government regulation can be decomposed into separable components, with each one having its own independent effect on the costs and benefits faced by firms. Depending on those effects, *ceteris paribus*, a race ensues. Looking across all the policy areas covered in our literature review, it becomes clear that regulations are not so neatly separable. In fact, we suspect that jurisdictions that impose strong regulations in one area also tend to set high standards in other areas as well. Regulation and deregulation often comes in waves that affect many issue areas at the same time, with substantial spillover effects. This raises the possibility that what drives regulatory change in one issue area is change that has occurred in a collateral area. The existing literature tends to investigate regulatory races in a balkanized fashion, one issue area at a time, but a more synthetic perspective could well uncover influences and connections that narrowly focused research overlooks.

The image of the “regulatory race” is politically useful and has been used by various groups to oppose strengthening regulations they do not like (on the grounds that business will flee elsewhere), or to criticize global economic integration (on the grounds that it will set off races to the bottom, and lower environmental and labor standards around the world). Regulatory races also offer convenient political cover for leaders who can justify policy choices as “necessary” given the threat of a race. So despite their empirical inaccuracy, we have not heard the last of regulatory races. In predicting that more stringent regulation of business will produce divestment and flight, business groups in particular often exercise their “voice” option more vigorously than their “exit” option. Their dire predictions are seldom realized, however, and businesses are likely to express far stronger opposition than they subsequently reveal through

their actions. Regulators who can survive the initial rhetorical onslaught will frequently find that they still possess significant regulatory discretion and control. One important exception to this involves cases where businesses can select a new regulatory home without physically moving their operations (corporate chartering, securities issuance). Since the cost of moving to the firm is minimal, firms can easily seek out their preferred regulations. The original home jurisdiction does not suffer from loss of jobs or declining production, but it does lose regulatory control. Even that case, however, does not necessarily produce a race, and regulators still have viable options, including deliberate coordination with other jurisdictions to harmonize regulations, or seeking regulations at a higher jurisdictional level.

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