

Global and Domestic Governance: Modes of Interdependence in Regulatory Policymaking

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Abstract: *This article examines how the regulatory policies of countries are interdependent. In particular, it identifies three modes of interdependence: competitive, coordinative, and informational. In the competitive mode the essential structure of interdependence is for countries to attempt to have distinctive policies that provide some advantage over other countries, but where the equilibrium set of policies is suboptimal for all. In the coordinative mode, there is an advantage for all countries to adopt the same policy, but exactly which policy is adopted may have significant distributional consequences. Lastly, in the informational mode, the choices and experiences of countries produce informational externalities, pointing the way for other countries to policy decisions. This article examines the logic underpinning each of these modes of interdependence, and draws out the governance implications of each mode.*

The regulatory policy of states is not made in a vacuum. In fact, the interdependence of the regulatory policy of states has drawn increasing scholarly attention over the last 20 years, with an especially large leap in the last several, pushed by the evident triumph of neoliberal policies across the world.¹ This convergence begs for a deeper understanding of exactly how the regulatory policies of nations are interdependent. There are many processes potentially at work in pushing this convergence of regulatory policy, thus the simple observation of convergence does not empirically distinguish between these processes. Furthermore, the underlying process, of course, has profound governance implications. Lastly, it is possible that in any given arena, multiple processes are operating at the same time. It is therefore necessary to simultaneously evaluate the presence of all of these processes in a given arena. The dominant thread of debate for most of the last 20 years, both within academia and among policymakers has been the competitive dynamics among states in setting regulatory policy—whether it is the use of regulations as non-tariff barriers, or fears of a race to the bottom in the stringency of standards. However, these competitive dynamics, arguably, offer at most a partial understanding of the changes in regulatory policy across the world over the last decade.

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¹ D. Levi-Faur and J. Jordana, 'The Rise of Regulatory Capitalism: The Global Diffusion of a New Order', (2005) 598, *The ANNALS of the American Academy of Political and Social Science* 200–217.

The objective of this article is to delineate the different ways in which the regulatory policies of states are interdependent, what underlies these interdependencies, and to examine what the governance implications of these interdependencies.² In particular, this article identifies three modes of interdependence: competitive, coordinative, and informational. In the competitive mode the essential structure of interdependence is for countries to attempt to have distinctive policies that provide some advantage over other countries, but where the equilibrium set of policies is suboptimal for all. In the coordinative mode, there is an advantage for all countries to adopt the same policy, but exactly which policy may have significant distributional consequences. In the informational mode, the choices and experiences of countries produce informational externalities, providing policy lessons for other countries for other countries to use.

The first section offers the backdrop to the discussion of the three modes of interdependence, focusing on regulatory interdependence that does not create any governance challenges, based on models of regulatory arbitrage and regulatory competition with mobile citizens.³ The second section critically examines the logic of the three modes of interdependence, and the concluding sections discuss how the different modes of interdependence create different governance challenges depending on the distribution of power in the international system.

I Regulatory Complementarity and Tiebout Sorting

The demand for a clean environment for aesthetic and health reasons is likely to have very high income elasticity. The concern over an agent that causes a one in a million change in the odds of prostate cancer is obviously going to be much higher in a country where people survive to get prostate cancer than in a country where mortality among the under-5s is 200 per thousand. Also, much of the concern over industrial atmosphere discharge is about visibility-impairing particulates. These discharges may have very little direct health impact. Clearly trade in goods that embody aesthetic pollution concerns could be welfare enhancing. While production is mobile, the consumption of pretty air is a non-tradable. (L. Summers, 1991)⁴

The Summers memo of 1991, suggesting that there were suboptimal amounts of pollution in much of the third world, was politically quite controversial at the time. The basic logic underlying it, however, is fairly conventional among international economists: that just as trade reflects an uneven endowment of climate, labour, capital, and so on, it also reflects heterogeneity in regulatory policy. Furthermore, such trade, following the logic of Heckscher-Ohlin trade theory, should be welfare enhancing—states with lesser preferences for a clean environment, for example, producing more pollution-intensive goods, and states with stronger preferences importing those goods, in exchange for low pollution goods (for the purposes of exposition, it is assumed that the regulations in question involve the environment, but logically the analysis should

² This article builds on: D. Lazer, 'Regulatory Interdependence and International Governance', *Journal of European Public Policy*, April 2001, 474–492. D. Lazer, 'Regulatory Capitalism as a Networked Order: The International System as an Informational Network', in David Levi-Faur and Jacint Jordana (eds) *The Rise of Regulatory Capitalism: The Global Diffusion of a New Order* (London: Sage Publications, 2005). D. Lazer and V. Mayer-Schoenberger, 'Governing Networks,' (2002) 27: 3 *Brooklyn Journal of International Law* 819–851.

³ C. Tiebout, 'A Pure Theory of Local Public Expenditures', (1956) 64 *Journal of Political Economy* 416–424.

⁴ L. Summers, World Bank memo on global environmental policy, December 12, 1991.

		Country A	
		High regulation	Low regulation
Country B	High regulation	Lower income in A and B, better environment, for both countries.	Higher income in A and lower in B, good environment in B and bad environment in A.
	Low regulation	<i>Higher income in B and lower in A, good environment in A and bad environment in B.</i>	High income bad environment for both countries.

Figure 1. Regulatory Complementarity.

apply to all types of regulation). Figure 1 summarises the essential interaction, where assuming Country A is rich and Country B is poor, Country B would tend to have low regulation because it values material returns over the environment, and Country A would tend to have high regulation because it values the environment relatively more. Trade should thus improve the wellbeing of both countries, where the equilibrium outcome (in italics) should be in the southwest quadrant of Figure 1.

Of course, one shortcoming of the preceding analysis is that policy is not exogenous in the same fashion as, for example, climate. An extensive literature on regulation and jurisdictional competition has developed, following on from Tiebout’s classic 1956 article.⁵ Tiebout examined jurisdictional competition in the provision of local public goods, working under the assumption of citizen mobility. In his model, citizens desired (1) lower taxes; and (2) the provision of (particular) local public goods. He found that under such assumptions, jurisdictional competition resulted in increased welfare, where individuals sorted themselves into homogeneous jurisdictions, which provided the public goods that their members demanded. However, the assumptions of the model—in particular, regarding citizen mobility—are highly problematic, leading to examination of the possibility of welfare-decreasing competitive dynamics in the absence of mobility (the first mode of interdependence examined below).

II Three Modes of Interdependence: Competitive, Coordinative, and Informational

This article examines three classes of regulatory interdependence: competitive, coordinative, and informational, which correspond to systematically different structures of strategic interdependence among states in regulatory policymaking. Each of these three types of interdependence is summarised below.

A The Competitive Mode of Regulatory Interdependence

In the competitive mode of regulatory interdependence, states seek policies that make them better off at the expense of others, where the equilibrium is one where all states are

⁵ Tiebout, *op. cit.* note 3 *supra*.

		Country A	
		High regulation	Low regulation
Country B	High regulation	Moderate wages and return to capital, better environment, for both countries.	High wages, moderate to high return on capital, bad environment for country A, Low wages, moderate to high return on capital, good environment in country B.
	Low regulation	High wages, moderate to high return on capital, bad environment for country B, Low wages, moderate to high return on capital, good environment in country A.	<i>Moderate or high wages, high return on capital, bad environment for both countries.</i>

Figure 2. RTB Strategic Interaction Among States.

worse off. This has unambiguously been the case with respect to non-tariff barriers, where there are many examples of standards whose main purpose was to maintain the positions of domestic firms. This is even more clearly the case with respect to the regulation of pollutants that cross borders, where it is almost certainly the case that states will under-regulate pollutants that largely affect other countries.⁶ Rather more ambiguous is the possibility of a ‘race to the bottom’ (RTB) in regulatory standards in areas that do not involve physical externalities, where states attempt to undercut each others’ regulations.

The essential RTB argument is that jurisdictions will seek to attract mobile factors of production (typically capital) through reducing the costs of doing business in that jurisdiction—in particular, by relaxing regulatory standards, the costs of which will largely be borne by immobile factors (typically labour). In a world where capital is highly mobile, return on capital will equilibrate internationally. If a country imposes a regulation that lowers the return to capital, that will cause capital to leave, depressing the returns to labour, and raising the return of the capital that remains to the international equilibrium level. Figure 2 summarises one version of this strategic interaction.

Proponents of the RTB are essentially arguing that the strategic interaction among states is a prisoners’ dilemma, where the equilibrium is low-regulation low-regulation, with a redistribution from the environment (and likely wages) to capital, where both would prefer the mutual high-regulation outcome. Given that the challenges to

⁶ P. Fredriksson and D. Millimet, ‘Strategic Interaction and the Determination of Environmental Policy across U.S. States’, (2002) 51: 1 *Journal of Urban Economics* 101–122.

cooperation in a large N system in the absence of a centralised authority are often insurmountable, the global result is a shift from environment and labour toward capital.

While RTB has received the most political attention of any of the types of interdependencies explored in this article, the analytic and empirical support for the model is far less than the political support it enjoys. The analytic models of regulatory interdependence suggest that RTB is a possible, but hardly the most likely, type of strategic interdependence among jurisdictions.⁷

The empirical explorations on the subject are even less supportive.⁸ Thus, for example, there is evidence that suggests that environmental quality is improving in many areas of the globe over the last few decades, despite increases in capital mobility.⁹ There are major shortcomings in much of this literature, however. The federalism literature on incorporation in the USA highlights the challenges in studying RTB. Corporations in the USA have a choice as to what state they may incorporate in, and for most of the last century a small state, Delaware, has dominated incorporations in the USA. The traditional interpretation of this was that it was evidence of a RTB, where Delaware rules favoured management over shareholders, and management thus tended to choose to incorporate in Delaware.¹⁰ This was subject to a revisionist interpretation, which asserts that Delaware simply does a better job at corporate governance than any other state.¹¹ Neither interpretation, however, explains Delaware's dominant position in incorporations—if there were a RTB, one might expect many other states to have similarly relaxed standards, thus eliminating Delaware's competitive advantage.¹² A 're-revisionist' account offers an explanation—that the existence of other firms that have incorporated in a jurisdiction creates positive externalities for other firms in that jurisdiction.¹³ The logic of this analysis is that one of the objectives of firms in choosing where they incorporate is clarity of the rules. This clarity is built through case law, where the quantity of case law is roughly proportional to the number of firms incorporated in a jurisdiction. There are, in short, economies of scale in providing corporate governance. The dominance of Delaware is thus a bit of a histori-

⁷ For a review of the economic literature on regulatory federalism see W. Oates, 'Fiscal and Regulatory Competition: Theory and Evidence', (2002) 3: 4 *Perspektiven der Wirtschaftspolitik* 377–390.

⁸ With respect to the environment see: K. Engel, 'State Environmental Standard-Setting: Is There a "Race" and Is it "to the Bottom?"', (1997) 48 *Hastings Law Journal* 271. With respect to the provision of welfare benefits in the US see: J. Brueckner, 'Strategic Interaction Among Governments: An Overview of Empirical Studies', (2003) 26 *International Regional Science Review* 175–188.

⁹ D. Wheeler, 'Racing to the Bottom? Foreign Investment and Air Pollution in Developing Countries', (2001) 10 *Journal of Environment and Development* 225–245.

¹⁰ W. Cary, 'Federalism and Corporate Law: Reflections Upon Delaware', (1974) 83 *Yale Law Journal* 663, 666.

¹¹ For contrasting views see: R. Revesz, 'Rehabilitating Interstate Competition: Rethinking the "Race to the Bottom" Rationale for Federal Environmental Regulation', (1992) 67(December) *New York University Law Review* 1210–1254; R. Daines, 'Does Delaware law improve firm value?', (2001) 62: 3 *Journal of Financial Economics* 525–558.

¹² However, it is important to note that policy convergence is neither sufficient to infer that a RTB has occurred (since other processes might lead to convergence), nor does it necessarily follow that if a RTB has occurred, that there will be policy convergence (although in the stylised interaction of Figure 2, there would be). Assuming policies are driven by both internal needs and external interactions, underlying heterogeneity of internal needs will still lead to heterogeneity in policy outcomes, even if all states have reduced the stringency of their regulations.

¹³ M. Kahan, and E. Kamar, 'The Myth of State Competition in Corporate Law', (2003) 55 *Stanford Law Review* 679–750. M. Klausner, 'Corporations, Corporate Law, and Networks of Contracts', (1995) 81 *Virginia Law Review* 757.

cal accident—however, by this logic, it was inevitable that some jurisdiction would be dominant. This dominance, in turn, means that it does not have to regulate ‘at the bottom’; furthermore, it means that Delaware can extract significant rents from firms that incorporate there (incorporation fees provide a very large share of Delaware’s budget).

The literature on incorporation highlights a broader issue with respect to the empirical work on the RTB—in particular, the research on the locational decisions of firms, much of which has found little or no relationship between locational decisions and the stringency of the regulations of jurisdictions.¹⁴ The research challenge is that it is plausible in this scenario that locational advantage and stringency of regulation are correlated. That is, those jurisdictions with a larger locational advantage are in a position to promulgate stricter rules than those jurisdictions with fewer locational advantages. However, simply because some jurisdictions have locational advantages does not mean that they are unaffected by other jurisdictions—even those jurisdictions with substantial locational advantages may have to reduce the stringency of their rules in order to prevent capital flight. It is plausible, therefore, to find in a cross-section little (or even a negative) relationship between regulatory stringency and locational decisions by firms and for there still to be a RTB.

B The Coordinative Mode of Interdependence

There has been significantly more analytic and empirical support for the role that coordination plays in pushing jurisdictions to have compatible rules—particularly with respect to product standards. If there are economies of scale in production, there will be network externalities with respect to standards—the benefit of adhering to a particular standard will increase monotonically with the number of other jurisdictions already adhering to it. Furthermore, it is likely that it would not be tenable for small jurisdictions to have standards that are not compatible with anyone else—for example, Vermont by itself could not afford have its own, strict, emissions standards.

The pressure to adopt compatible process standards will generally be less than that to adopt compatible product standards, but in certain circumstances, pressure towards conformity will still exist. There are two reasons for this. The first is simply an extension of the above analysis for product standards: consistent process standards may lower the costs of multinational corporations (MNCs) that are located in different countries, and as a result, they may put pressure on host countries to adopt compatible rules. Furthermore, in recent years the empirical distinction between product and process standards has been eroding. For example, in the case of regulating the safety of seafood, a new regulatory régime emerged internationally in the 1990s—Hazard Analysis and Critical Control Points (HACCP).¹⁵ The premise of HACCP is that the way to regulate the safety of seafood is by regulating how seafood is processed. One can imagine two indistinguishable fish—one processed in a country with HACCP, one without HACCP. The former fish (generally) can be imported into the USA with minimal costs in terms

¹⁴ T. Bartik, ‘The Effects of Environmental Regulation on Business Location in the United States’, (1988) 19 *Growth and Change* 22–44. A. Jaffe, P. Portney and R. Stavins, ‘Environmental regulations and the competitiveness of U.S. manufacturing: what does the evidence tell us?’, (1995) 33 *Journal of Economic Literature* 132–163.

¹⁵ D. Lazer, ‘Regulatory Interdependence and International Governance’, (2001) April *Journal of European Public Policy* 474–492.

		Country A (preference for high regulation)	
		High regulation	Low regulation
Country B (preference for low regulation)	High regulation	<i>Country A has its preferred regulatory outcome and compatibility with B. Country B does not have its preferred regulatory outcome, but gets compatibility with A.</i>	Neither A nor B receives its preferred regulatory outcome nor compatible regulatory regimes.
	Low regulation	Both A and B have preferred regulatory outcomes but incompatible regulatory regimes	<i>Country B has its preferred regulatory outcome and compatibility with A. Country A does not have its preferred regulatory outcome, but gets compatibility with B.</i>

Figure 3. Standards Battles with Respect to Regulation.

of inspection, and so on. The latter fish can be imported into the USA *only if the importer documents that the fish has been processed in accordance with US (or equivalent) rules*. That is, even if it is identical, if it has not been processed in a HACCP-consistent fashion it cannot be imported into the USA. This is consistent with WTO rules, presumably because it could be shown that even if the fish are identical, fish processed consistent with HACCP-based procedures tend to be safer than those that are not. In short, the presence of inconsistent regulatory régimes that mandate different processes may impose transactional costs on trade that may lead exporters to pressure their governments to adopt standards compatible with their export markets.¹⁶

The fact that there are benefits to having standards that are compatible with other jurisdictions does not mean that all jurisdictions will converge on the same standard, or that they are neutral as to which standard that they adopt, as long as many other jurisdictions adopt that standard as well. In fact, typically jurisdictions will have strong preferences as to which standard is converged upon—because of initial investments in particular standards (driving on the left- versus right-hand side of the road), and because of deeper differences in policy preferences.¹⁷ Figure 3 characterises the scenario where compatibility is critical to both countries A and B, but where country A would prefer stricter regulation than B.

¹⁶ K. Abbott and D. Snidal, ‘Hard and Soft Law in International Governance’, (2000) 54 *International Organization* 421–456.

¹⁷ In game theory terms, this divergence in preferences but desire for compatible standards is called ‘battle of the sexes’.

Vogel has argued that the needs for coordination among countries leads to a systematic tendency toward stricter standards—a ‘race to the top’ (RTT).¹⁸ In particular, he argues that there is a ratcheting-up effect with respect to health, safety, and environmental standards, where (1) domestic firms form an alliance with pro-regulatory groups (e.g. environmentalists) to push for stricter standards in order to keep down international competition (a ‘bootlegger-baptist’ coalition), and/or (2) corporations that sell goods in many markets will push for standards equal to the strictest in the system at home so that they can produce goods to one standard and gain the advantages of economies of scale.

The analytics of why an RTT should routinely occur (as compared to, for example, convergence on lower standards), however, are still underdeveloped. It is clear that wealthier nations tend to prefer stricter standards than poorer nations, and wealthier nations will have greater market power, which should yield a global system tilting toward higher (specifically, US and EU) standards. However, the coalitional analysis of Vogel and others does a better job at explaining the pro and anti-regulatory coalitions that might emerge than why one side triumphs. For example, the circumstances under which internationally oriented corporations might benefit from stricter standards would also be the circumstances under which domestic firms would have a particular interest in *resisting* stricter standards. The outcome of such a political disagreement is impossible to anticipate without understanding the broader political context of a jurisdiction. In fact, such pro and anti-regulatory coalitions emerge fairly routinely in purely domestic contexts, where firms seek regulatory interventions so as to achieve market success.¹⁹ Furthermore, given a large N system, reminiscent of the ‘chain store paradox’, MNCs would have a strong incentive to use all of their political might to limit how strict the strictest regulators of the system were because of the potential systemic consequences.²⁰ That is, even if there were a convergence to the top, there may be strong pressures to keep the top from getting too high.

In a scenario where the payoffs are structured so that convergence is best for all actors, there are twin governance challenges around divergence and convergence. First, one might imagine *inefficient divergence*. In particular, in a world that starts out with many standards where there are significant switching costs, there may be two Nash equilibria: one where all states have the same policy, and a second (Pareto inferior) equilibrium, where all states have divergent policies. Such issues are avoided if (1) there is one dominant country that sets (effectively global) standards or (2) a critical mass of countries that collectively decide on one standard that becomes the global norm.²¹ Thus, for example, in looking at global subsystems, Latin American states generally follow US rules for insecticide use on crops, while countries such as Israel follow EU

¹⁸ D. Vogel, *Trading Up: Consumer and Environmental Regulation in a Global Economy* (Harvard University Press, 1995).

¹⁹ A Bartel and L. G. Thomas, ‘Predation Through Regulation: The Wage and Profit Effects of the Occupations Safety and Health Administration and the Environmental Protection Agency’, (1987) 30 (October) *Journal of Law and Economics* 239–264.

²⁰ D. Kreps and R. Wilson, ‘Reputation and imperfect information’, (1982) 27 *Journal of Economic Theory* 253–279.

²¹ C. Kindleberger, ‘Standards as Public, Collective and Private Goods’, (1983) 36 *Kyklos* 377–396. P. Genschel and T. Plumper, ‘Regulatory competition and international co-operation’, (1997) 4: 4 *Journal of European Public Policy* 626–642.

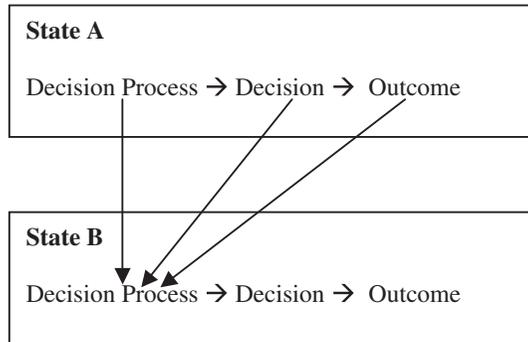


Figure 4. Three Types of Information Diffusion.²⁴

rules.²² However, both of these ‘solutions’ to the coordination problem create the second governance challenge: *democratic accountability*, where global standards reflect the policy preferences of the polities in large markets.

C The Informational Mode of Interdependence

It is one of the happy accidents of the federal system that a single courageous state may, if its citizens choose, serve as a laboratory, and try novel social and economic experiments without risk to the rest of the society. (Justice Louis Brandeis, 1932)

Brandeis was writing about the US federal system. However, his argument regarding the role and value of experimentation in a decentralised system applies as much to the world of today as the United States of 1932. It highlights the information that jurisdictions produce when they choose policy. The informational mode, encompassing processes of policy transfer and diffusion is, arguably, the best explanation for the most prominent regulatory convergence over the last 20 years—the combination of privatisation and regulation of a variety of utilities across the world.²³ This is an arena where the coordinative and competitive modes, while perhaps present, do not offer great causal traction. Instead, there was clearly an informational trajectory, where the experiences of early adopters (most notably, the UK) offered information to other decision-makers to base their decisions on. The question, examined here, is what is the structure of that informational interdependence.

Jurisdictions may produce information at three stages: in their *policy deliberations*, in their *policy choices*, and in their *policy experiences* (see Figure 4). Policy deliberations (broadly construed) may involve costly research on policy alternatives. These deliberations may occur in the legislative context (legislative debates and/or reports), or administrative (e.g. in the USA all major regulation must be accompanied by thorough

²² D. Vogel, ‘Trading Up and Governing Across: Transnational Governance and Environmental Protection’, (1997) December *Journal of European Public Policy* 556–571.

²³ D. Dolowitz, R. Hulme, M. Nellis and F. O’Neill, *Policy Transfer and British Social Policy: Learning from the USA?* (Open University Press, 2000). E. Rogers, *Diffusion of Innovations*, 5th edn (Free Press, 2003).

²⁴ This figure is reproduced from D. Lazer, ‘Regulatory Capitalism as a Networked Order: The International System as an Informational Network’, in David Levi-Faur and Jacint Jordana (eds) *The Rise of Regulatory Capitalism: The Global Diffusion of a New Order* (Sage Publications, 2005) p. 56.

impact analyses, which are made available to the public for comment). These deliberations and the information they produce are often public and accessible to other jurisdictions.

While deliberative information is typically voluminous and heterogeneous, policy choices convey information with relative economy—in short, here is the decision of a particular set of decision-makers based on those deliberative processes.

Lastly, policy experiences are the post-mortems of the effects of a policy choice. These post-mortems may come from a variety of sources—the media, political figures, and academia. While policy experiences are potentially the most informationally rich—because this is information about whether the policy actually *worked*—interpretations of experiences are typically contested.

The informational mode focuses analytic attention on the processes by which information is produced, disseminated, and aggregated within a system.

a) *Information Production*

In the policy setting information generally has the characteristics of a public good. That is, the information generated by state A's policy choices is generally available to all other jurisdictions, and the fact that B is informed by A's experiences does not detract from C's capacity to be informed by A's experiences as well. The well-known inefficiency associated with public goods is that they will tend to be underproduced. In the private sector, legal institutions—intellectual property rights—have evolved to 'give' some information some of the characteristics of a private good. However, in the public sector, there is no parallel to intellectual property rights—if the UK develops a new way of organising public utilities that is vastly more efficient, it cannot extract rents from other countries that adopt its model. The question then is whether policy innovation will tend to be underproduced in the international system, and, in particular (and in contrast to Brandeis' assertion) whether there will be less innovation in a decentralised than a centralised system.²⁵ A further question is whether the fact that information has become more public in recent years (e.g. as fuelled by the Internet) has aggravated the potential problem of underproduction of policy innovations.²⁶

A second critical issue is the diversity of information available in the international system. Diversity is a systemic property, and provides the repertoire of potential responses that the system has to future challenges. Communication potentially reduces diversity as states converge on what they perceive as 'best practice'. The process of convergence may provide a system with good results in the short run, but to the detriment of long-run performance.²⁷

b) *Information Dissemination*

The second critical feature of an informational system is the process of dissemination of information. Simply because some jurisdiction has produced the perfect policy, and that information is freely available, does not mean that anyone will notice. Individual

²⁵ K. Strumpf, 'Does Government Decentralization Increase Policy Innovation?', (2002) 4 *Journal of Public Economic Theory* 207–241.

²⁶ Lazer, *op. cit.* note 24 *supra*.

²⁷ D. Lazer and A. Friedman, 'The Parable of the Hare and the Tortoise: Small Worlds, Diversity, and System Performance', KSG Faculty Research Working Paper Series RWP05-058, October 2005.

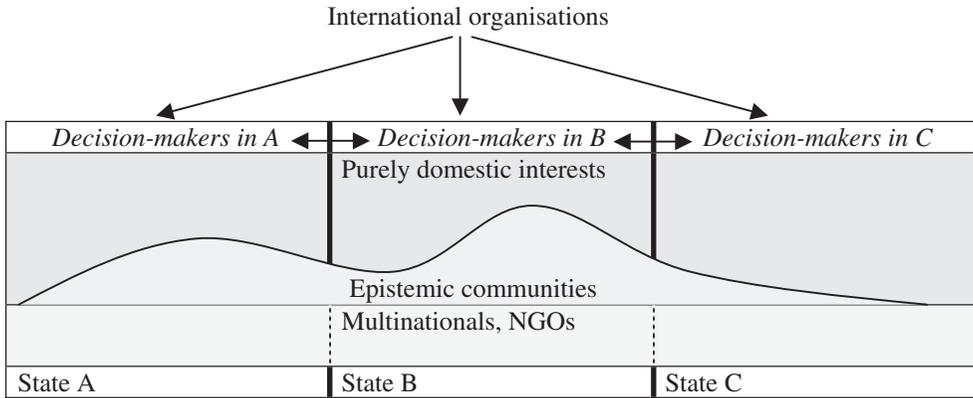


Figure 5. Mechanisms of Diffusion in the International System.

decision-makers have the capacity to pay attention to only a tiny fraction of information relevant to their choices. The attention process, of course, is not random; there are a variety of formal and informal mechanisms that focus attention on certain information and not other. Particularly important in diffusing information are ties that connect otherwise distant actors— as demonstrated, a few distant ties can radically reduce the ‘degrees of separation’ within a network.²⁸ While policy networks undoubtedly have a strong geographic component,²⁹ there are a number of mechanisms in the international system that facilitate communication and lesson-drawing from distant jurisdictions. Figure 5 portrays some of these mechanisms: international organisations, epistemic communities, and MNCs and NGOs. Each is discussed in turn below.

- i) *Epistemic Communities.* There are certain communities which cross national boundaries that serve as a conduit for policy-relevant information.³⁰ Academia is the prototypical epistemic community, where there are institutionalised mechanisms to facilitate information flow across jurisdictional boundaries— conferences, journals, professional associations, and so on.
- ii) *Cross-National Entities.* Similarly, there are numerous formal organisations that cross national boundaries, most notably, MNCs. As noted above, MNCs play an important role in the political process underlying regulation. Part of the participation in the political process is purely informational—providing decision-makers with information relevant to their choices. Along the same lines, there has been a growth in the number of NGOs, which attempt to influence the policies of multiple states, over the last decade.
- iii) *International Organisations.* Organisations, such as World Bank and the Organization for Economic Cooperation and Development (OECD), have played a

²⁸ D. J. Watts and S. H. Strogatz, ‘Collective dynamics of “small-world” networks’, (1998) 393 *Nature* 440–442.

²⁹ J. Walker, ‘The Diffusion of Innovations among the American States’, (1969) 63 *American Political Science Review* 880–899.

³⁰ R. Rose, *Lesson-drawing in Public Policy* (Chatham House, 1993). P. Haas, ‘Introduction: Epistemic Communities and International Policy Co-ordination’, (1992) 46: 1 *International Organization* 1–35.

key information aggregation and dissemination role.³¹ For example, the OECD had an extensive research programme during the 1990s on deregulation, where much of their research is freely available on their website.³²

- iv) *Formal Mechanisms*. There are also formal, institutionalised, events that bring decision-makers together. These events, in turn, create opportunities for information exchange to occur, and facilitate the creation of ongoing informal relationships. G8 summits provide one opportunity for information diffusion; at a lower level, monthly meetings of the Independent Regulators Group, while aimed at facilitating coordination of telecommunications policies among EU members, also plays a critical role in informal exchange of information about policy.³³

c) *Information Aggregation*

The presence of an enormous amount of policy information does not guarantee, however, that the ideal policies will be chosen. The literature on information cascades illustrates how it is possible, if choices are public knowledge, but success and failure are not (sometimes a fairly close match in the policy domain, where outcomes can be quite opaque) for ineffective policies to spread through a system, even if most actors in the system have information that the policy is ineffective.³⁴ This can happen because private information that a policy will be ineffective can be outweighed by public information that other jurisdictions have adopted that policy (which indicates that they have assessed that the policy will be effective). If A adopting a policy leads B (which was mildly reluctant) to adopt the policy, then A and B both adopting might lead C (which was more reluctant) to adopt the policy, and so on, leading to a bandwagon effect.

The possibility of bandwagons highlights the critical role of ‘information aggregators’ in the system, which accumulate and process data on the experiences of multiple states with respect to their experiences. Among the conduits of information discussed above, academia is one institutional setting that produces information aggregation; international organisations (such as the OECD) are another. Analyses from these locations simultaneously provide depth and economy in the dissemination of information—depth because they reflect the experiences of multiple jurisdictions, and economy because typically experiences from multiple locations are aggregated and summarised through statistical presentation.

III Discussion

The challenges of global governance can be illustrated with a thought experiment. Imagine three different worlds, each with the same heterogeneous population, but with different jurisdictional boundaries (see Figure 6).

³¹ M. Orenstein, ‘Mapping the Diffusion of Pension Innovation’, in R. Holzmann, Mitchell Orenstein and Michal Rutkowski (eds), *Pension Reform in Europe: Process and Progress* (World Bank, 2003).

³² <http://www.oecd.org>.

³³ D. Lazer and V. Mayer-Schoenberger, ‘Governing Networks’, (2002) 27: 3 *Brooklyn Journal of International Law* 819–851.

³⁴ A. V. Banerjee, ‘A Simple Model of Herd Behavior’, (1992) 107: 3 *Quarterly Journal of Economics*. S. Bikhchandani, D. Hirshleifer, and I. Welch, ‘A Theory of Fads, Fashions, Custom, and Cultural Change as Informational Cascades’, (1992) 100: 5 *Journal of Political Economy* 992–1026.

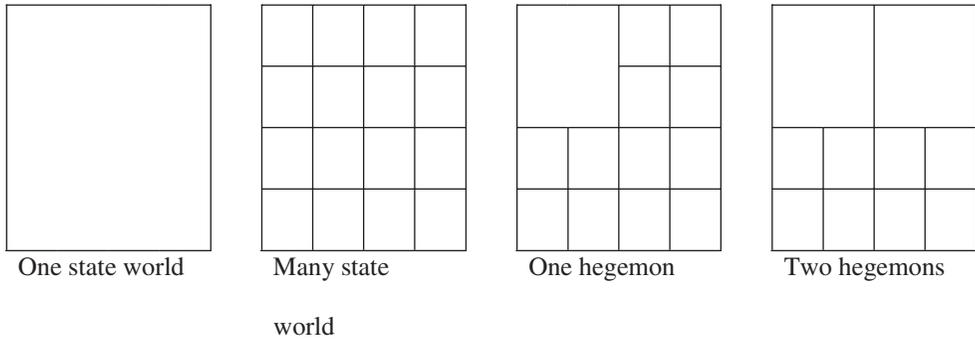


Figure 6. *Different Distributions of Market Power.*

In the first scenario, that population is within one state, with one standard. In the second scenario, there are many small states, in the third, there is a single dominant state, but still with quite a few small states, and in the fourth, there are two dominant states, still with a large number of small states. What do each of the models above suggest would be the governance challenges in each scenario? The first scenario would have the advantages (1) that there can be no RTB with a single actor; (2) it would avoid inefficiently divergent policies; (3) there would be no free riding on the information production of other states; (4) there would (potentially) be some degree of accountability of leadership of the state to all of its population. It would also have some significant disadvantages: (1) the homogeneity of policy would not match the heterogeneity of the population; (2) the absence of competing jurisdictions might allow élites to extract more rents; (3) the homogeneity of policy would provide a very limited repertoire for future policy responses.

The second scenario offers the opposite set of governance strengths and weaknesses. Its strengths would be: (1) the policies of jurisdictions could be more closely tuned to match the preferences of their constituents; (2) competing jurisdictions might increase the efficiency of governments; (3) the heterogeneity of policy would provide a relatively extensive policy menu for challenges states might confront in the future. Conversely: (1) there would be the possibility of a RTB; (2) there would be a possibility of inefficiently divergent policies; (3) there would be a possibility of free riding on the information production of other states; and (4) there are potentially problems with respect to accountability, since much of policy will be driven by external actors.

The third scenario has a mix of the strengths and weaknesses of the first two scenarios. The policies of jurisdictions would potentially match their (relatively homogeneous) constituents and regulatory competition imposes some degree of discipline on policymakers, and there would be a greatly reduced probability of inefficiently divergent policy, and there would (except for where there are strong coordinative dynamics) still be significant diversity of policies. However, there is still a potential RTB, and substantial issues with respect to accountability, since much of global regulatory policy would be driven by the preferences of the hegemon, which contains a minority of the world's population. Lastly, information production would be between the first two scenarios—undersupplied, where the hegemon would do a disproportionate share of the information production.

The fourth scenario would have some of the same advantages and disadvantages of the third, but with the possibility of inefficient divergence in policy between the two

hegemons, and the possibility that the existence of an alternative hegemon provides an alternative viable regulatory model for smaller countries to follow.

In the absence of a conquest, the distribution of size in the system is a given in the short run—however, distribution of size varies over time and across subsystems. The world, arguably, has shifted over the last few decades, with the rising relevance of the EU in this domain, from the one-hegemon scenario to a two-hegemon scenario, where in certain subsystems the USA is dominant, and in others the EU is dominant.

IV Conclusion

The objective of this article has been to delineate the different ways that the regulatory policies of countries are interdependent, in particular, focusing on competitive, coordinative, and informational modes of interdependence. Each of these modes has different governance implications. In the competitive mode, there is a great need for rules that constrain the domestic policies of countries to avoid beggar-thy-neighbour policies. In the coordinative mode, institutions that facilitate the convergence of policies which reflect the broader community of states affected by those policies are critical. Lastly, in the informational mode, the existence of institutionalised mechanisms that encourage information creation, dissemination, and aggregation are essential. The ‘real-world’ challenge of institutional design is that typically these types of interdependencies are interwoven.³⁵ For example, one might imagine a strong incentive to converge on particular process standards for health and safety, reducing transaction costs in trade, and maintaining access to export markets. However, where ‘equivalent’ process standards are in place, there may be an incentive to enforce them weakly. There is thus a need to create an equivalent interweaving of governance practices to address the complexity of regulatory interdependence among states.

³⁵ Lazer and Mayer-Schoenberger, *op. cit.* note 33 *supra*.

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