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I. INTRODUCTION

In the Summer of 2001, while visiting the United States, a Ukrainian official in charge of telecommunication regulations raised his voice. Clearly, he said, not telecom competition but coordination is what his country needed. Two months earlier, a U.S. telecom policy maker exasperatedly remarked at an international conference, "This is the problem with you Europeans. You don't believe in competition. You'd rather have state-imposed coordination."[1]

These statements may be simplistic, but they exemplify two quintessential positions in telecom regulation (and regulations in general): competition and coordination. Much of the history of telecommunications infrastructure is one of state ownership and heavily regulated private monopolies. But over the last fifteen years we have witnessed a widespread liberalization, especially in the U.S. and the European Union ("EU"), accelerating rapidly over the past five years.[2] Today, the telecommunication markets are highly competitive on both sides of the Atlantic. In many European countries, for example, rates for

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1. Interview with unnamed United States official, in Zurich, Switzerland (June 28, 2001).

2. *See* Viktor Mayer-Schönberger & Mathias Strasser, *A Closer Look at Telecom Deregulation: The European Advantage*, 12 HARV. J. LAW & TECH. 561, 562 n.2 (1999).

long distance phone services have come down a staggering 80% or more from what they used to be only a decade ago.[3]

On the surface, both the U.S. — through its Telecommunications Act of 1996[4] — and the EU — through its telecommunication directives[5] — have approached liberalization fairly similarly, substituting a monopoly with a market in which new entrants may successfully challenge the incumbents with the help of a complex competition-inducing regulatory framework. On a closer look, however, one discovers substantial differences in how the two tackled the regulatory task.

Comparing the successes and failures of the two regulatory frameworks may reveal important insights on how to better legislate in the future, in other countries, and perhaps, even in other sectors yet to be deregulated. But the authors think that it is still too early to comprehensively assess the two regulatory frameworks. Only a few years have passed since these frameworks have been put in place, and the long-term impacts may not yet be visible. Moreover, accurate economic and quantitative comparative studies are still scarce. The central hurdle, however, is the lack of an adequate and objective benchmarking framework. What are we supposed to compare when evaluating different regulatory regimes? How do we *measure* success?

To better understand the existing legal frameworks and to aid future law makers, the authors propose a first building block for such a benchmark: an evaluative model based on political economy theories of policy interdependence. This model provides an assessment of the challenges that a system of jurisdictions faces and of the capacity of a particular legal framework for deregulation to meet those challenges.

The authors will discuss three types of regulatory interdependence: competitive, coordinative and informational. An effective governance model, the authors argue, needs to be responsive to the types of interdependencies that exist in a par-

3. This decline is not limited to end-user call charges. For example, charges for leased telecommunication lines have come down by 30% within two years (1997-99). *See* Sixth Report on the Implementation of the Telecommunications Regulatory Package, COM(00)814 final at 3.

4. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified as amended in scattered sections of 47 U.S.C.).

5. *See infra* notes 15-22.

ticular policy area. As components of each of these interdependencies are present in the telecommunications sector, a hybrid governance model is required. The title of this Article therefore has a dual meaning: on one level, it is about telecommunication networks; on another level, it is about governance networks. The authors find that the EU model in telecom has a number of distinct advantages: (1) it has centralized a core set of standards that address interface concerns; (2) it spurs innovations through what is an otherwise decentralized system; and (3) it has created an effective informational network through which those innovations might spread.

Part II of this Article reviews the current legal framework of liberalized telecom markets. Part III introduces the competitive, coordinative and informational modes of regulatory interdependence and shows that all three of them are present in various forms in the existing legal frameworks. In Part IV, the Article suggests that the key to understanding these frameworks is to accept that the regulatory structure should not be optimized to address just one of the three types of interdependencies.

II. THE EUROPEAN TELECOM REGULATORY FRAMEWORK

In Europe, since its inception, telecommunication was administered as a public utility by government owned and operated national carriers. They controlled long-distance and local services as well as terminal equipment.[6] In the early 1980's, spurred by the developments in the U.S. and fueled by Margaret Thatcher's policies of deregulation, the United Kingdom took the lead in European telecom liberalization. The door for a European deregulatory movement was opened in 1985, when the European Court of Justice ("ECJ") decided that competition rules applied to the telecommunication sector.[7] In 1987, the European Commission ("Commission") published its blue print for pan-European liberalization.[8] This 1987 Green Paper envi-

6. *See* REGULATION OF NETWORK UTILITIES: THE EUROPEAN EXPERIENCE 1 (Claude Henry et al. eds., 2001).

7. *See* Case 41/83, Italian Republic v. Commission, 1985 E.C.R. 873 (1985).

8. *See generally* Towards a Dynamic European Economy, Green Paper on the Development of the Common Market for Telecommunications Services

sioned a comprehensive regulatory framework leading towards progressive liberalization.[9] It also defined harmonized access conditions to networks, which later were turned into the Open Network Provision ("ONP") concept.[10]

The liberalization advanced along two distinct tracks: Commission directives based on competition law, and the Council of the European Union ("Council") directives based on the ONP concept of set access conditions.[11] While competition law is based on Article 82 of the Treaty Establishing the European Community ("EC Treaty")[12] and its general notion of antitrust, the ONP concept is based on national regulatory frameworks enforced by national regulatory authorities.[13] Based on the detailed ONP concept mandated by the EU, these national authorities lay down concrete rules on transparency, unbundling, pricing and accounting.[14] Examples of the competition law approach are the directive deregulating the terminal equipment market adopted in 1988,[15] as well as directives to open up the markets for value-added services (1990),[16] data services (1990),[17] satellite communications (1994)[18] and mobile communication (1996).[19] At an EU Telecom Review in 1993, agreement was achieved to fully liberalize the telecom markets by January 1, 1998, including voice

and Equipment, COM(87)290 final [hereinafter Green Paper on Development].

9. *Id.* at 184-85.

10. *Id.* at 189.

11. This point has been well made by Herbert Ungerer, *Access Issues Under EU Regulation and Antitrust Law: The Case of Telecommunications and Internet Markets* at 12 n.10 (Program on Information Resources Policy), *at* http://pirp.harvard.edu/pubs_pdf/ungerer/ungerer-i00-3.pdf (July 2000).

12. TREATY ESTABLISHING THE EUROPEAN COMMUNITY, Nov. 10, 1997, art. 82, O.J. (C 340) 3, 209 (1997) [hereinafter EC TREATY].

13. *See* Green Paper on Development, *supra* note 8.

14. *Id.*

15. *See* Commission Directive 88/301 on Competition in the Markets in Telecommunications Terminal Equipment, 1988 O.J. (L 131) 73.

16. *See* Commission Directive 90/388 on Competition in the Markets for Telecommunications Services, art. 2, 1990 O.J. (L 192) 10, 15.

17. *See id.* art. 3.

18. *See* Commission Directive 94/46 Amending Directive 88/301 and Directive 90/388, in Particular with Regard to Satellite Communications, 1994 O.J. (L 268) 15.

19. *See* Commission Directive 96/2 Amending Directive 90/388 with Regard to Mobile and Personal Communications, 1996 O.J. (L 20) 59.

January 1, 1998, including voice telephony.[20] This agreement was implemented in 1996.[21] At the same time, the ONP concept was advanced through a framework directive,[22] which was followed by issue and sector-specific directives,[23] especially on interconnection[24] and recommendations.[25] Later, the ONP con-

20. *See* Communication to the Council and European Parliament on the Consultation on the Review of the Situation in the Telecommunications Services Sector, COM(93)159 final at 35.

21. *See* Commission Directive 96/19 Amending Commission Directive 90/388 with Regard to the Implementation of Full Competition in Telecommunications Markets, 1996 O.J. (L 74) 13.

22. *See* Council Directive 90/387 on the Establishment of the Internal Market for Telecommunications Services Through the Implementation of Open Network Provision, 1990 O.J. (L 192) 1 [hereinafter ONP Framework Directive].

23. *See* Council Directive 92/44 on the Application of Open Network Provision to Leased Lines, 1992 O.J. (L 165) 27; Parliament and Council Directive 95/62 on the Application of Open Network Provision (ONP) to Voice Telephony, 1995 O.J. (L 321) 6; Parliament and Council Directive 98/10 on the Application of Open Network Provision (ONP) to Voice Telephony and on Universal Service for Telecommunications in a Competitive Environment, 1998 O.J. (L 101) 24; Parliament and Council Directive 97/66 Concerning the Processing of Personal Data and the Protection of Privacy in the Telecommunications Sector, 1998 O.J. (L 24) 1 [hereinafter Parliament and Council Directive 97/66].

24. Specifically on interconnection, see Parliament and Council Directive 97/33 on Interconnection in Telecommunications with Regard to Ensuring Universal Service and Interoperability Through Application of the Principles of Open Network Provision (ONP), 1997 O.J. (L 199) 32 [hereinafter Parliament and Council Directive 97/33], amended by Parliament and Council Directive 98/61 with Regard to Operator Number Portability and Carrier Preselection, 1998 O.J. (L 268) 37.

25. *See, e.g.,* Council Recommendation 92/382 on the Harmonized Provision of a Minimum Set of Packet-Switched Data Services (PSDS) in Accordance with Open Network Provision (ONP) Principles, 1992 O.J. (L 200) 1; Council Recommendation 92/383 on the Provision of Harmonized Integrated Services Digital Network (ISDN) Access Arrangements and a Minimum Set of ISDN Offerings in Accordance with Open Network Provision (ONP) Principles, 1992 O.J. (L 200) 10; Commission Recommendation 98/322 on Interconnection in a Liberalised Telecommunications Market, 1998 O.J. (L 141) 6; Commission Recommendation 98/511 Amending Recommendation 98/195 on Interconnection in a Liberalised Telecommunications Market (Part I — Interconnection Pricing), 1998 O.J. (L 228) 30.

cept was substantially revised to take into account the changing shape of the competitive telecom market.[26]

Directives are not directly applicable legal rules. Rather, they oblige Member States to transpose their substance into national law within a time period specified in the directive.[27] In addition to this two-level implementation structure, there is also a track-specific adjudication structure: Competition directives are adjudicated by the legal system and ultimately decided by the ECJ. On the other hand, ONP directives, once transposed into national laws of Member States, are applied and used by national regulatory authorities to create and enforce ex-ante provisions.[28]

The European (de)regulatory history is therefore substantially different from that in the U.S. In the U.S., Congress decided to grant the American Telephone and Telegraph Company ("AT&T") first a temporary, later a permanent monopoly over almost all aspects of telecommunications.[29] For decades, AT&T was the dominant provider of both telecom services and equipment. By 1970, modest competition had been introduced in the telecom equipment market, and — with the advent of microwave transmission — long-distance services.[30]

In 1974, the U.S. Department of Justice charged AT&T with violations of sections 2 and 4 of the Sherman Anti-Trust Act.[31] In 1984, the decade long anti-trust struggle was finally settled with the so-called Modification of Final Judgement ("MFJ"),[32] which ordered the break-up of AT&T.[33] The company was allowed to provide long-distance telecommunication services, but it had to divest its local exchanges into seven Regional Bell Op-

26. Parliament and Council Directive 97/51 Amending Council Directive 90/387 and 92/44 for the Purpose of Adaptation to a Competitive Environment in Telecommunications, 1997 O.J. (L 295) 23.

27. *See* EC TREATY, *supra* note 12, art. 249.

28. *See* Ungerer, *supra* note 11, at 17.

29. *See* Jim Chen, *The Legal Process and Political Economy of Telecommunications Reform*, 97 COLUM. L. REV. 835, 838-39 (1997).

30. *Id.* at 843-50.

31. *See* United States v. American Tel. & Tel. Co., 427 F. Supp. 57, 58 (D.D.C. 1976).

32. *See* United States v. American Tel. & Tel. Co., 552 F. Supp. 131 (D.D.C. 1982), *aff'd sub nom*. Maryland v. United States, 460 U.S. 1001 (1983).

33. *See* ROBERT W. CRANDALL, AFTER THE BREAKUP: U.S. TELECOMMUNICATIONS IN A MORE COMPETITIVE ERA 41 (1991).

erating Companies ("RBOCs"),[34] which in turn were prohibited from providing long-distance services and manufacturing terminal equipment.[35]

In 1996, Congress ventured into a second phase of liberalization with the Telecommunications Act of 1996 ("1996 Act").[36] The 1996 Act abolishes the RBOCs' public utilities status and revokes their exclusive franchises under state law.[37] Attempting to facilitate the entry of new competitors, the 1996 Act mandates interconnection and forces the former RBOCs to provide unbundled network access and collocation.[38] RBOCs were permitted to compete in long-distance markets, as long as competition was introduced in their local markets.[39] Similarly, AT&T was permitted to enter the local exchange markets, and has done so through its AT&T Broadband subsidiary.[40]

Institutionally, the Communications Act of 1934 gave the Federal Communications Commission ("FCC") the power to regulate long-distance services and terminal equipment, while giving the states the power to regulate the local exchange as a public utility.[41] States then granted their local carriers (mostly AT&T branches) exclusive franchises.[42] The 1996 Act federalized much of U.S. telecommunications law, favoring the FCC as a regulatory authority by expressly empowering it to implement the Act's local competition provisions.[43] At the same time,

34. At that time, the seven RBOCs were: American Information Technologies Corporation, Bell Atlantic Corporation, Bell South Corporation, Nynex Corporation, Pacific Telesis Group, Southwestern Bell Corporation and US West. *Id.* at 10.

35. *See id.* at 37.

36. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified as amended in scattered sections of 47 U.S.C.).

37. *See* Telecommunications Act of 1996, 47 U.S.C. § 253(a) (Supp. III 1998) [hereinafter 1996 Act].

38. *See id*. §§ 251(a)-(c), 252.

39. *See id.* § 271.

40. *See AT&T Grows Larger*, N.Y. TIMES, May 6, 1999, at A32.

41. *See* Communications Act of 1934, 47 U.S.C. §§ 151-612 (1994).

42. The local exchange, even more so than the telecom infrastructure at large, was seen as a typical "natural monopoly." Daniel F. Spulber, *Deregulating Telecommunications*, 12 YALE J. ON REG. 25, 31 (1995).

43. *See* AT&T Corp. v. Iowa Utils. Bd., 525 U.S. 366, 377-78 (1999). The Court stated:

> Section 201(b), a 1938 amendment to the Communications Act of 1934, provides that "[t]he Commission may prescribe such rules and

Congress severely curtailed the FCC's decisional discretion in this matter through the highly detailed clauses in the 1996 Act.[44] In the areas in which the FCC continued to enjoy decisional discretion, implementation of its decision was stalled through legal action, and only partly resolved by the Supreme Court's decision in *AT&T Corp. v. Iowa Utilities Board*, which reaffirmed the FCC's extended jurisdiction.[45]

III. THREE MODES OF REGULATORY INTERDEPENDENCE

In a simple model, rule making is purely a response to domestic demands for regulation, combined with a capacity and willingness of the state to provide regulation. However, in practice, regulatory rule making is part of a larger process of competition, coordination and learning among states. As economies have become increasingly intertwined, these interdependencies have increased dramatically. The most often discussed interdependence are so-called "races to the bottom," but the interdependence of regulations is much more complex than a simple spiral into the ground. Below, the Article discusses three modes of cross-jurisdictional regulatory interdependence, which are labeled competitive, coordinative and informational.

A. Competitive Interdependence

In many ways, jurisdictions are in competition with each other, and the regulatory system is one tool among many where states seek a competitive edge through a distinctive regulatory system. There are two reasons why jurisdictions might seek to be distinctive: (1) to gain a competitive advantage over other jurisdictions; or (2) to block competition in the domestic market through non-tariff barriers.

An example of the first case is where one jurisdiction may offer lower tax rates or subsidies to attract capital. If multiple

> regulations as may be necessary in the public interest to carry out the provisions of this Act." Since Congress expressly directed that the 1996 Act, along with its local-competition provisions, be inserted into the Communications Act of 1934, 1996 Act § 1(b), 110 Stat. 56, the Commission's rulemaking authority would seem to extend to implementation of the local-competition provisions.

Id. (citation omitted).

44. *See* 1996 Act, 47 U.S.C. §§ 251-261, 271-276 (Supp. III 1998).

45. *Iowa Utils. Bd.*, 525 U.S. at 366.

jurisdictions are seeking to be distinctive in this manner, there is likely to be a ratcheting effect with respect to what is distinctive, where what offers a competitive advantage today may simply be average tomorrow. What may result is a race to the bottom where all jurisdictions would prefer more stringent rules, but choose lax ones so as not to fall at a competitive disadvantage. This is the so-called "Delaware effect,"[46] where it has been argued that the state became the preferred home of corporations in the U.S. because it has a lax regulatory regime.[47] In this scenario, jurisdictional competition may limit the capacity of a jurisdiction to implement redistributional policies, if those who would lose wealth are mobile. The danger of an imminent race to the bottom has also been described in the area of privacy legislation in Europe, including telecommunication privacy, arguably necessitating EU action.[48] It is important to note that in the regulatory area where there has been the most research — environmental regulation — there are few studies that support the conclusion that race to the bottom dynamics happen.[49] The second case where states select distinctive standards is where they choose them so as to protect domestic manufacturers. The regulation of terminal equipment markets in Europe before liberalization offers excellent examples: standards were designed to favor domestic manufacturers, resulting in a protected domestic market.[50]

These two cases of "competition" are, in substance, quite different, but both potentially have a prisoner's dilemma structure of payoffs, where cooperation leads to a better outcome for

46. DAVID VOGEL, TRADING UP: CONSUMER AND ENVIRONMENTAL REGULATION IN A GLOBAL ECONOMY 5-6 (1995) [hereinafter TRADING UP].

47. *See* William L. Cary, *Federalism and Corporate Law: Reflections Upon Delaware*, 83 YALE L.J. 663, 663 (1974).

48. *See* Viktor Mayer-Schönberger, *Operator, Please Give Me Information: The European Union Directive on Data Protection in Telecommunications, in* COMPETITION, REGULATION, AND CONVERGENCE: CURRENT TRENDS IN TELECOMMUNICATIONS POLICY RESEARCH 121, 123-25 (Sharon Eisner Gillett & Ingo Vogelsang eds., 1999).

49. *See* Robert E. Hudec, *Introduction to the Legal Studies, in* 2 FAIR TRADE AND HARMONIZATION: PREREQUISITES FOR FREE TRADE? 1, 1-2 (Jagdish Bhagwati & Robert E. Hudec eds., 1996).

50. *See generally* Marc T. Austin & Helen V. Milner, *Strategies of European Standardization*, 8 J. EUR. PUB. POL'Y 411 (2001).

both parties than non-cooperation.[51] As has been analyzed extensively elsewhere, the prisoner's dilemma may resolve itself under particular circumstances, notably: (1) where there is a long future of potential cooperation at stake (as compared to a one-time transaction);[52] and (2) where there is a small number of actors.[53] The smaller the future stakes and the larger the number of actors involved, the more difficult it is for actors to resolve the dilemma without resorting to a higher authority. Thus, under these circumstances, it may be beneficial for a central authority to step in and limit the range of policies that a jurisdiction may choose.

Not all jurisdictional competition, of course, is bad. And it is not desirable for all prisoner's dilemmas to be resolved through mutual cooperation. In fact, in the literal prisoner's dilemma scenario (two prisoners facing the choice of whether to turn in their co-conspirator), it is societally undesirable for the prisoners to cooperate with each other. There is a similar concern about cooperation among jurisdictions. To the extent that governments seek objectives other than the welfare of their citizens, competition among jurisdictions might limit their capacity to do so.[54] For example, there has been a powerful revisionist interpretation of the Delaware effect that Delaware does not have a more relaxed regulatory environment.[55] In fact (the argument goes) such a regime would be counterproductive be-

51. Kenneth W. Abbott & Duncan Snidal, *International "Standards" and International Governance,* 8 J. EUR. PUB. POL'Y 345, 347-48 (2001); David Lazer, *Regulatory Interdependence and International Governance,* 8 J. EUR. PUB. POL'Y 474, 476 (2001) [hereinafter *Regulatory Interdependence*].

52. *See generally* ROBERT AXELROD, THE EVOLUTION OF COOPERATION (1984); COOPERATION UNDER ANARCHY (Kenneth A. Oye ed., 1986).

53. *See* Duncan Snidal, *Coordination Versus Prisoners' Dilemma: Implications for International Cooperation and Regimes*, 79 AM. POL. SCI. REV. 923, 936-37 (1985).

54. In fact, much of the public choice literature is based on such an assumption regarding government behavior. *See, e.g.,* Geoffrey Brennan & James M. Buchanan, *Towards a Tax Constitution for Leviathan*, 8 J. PUB. ECON. 255, 271-72 (1977); WILLIAM NISKANEN, BUREAUCRACY AND REPRESENTATIVE GOVERNMENT (1971). For a more recent example, see ANDREI SHLEIFER & ROBERT W. VISHNY, THE GRABBING HAND: GOVERNMENT PATHOLOGIES AND THEIR CURES (1998).

55. *See* Richard L. Revesz, *Rehabilitating Interstate Competition: Rethinking the "Race-to-the-Bottom" Rationale for Federal Environmental Regulation,* 67 N.Y.U. L. REV. 1210, 1210 (1992).

cause investors would not invest in companies if there were not an effective regulatory regime.[56] Instead, what Delaware offers is efficient government — one that moves quickly and predictably. In essence, Delaware finds an "optimal" balance between protecting shareholders rights and minimizing burdens on corporations.[57]

In this scenario, competition may reduce the room that governments have to maneuver, but at the benefit of the governed.[58] Ironically, the role of any central authority would therefore be to foster a prisoner's dilemma among its constituent units. For example, it should not limit policy options of individual jurisdictions, and attempt to eliminate collusion among jurisdictions.

The EU's mandate to create independent national regulatory authorities ("NRAs") for the telecom sector provides a good example.[59] Previously, national regulatory power rested mostly with the telecom ministries, which typically had long and close ties with the incumbent telecom monopolist and with politicians in power.[60] This institutional set up likely encouraged deals to support the national incumbent and coordination among similarly situated ministerial regulators in other countries to maximize political slack. Forcing Member States to set up independent NRAs disrupted this close linkage and limited the potential for collusion.

B. Coordinative Interdependence

Coordination is an issue when there are benefits to all to having a uniform standard. This most obviously is the case where a technological interface comes into play. Who does not recall the problem of plugging in an electrical device manufactured in a different country? The world's three different televi-

56. *Id.*

57. *See id.*

58. *See* Timothy Besley & Anne Case, *Incumbent Behavior: Vote-Seeking, Tax Setting, and Yardstick Competition,* 85 AM. ECON. REV. 25, 34-36 (1995).

59. The ONP interconnection directive, among other documents, defines this in detail. *See* Parliament and Council Directive 97/33, *supra* note 24, art. 9.

60. *See* Carl B. Kress, *The 1996 Telekommunikationsgesetz and the Telecommunications Act of 1996: Toward More Competitive Markets in Telecommunications in Germany and the United States,* 49 FED. COMM. L.J. 551, 558 (1997).

sion standards — National Television Standards Committee in North America, Phased Alternation by Line in Europe and Sequential Color with Memory in France and Russia, among others — are another example.[61] This is also the case for health and safety standards where incompatible standards increase the costs of exporting — e.g., with agricultural goods.[62]

In such an area, the need for conformity will be driven by: (1) the technological and societal needs to interface; (2) the cost of producing products compatible with multiple standards; and (3) the cost of producing multiple lines of products to different standards.[63] For example, before the advent of laptop computers connecting to the Internet, having an international standard for phone plugs was not an issue, as one would almost never take one's phone on an international trip. Only with the rise of the Internet and mobile computing came the technological (and market) need for conformity. On the other hand, if the cost of producing products compatible with multiple standards is low, incentives for conformity are low, too. The power supplies in today's mobile phones, laptops and even desktop computers for instance, automatically switch between 110 and 220 volts, therefore reducing the pressure to create a uniform global electricity standard.[64]

However, if the production of multiple lines of products to different standards is very costly, the benefits of a widely held standard will be high. Again the European phone equipment market provides a case in point. While the transmission standards have been harmonized, the pressure for conformity was strong because of interface concerns, as many EU Member States still have millions of legacy phone plugs that comply with earlier national standards.[65] Equipment manufacturers have responded by producing one line of phones, with a standard (American) plug. Each phone is then "customized" to the target market by adding the right cord with the appropriate plug. This strategy substantially lowers the cost of maintaining

61. *See* Austin & Milner, *supra* note 50, at 428 nn.12-14.

62. *See* David Vogel, *Trading Up and Governing Across: Transnational Governance and Environmental Protection*, 4 J. EUR. PUB. POL'Y 556, 563-64 (1997) [hereinafter *Transnational Governance*].

63. *See Regulatory Interdependence*, *supra* note 51, at 476.

64. *Id.* at 477.

65. *Id.*

multiple production lines.[66] On the other hand, there will be little need for a single standard even in case there is a need to interface, if it is cheap to manufacture products that are compatible.

The phone plug example also highlights the importance of *switching costs*.[67] Obviously, producers and consumers invest in a particular standard. Consequently, a shift to another standard will involve a loss of useful assets. The gains of harmonization therefore must be weighed against the loss of these assets. Thus, for example, it probably does not make sense for the U.K. to switch the side of the street its cars drive on, even though there would some interface and economies of scale benefits to having *compatible* cars with the continent.

The selection of a frequency band for third generation mobile phones (often called "3G" or "UMTS") provides another example. As a result of international negotiations, dozens of nations around the world agreed to use a particular frequency band for 3G mobile devices.[68] This will permit these devices to be used internationally, hence — at least this is the hope — stimulate their use by providing a seamless experience for the customers.[69] The U.S. has chosen a different frequency band. This is in part because the U.S., due to its size, has relatively less need for interface with other countries than most states do. It was also driven by concerns about switching costs: the frequency band selected by the rest of the world is used heavily in the

66. The "Euro Plug," a standard European phone plug, will ultimately eliminate the necessity for multiple lines altogether. *See* Commission Decision 97/486 on a Common Technical Regulation for the General Attachment Requirements for Terminal Equipment to Interface to Open Network Provision (ONP) Two-Wire Analogue Leased Lines, 1997 O.J. (L 208) 44. European Standard ETS 300 012 harmonizes the plug for digital phones. Harmonization of the analogue phone plugs (the Euro Plug) is outlined and envisioned based on the Commission Directive 97/486 by EUROPEAN TELECOMMUNICATIONS STANDARDS INST., TERMINAL EQUIPMENT (TE): TECHNICAL FEASIBILITY OF A HARMONIZED PLUG AND SOCKET STANDARD FOR EUROPEAN PUBLIC SWITCHED TELEPHONE NETWORK (PSTN) ACCESS, DTR/ATA-005037 (1997), *available at* http://www.etsi.org/getastandar/ home.htm > "free download" > "publications" > "ETR 344."

67. *See* CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY 103-04 (1999).

68. MOBILE LIFESTREAMS, "YES 2 3G" — WHITE PAPER 13 (2001), *available at* http://www.gsmworld.com/presentations/white_papers/yes23g.pdf.

69. *Id.*

U.S. by the military.[70] Replacing the existing military standard and infrastructure would be more costly than the benefits reaped from fully interoperable mobile devices.

The possibility of switching costs also highlights a *timing* issue with respect to resolving coordination challenges. At some point, as jurisdictions invest in a particular standard, it will not make sense to switch to competing standards, even if there are major benefits to compatibility.[71] Thus, where there is substantial potential for switching costs, there are particular benefits to early collective intervention.

The development of the Groupe Special Mobile ("GSM") standard for digital cellular mobile telecommunications in Europe offers a telling example, where the EU acted early to encourage the development of a Europe-wide digital standard.[72] In the absence of centralized intervention, it is plausible that Europe might have balkanized around competing standards, leading to interface problems and higher unit costs — as, indeed, has occurred in the U.S.[73]

In a world with a dominant actor, coordination challenges will generally resolve themselves efficiently, although perhaps not equitably.[74] Jurisdictions will evaluate their choices in light of what the dominant actor has chosen, and if the benefits of conformity with that dominant standard are high enough, they will choose that standard. The decision of a small jurisdiction to conform to the standard of the dominant jurisdiction will generate a small benefit for the dominant jurisdiction and potentially a much larger benefit (at least per capita) for the small jurisdiction.

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70. *See* Elisa Batista, *U.S. 3G Spectrum Price-tag Soars,* WIRED (June 13, 2001), *at* http://www.wired.com/news/wireless/0,1382,44468,00.html.

71. *See* Stanley M. Besen & Joseph Farrell, *Choosing How to Compete: Strategies and Tactics in Standardization,* 8 J. ECON. PERSP. 117, 129 (1994).

72. *See* Jacques Pelkmans, *The GSM Standard: Explaining a Success Story*, 8 J. EUR. PUB. POL'Y 432, 433 (2001). For a general overview of the GSM standard, see generally MICHEL MOULY & MARIE-BERNADETTE PAUTET, THE GSM SYSTEM FOR MOBILE COMMUNICATIONS (1992); SIEGMUND H. REDL, AN INTRODUCTION TO GSM (1995).

73. *See* Pelkmans, *supra* note 72, at 433.

74. In game theory terms, this type of strategic interdependence is called "battle of the sexes." *See, e.g.,* ERIC RASMUSEN, GAMES AND INFORMATION: AN INTRODUCTION TO GAME THEORY 31 (1989).

Thus, many nations have chosen to follow the GSM standard.[75] While this choice generates some positive externalities for the EU (through greater international interoperability, and slightly lower per unit costs), most of the benefits are accrued by adopters (as compared to a counterfactual world where small states created their own standards). For example, for a small country like Israel, development of its own standard would result in exorbitant unit prices, in addition to loss of interoperability. Adoption of EU standards results in far cheaper handsets, as well as interoperability in Europe. While Israeli adoption of GSM generates some benefits for Europe (since they potentially gain the benefits of interoperability when they visit Israel, as well as (tiny) reductions in per-unit costs), Israeli benefits are far greater.

There are two distributional concerns with respect to coordination, combined with decentralized governance and a concentration of power. First, where there are significant benefits to convergence, the dominant actor will almost always get its preferred policy outcome.[76] Second, where regulation may be arrayed along a spectrum of least to most strict, and it is costly to produce multiple versions of a particular good, there will be a bias toward adopting the strictest standards — so that the product may have access to *all* markets. That is, there may be a race toward the top, as evidenced by the spread of strict pesticides and auto emissions regulations.[77] The auto emissions regulations case is a telling one, where California adopted emissions standards that exceeded federal standards.[78] These Californian standards have become de facto national standards, because it was not efficient for manufacturers to produce multiple versions of their products.[79] As a result, the costs of California's standards are borne in part (mostly) by other ju-

75. GSM accounts for 75% of the world's digital market and 71% of the world's wireless market. The number of countries/areas with GSM System is 178 and total subscribers are 677 million by March 2002. *See* Press Release, GSM World News, GSM Association Welcomes 122 New Member Companies At 47th Plenary Meeting (Apr. 17, 2002), *available at* http://www.gsmworld.com/news/press_2002/press_12_p147.shtml.

76. *See* Charles P. Kindleberger, *Standards as Public, Collective and Private Goods,* 36 KYKLOS 377, 393 (1983).

77. *See* TRADING UP, *supra* note 46, at 6, 250.

78. *Transnational Governance*, *supra* note 62, at 561.

79. *Id*. at 561-62.

risdictions, including some that place little or no value on emissions reduction.

In a world where power is more diffuse, coordination will be more difficult to achieve without some centralized intervention. As for the benefits to justify the costs of adopting a new standard, a critical mass of jurisdictions must already adhere to that standard.[80] A dominant actor (by assumption) provides that critical mass. In the absence of a dominant actor, it may require multiple actors to provide that critical mass — the more diffuse power is, the more actors will be required.[81] In the absence of centralized institutions to facilitate bargaining, conflicts over the distributional implications of different standards may preclude a common standard.[82]

A simple example will illustrate the challenge. Let us imagine there are ten states each with their own widget standard. As there are major economies of scale to producing widgets, some manufacturers have multiple product lines to sell to multiple markets (at higher per unit costs), while some manufacturers produce only for their home market. Consumers pay higher prices because manufacturers' costs are higher, and because there is less competition in each market. Each state faces the choice of adopting another state's standard. This would have the benefit of increasing the scale of production for goods produced to that standard. It would, however, have the cost of stranding many of the assets (presumably disproportionately in the home state) devoted uniquely to producing to that state's standard. If these costs are extremely high, or the benefits to cheaper production costs and greater competition are small, then it may not make sense for all ten states to harmonize, since the costs may exceed the benefits. However, often there will be a wide range of benefits and costs where it would not make sense for a pair of states to harmonize, but it

80. *See* Nicholas Economides & Charles Himmelberg, *Critical Mass and Network Evolution in Telecommunications, in* TOWARD A COMPETITIVE TELECOMMUNICATIONS INDUSTRY: SELECTED PAPERS FROM THE 1994 TELECOMMUNICATIONS POLICY RESEARCH CONFERENCE 47 (Gerard W. Brock ed., 1995); Brian W. Arthur, *Competing Technologies, Increasing Returns, and Lock-In by Historical Events*, 99 ECON. J. 116, 127 (1989).

81. *See* Kindleberger, *supra* note 76, at 393.

82. Besen & Farrell, *supra* note 71, at 121.

would make sense for the entire set of states to agree to a single standard.

Philipp Genschel and Thomas Plümper provide an example in the banking arena, where prior to 1987, there was no effective global standard with respect to accounting standards for banks.[83] In 1987, with the Basle Accord, the U.S., the U.K. and Japan effectively imposed a global standard on the rest of the world.[84] They were successful in doing so because once a critical mass (provided by those three countries) adopted a standard, banks from non-compliant countries would be placed at a competitive disadvantage internationally. The rest of the world quickly fell in line behind the standard.[85]

The value of centralized governance when there are coordination concerns is therefore threefold. First, it limits the capacity of a large jurisdiction to unilaterally create de facto international standards. Second, it limits the ability of stricter jurisdictions to transfer the costs of strict standards to other jurisdictions. Third, it provides a mechanism to provide the *public good* of a common standard.

Information is at the foundation of coordination challenges. In the absence of information and communication, coordination is impossible. As a result, associated with coordination challenges are a variety of mechanisms to transmit data on what other states are doing. Effective transmission of information will help resolve coordination challenges even in the absence of centralized governance mechanisms, as jurisdictions adapt to what other states are doing. However, even in the absence of the incentives to conform discussed above, the transmission of information has an independent effect on policy making, because that information will also convey lessons as to what are good and what are bad policies, which is the focus of the "informational" mode of regulatory interdependence.[86]

83. *See* Philipp Genschel & Thomas Plümper, *Regulatory Competition and International Co-Operation,* 4 J. EUR. PUB. POL'Y 626, 628 (1997).

84. *Id.* at 629-30.

85. *Id.* at 630.

86. *See Regulatory Interdependence*, *supra* note 51, at 480-81.

C. Informational

The principle of the informational mode is simple: Even if policies among jurisdictions are not interdependent in the sense that jurisdiction *A's* choice affects the payoffs to jurisdiction *B*, *A's* choice may affect the information that *B* has about its choices.[87] For example, *A* may generate information about policy alternatives simply in determining its own choice. This information may then be recycled by other jurisdictions. Even if *A* does not generate information about success and failure, the decision by *A* to select policy alternative *X* rather than policy alternative *Y* sends a signal to other jurisdictions that alternative *X* is better than alternative *Y*. Thus, for example, the Scandinavian NTM-450 analog standard in mobile telephony, with roaming throughout Scandinavia, served effectively (and accidentally) as a model for the GSM standard, with roaming throughout the EU.[88]

There are four concerns with respect to informational interdependence: (1) that information spreads as efficiently as possible; (2) that enough information be produced; (3) that the spread of information does not squelch heterogeneity in the system; and (4) that fads will be minimized.[89]

1. Efficient Information Diffusion

Communication among jurisdictions is not necessarily structured so as to facilitate the overall spread of information among all jurisdictions.[90] Information networks may be characterized by a hub and spoke structure, where a few central actors get a lot of information, and peripheral actors little. Alternatively, there may be very good communication within small groups of jurisdictions, but poor communication between those groups. It is therefore possible that jurisdiction *A* has the answer to jurisdiction *B's* problems — but jurisdiction *B* does not know it.[91]

87. *See* David Lazer, How to Maintain Innovation.gov in a Networked World?, Paper Presented at the Fourth Annual Visions of Governance for the Twenty-First Century Retreat (July 11-14, 1999) (on file with Journal) [hereinafter Innovation.gov].

88. *See* Pelkmans, *supra* note 72, at 437.

89. *See* Innovation.gov, *supra* note 87, at 2.

90. *See id*. at 2-6.

91. *See id.* at 3-5.

2. Information Production

If information flows freely, jurisdictions may underinvest in their policy decisions, relying on some other jurisdiction to make a decision. That is, ironically, if information is instantly public and easily accessible, then the production of information is a public good: While a jurisdiction might benefit from experimentation, other jurisdictions may benefit as much, without incurring the costs and risks associated with experimentation. A likely result is that jurisdictions will underinvest in their own policymaking process, as they wait for other jurisdictions to come up with solutions.[92]

3. Preservation of Heterogeneity

Because of the information generated by experimentation, it may be beneficial for there to be a heterogeneity of policy approaches — even if some of them are "non-optimal" at the time, as different approaches may offer better solutions to future problems. A mimetic process by which the less successful imitate the more successful may eliminate (systemically) useful heterogeneity.

4. Prevention of Fads

If information flows freely, it is as possible that bad policy choices will spread as good policy choices. There is a substantial literature on "information cascades" that demonstrates that the contagion process often overwhelms the quality of an idea.[93] Bad policies may spread almost as easily as good policies.

These issues around information diffusion are, of course, not new to the information age. Jared Diamond, in his sweeping treatment of all of human (pre)history, for example, argues that the structure of information diffusion gave Europe a criti-

92. *See* Susan Rose-Ackerman, *Risk Taking and Reelection: Does Federalism Promote Innovation?*, 9 J. LEGAL STUD. 593 (1980); Koleman S. Strumpf, *Does Government Decentralization Increase Policy Innovation?,* 4 J. PUB. ECON. THEORY 207 (2002).

93. *See* Sushil Bikhchandani et al., *Learning from the Behavior of Others: Conformity, Fads and Informational Cascades*, 12 J. ECON. PERSP. 151, 154 (1998).

cal advantage over the rest of the world.[94] His argument, in short, is that Europe, in contrast to the other continents, had a geography that was effective at diffusing innovations, but rugged enough to preserve heterogeneity.[95] What is new in the information age has been the progressive decoupling of virtual geography from real geography.[96] It may be, for example, easier to send information to the other side of the world than to one's neighbor. Virtual topography is certainly more malleable than the physical, and can be molded in a way that optimizes the flow of information.

Thus, while coordination and competition concerns have received the bulk of attention regarding telecommunication regulation, creating a capacity that allows policy makers to effectively build upon prior experience may, over the long run, be far more important than competitive and coordinative concerns.

D. Creating Governance Structures

The informational, coordinative and competitive modes of policy interdependence each pose governance challenges in decentralized regulatory systems. The key question in all of these modes is the extent that rule making should be centralized. The critical question is a structural one: Who should have responsibility for what pieces of regulatory policy — the central government, or the constituent jurisdictions?

In the foreground of the decision regarding how much to centralize policy making is the underlying heterogeneity of policy preferences of the set of jurisdictions. *Ceteris paribus*, the greater the heterogeneity, the less central authority should intervene. However, if the disfunctions resulting from policy interdependence are high enough, there should be some constraints on the policy choices of jurisdictions even in the presence of great heterogeneity.

If coordination is the major challenge to the system, then the key concerns are to prevent inefficient divergence, and non-accountable convergence. Inefficient divergence is most likely

94. *See* JARED DIAMOND, GUNS, GERMS AND STEEL: THE FATE OF HUMAN SOCIETIES 409-10 (1999).

95. *Id.* at 409-17.

96. *See* WILLIAM J. MITCHELL, E-TOPIA: OUR TOWN TOMORROW 4-7 (1999).

where market power is diffuse — a multitude of actors making an ad hoc agreement unlikely even where the benefits would be high. The benefits to centralized intervention would be maximized where interface benefits are high, and/or production cost savings outweigh (in present value) the value of the stranded assets devoted to producing multiple lines of a product (or a multi-standard product). Thus, the EU actions with respect to GSM would appear to be an effective use of a central authority as interface benefits were high, and switching costs (since there were minimal investments in a digital standard already) were low.

Accountability is a concern where the pressure to conform to an emerging regulatory framework is so great that there is a disconnect between the framework that emerges and the policy preferences of most of the population covered by the regulation. This is a particular danger where there is a large jurisdiction, whose regulatory choices automatically get such a head start on alternatives that they tend to become the de facto framework for the entire system. Accountability points to the need for central institutions to effectively include the policy desires of all of the members of the system, and to provide mechanisms to compensate losers.

The EU directive on telecom privacy[97] and the more general EU privacy directive[98] provide cases in point. Both were championed by Germany, who wanted its stringent national privacy laws to be reflected in similarly stringent EU-wide regulations.[99] After years of negotiations, consensus on the directives were finally reached during Germany's EU presidency, after the German government had expended significant political capital in persuading other Member States to agree.

In the absence of the EU as a forum for bargaining, it might well have been that German privacy laws would have become the de facto standard in Europe. However, as in the California emissions example, the costs of the standard would have been transferred in part to other jurisdictions that did not place such a value on privacy. Instead, Germany was forced to effectively

97. *See* Parliament and Council Directive 97/66, *supra* note 23.

98. *See* Parliament and Council Directive 95/46 on the Protection of Individuals with Regard to the Processing of Personal Data and on the Free Movement of Such Data, 1995 O.J. (L 281) 31.

99. *See* FRED H. CATE, PRIVACY IN THE INFORMATION AGE 42-43 (1997).

compensate other states in the bargaining process. The EU thus creates a hierarchy of accountability for its Member States, where the democratically elected governments of Member States may be held accountable for the bargains they agree to.

If competition is the major challenge to the system, the role of the central government will be to pre-empt harmful competition, i.e., race to the bottom effects and protection in the guise of technical rules, through constraints on the regulatory choices of constituent jurisdictions. At the same time, the central government should not constrain healthy jurisdictional competition to create a leaner and more effective regulatory system. Thus, for example, the EU has determined certain food safety standards to which all Member States must abide, since there will be a potential incentive for a race to the bottom in those markets otherwise.[100]

If the interdependence is primarily informational, then the role of the center[101] is first to subsidize experimentation and diversity. This will compensate for the informational externalities that experimentation generates. Second, it is to provide effective conduits for information. An effective "clearinghouse" will both pre-empt states from "reinventing" the wheel that some other state has already invented, and will provide data on success and failure of policies of other states, so that fads will not occur (i.e., a failed policy will not spread if it is known that it is a failure; it might if it is not known that it is a failure).[102] Below, the Article examines the governance challenges that the EU faces in regulating telecommunications, and considers the match between the challenges and the governance structures of the EU.

100. For a discussion with respect to fish inspection, see *Regulatory Interdependence*, *supra* note 51, at 482.

101. "Center" is to be liberally interpreted in this context, since the coercive power of a central government is not necessary to disseminate information. Thus, for example, in the U.S. there are numerous voluntary intergovernmental associations, like the National Governor's Association and the National District Attorneys' Association that play this role. These organizations, however, do not have the capacity to perform the first function listed above.

102. *See* Innovation.gov, *supra* note 87, at 1.

IV. MULTIPLE MODES, MIXED CURES — THE EU TELECOM FRAMEWORK

As has been mentioned previously, the EU's framework regulating telecommunications combines centralizing and decentralizing strands with institutional mechanisms that deal with informational interdependencies. The decentralized tendency is most visible in the principle that telecom laws are still national laws.[103] The centralizing components of the EU framework are highlighted in the harmonized ONP framework.[104] Finally, the numerous meetings of the NRAs and national telecom policy makers on an EU-wide level foster exchange of information and provide ample signaling opportunities.[105] This confirms what the authors have asserted on a theoretical level: that no single governance model is optimal. Complex regulatory frameworks covering many different jurisdictions are, it seems, bound to blend together different governance approaches.

A. "Mutual Recognition": EU Standards and National Rules

The deregulation of the telecom terminal equipment market provides an illuminating example. When in the 1980's the EU was faced with the difficult task of liberalizing the terminal equipment market, every Member State had vastly different regulations and standards in place, intended to protect national manufacturers. New entrants had to design their equipment in accordance with these national standards, then go through a long and costly evaluation process before they could sell their equipment.[106] This extreme example of decentralized governance resulted in a failure to efficiently resolve the coordination and competitive interdependencies among these states. All states would have benefited from a degree of uniformity in their standards with resultant reductions in produc-

103. *See* Mayer-Schönberger & Strasser, *supra* note 2, at 576.

104. *See* Green Paper on Development, *supra* note 8, at 69-70; ONP Framework Directive, *supra* note 22, art. 3.

105. One place for such EU-wide information exchange is through the Independent Regulators Group at http://irgis.icp.pt/site/en/index.asp (last visited Apr. 22, 2002).

106. In numerous nations, not only the sale of non-compliant equipment but also its sheer use was prohibited and punishable by fines. *See generally* § 3 Fernmeldegesetz 1993 Bundesgesetzblatt [BGBl] 908/1993 (Aus.); FEV BGBl 712/1994 (Aus.).

tion costs by manufacturers and increased competition in home markets.

There was a clear need for the EU to impose a degree of uniformity. However, its original strategy to achieve uniformity — to impose comprehensive EU-wide standards combined with a centralized EU evaluation and testing center to certify compliant products — quickly overwhelmed the institution.[107] As the failure of this approach became apparent, the EU shifted to an approach that wove together strands of centralized and decentralized governance. First, rather than setting a comprehensive set of standards, it only determined a core set of standards for interoperability of terminal equipment — resolving the key interface concerns.[108] Second, through regulation, it forced Member States to recognize the approval of equipment of any other Member State.[109] The standards ensure necessary homogeneity, while the mandatory recognition adds possibly beneficial heterogeneity.[110] This system creates a competition among regulatory systems — a competition arbitrated by consumers, who choose products manufactured under the rules of one system or another, and producers, who choose one system or another based on cost and anticipated responses of consumers. In short, this approach addresses the coordination challenges due to the interface issues inherent in telecommunications equipment, and the prisoner's dilemma resulting from the effective protection of home markets through regulation.

107. *See* Kalypso Nicolaidis, *Mutual Recognition of Regulatory Regimes: Some Lessons and Prospects*, Jean Monnet Working Paper 7/97, http://www.jeanmonnetprogram.org/papers/97/97-07.rtf (last visited Apr. 21, 2002).

108. For an overview of this principle of mutual recognition (the so-called "new approach"), see EUROPEAN COMMISSION, GUIDE TO THE IMPLEMENTATION OF DIRECTIVES BASED ON THE NEW APPROACH AND THE GLOBAL AAPPROACH (2000), *available a*t http://europa.eu.int/comm/enterprise/newapproach/legislation/guide/document/1999_1282_en.pdf.

109. *Id.*

110. The system was started with Commission Directive 88/301 on Competition in the Markets in Telecommunications Terminal Equipment, 1988 O.J. (L 131) 73. Today the relevant legislative framework is provided by Parliament and Council Directive 99/5 on Radio Equipment and Telecommunications Terminal Equipment and the Mutual Recognition of Their Conformity, 1999 O.J. (L 91) 10.

The setup has proven to be hugely successful.[111] Not surprisingly, production consolidated around the standards of a few major markets (where the producers were already located). The resulting regulatory competition is no longer to create barriers that shelter domestic producers — rather, it is to attract and retain producers, whose motivation, in turn, will be to attract consumers and lower costs.[112] Production costs have decreased, and competition increased. In a handful of years, terminal equipment prices came down dramatically, yet interconnectivity has not been compromised.[113] The combination of a uniform set of core standards and regulatory competition governed by mutual recognition is not the only example of the application of mixed governance models. In fact, "governance mixes" can be found in the very enactment and enforcement structures of the current regulatory framework.[114]

111. The terminal equipment market in the EU has reached annual revenues of $30 billion euros in 2000. *See Radio & Telecommunications Terminal Equipment: Introduction to the R&ETTE Directive, at* http://europa.eu.int/comm/enterprise/rtte/intr.htm (last modified June 4, 2001). Annual growth rates have been 7-11% since liberalization in the late 1980's. *See* EITO, *Growth in Information Technology and Telecommunications Even Higher Than Expected*, *at* http://www.eito.com/PAGES/EITO/ABSTRACT/Def-abst.htm (Oct. 1998).

112. Whether this will result in a race to the bottom is contingent on the quality of information regarding the various regulatory systems. If terminal equipment manufactured according to the standards of a particular jurisdiction were perceived as shoddy, then manufacturers would not choose those standards. In short, a race to the bottom in cases like this is contingent on a market failure due to information asymmetries.

113. One of the authors himself remembers buying an answering machine in Austria in 1987 (pre-liberalization). It cost twenty times (!) as much as a similar model in the U.S. at that time. Less than five years later, in the wake of liberalization, prices had come down to the U.S. level.

114. *See* Abbott & Snidal, *supra* note 51, at 346 (arguing for the use of governance blends — in that context blending together the private-public dimension as well as the centralized-decentralized dimension).

B. Enactment: Structural Subsidiarity[115] — Centralized Goals and National Transposition

The EU has a number of legal instruments to enact its decisions.[116] By far its most widely used instrument — the directive — is the very embodiment of structurally blending centralized and decentralized governance. The directive, a set of rules addressed to the Member States, has to be transposed into national laws.[117] This permits a certain flexibility, or heterogeneity of the means, while maintaining coherence and homogeneity of the goals.

Almost the entire EU telecom regulatory framework is in the form of directives, thus permitting "mixed governance." But this does not guarantee an *optimal* mix in response to a particular policy challenge. Finding the appropriate level of generality or specificity is complex, and highly context specific. One of the authors has argued before that this structural subsidiarity in the enactment phase provided the foundation for the EU to successfully liberalize the telecom sector.[118] Enactment, however, is not the only phase in which "governance mixes" are structurally possible.

C. Enforcement: Dual Track — Community Law and NRAs

As mentioned before, the EU's telecom regulatory framework has two distinct tracks. One is based on EU competition law, the other on harmonization directives clustered around the principle of ONP.[119] Enforcement of the former rests on the judicial system and ultimately with the ECJ.[120] This provides for a strong centralizing dimension as ultimately one European

115. *See* David Lazer & Viktor Mayer-Schönberger, *Blueprints for Change: Devolution and Subsidiarity in the United States and the European Union*, *in* THE FEDERAL VISION 118, 138-141 (Kalypso Nicolaidis & Robert Howse eds., 2001).

116. *See* ENCYCLOPEDIA OF THE EUROPEAN UNION 324 (Desmond Dinan ed., 2000).

117. *See* EC TREATY, *supra* note 12, art. 249 ("A directive shall be binding, as the result to be achieved, upon each Member State to which it is addressed, but shall leave to the national authorities the choice of form and methods.").

118. Mayer-Schönberger & Strasser, *supra* note 2, at 583.

119. *See* Ungerer, *supra* note 11, at 10.

120. *Id.* at 14 n.22.

arbiter resolves the conflicts. Enforcement of the ONP directives is based on national implementation.[121] The directives foresee NRAs ultimately enforcing the goals of the directive through the regulatory frameworks they advance.[122] In this sense, the forward-looking rules enacted by the NRAs themselves set up in accordance with a directive mandate, are enforcement of the directives' broader goals.[123] This provides for multiple flexibility and thus heterogeneity, creating the possibility of regulatory competition.[124]

Furthermore, this governance mix binds the enforcement (or implementation) institutions to each other. Courts will closely follow the decisions taken by the NRAs, and wrestle with their substance when deciding claims stemming from competition law, keeping in mind that NRAs have both a wealth of knowledge and experience in the telecom sector and a strong regulatory agenda. NRAs, on the other hand, will closely watch court decisions, fully understanding that whatever they regulate, it may only be temporary if it cannot withstand judicial scrutiny based not on national, but EU competition law. Like the directive model in the enactment phase, the dual track model does not guarantee efficient results. But it provides a structural basis for governance mixes even in the implementation phase.

D. Institutionalizing Governance Mixes

As enumerated above, the EU has a number of powerful tools that implicitly include centralizing and decentralizing components. However, the availability of tools does not guarantee their balanced and effective use. The authors argue here that the very decision-making structure of the EU embeds and balances competing preferences for centralization and decentralization, where the Commission represents the preferences for centralization, and the Council the preferences for decentralization.

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121. *Id.* at 7 n.10.

122. *Id.* at 17.

123. *Id.* at 15.

124. This implies, of course, that Member States do not coordinate among themselves to create a harmonized framework, yet one not envisioned by the directives. The involvement of national governments in drafting and enacting the directive, combined with the strong economic incentives to compete makes such an outcome impossible.

Institutional involvement in the EU's rule making depends on the matter to be regulated. Yet, in most instances the Council, representing the governments of the individual Member States, enacts legislation based on proposals from the Commission — the EU executive — with some involvement by the European Parliament.[125] This process in itself incorporates institutions pushing for heterogeneity and flexibility (usually represented by the Council) and harmonization (usually advanced by the Commission).

The Council can stall progress by refusing to enact proposed community legislation, for example, when it is of the impression that the proposed directive attempts too much coordination.[126] In competition matters, this power of the Council is countered by an equally heavy club of the Commission, as it is empowered by the EU Treaty to enact directives ensuring competitive markets without the consent of the Council.[127]

This leaves the Commission, traditionally more supportive of centralized governance, and the Council, tendentiously more supportive of decentralized governance, in a double bind. The Council can also stall, centralizing a directive, but risks that the Commission may enact parts of it under the rubric of its competition powers.[128] At the same time, the Commission must use its competition threat carefully. Clubbing the Council has its political price, and the Commission's power to legislate is limited to the small area of competition matters, creating not enough of a power base to enact a full (de)regulatory framework.

During the "hot" phase of negotiating telecom liberalization, the Commission repeatedly threatened to enact deregulatory directives based on its competition powers, mainly to induce the Council to act faster and be bolder in its liberalization steps.[129] Yet, the Commission has come to terms with the Council every time, enacting competition directives in tandem

125. *See* EC TREATY, *supra* note 12, art. 202.

126. *See* ENCYCLOPEDIA OF THE EUROPEAN UNION, *supra* note 116, at 118-19.

127. *See generally* Case 41/83, Italian Republic v. Commission, 1985 E.C.R. 873 (1985).

128. *See* ENCYCLOPEDIA OF THE EUROPEAN UNION, *supra* note 116, at 103, 118-19.

129. *See* Herbert Burkert, *The Post Deregulatory Landscape in International Telecommunications Law: A Unique European Union Approach?,* 27 BROOK. J. INT'L L. 739, 755-56 (2002).

with the Council's related ONP harmonization directives (which in turn were proposed by the Commission).[130] The specific institutional setup within the EU that has granted overlapping, yet distinct powers to both the Commission and the Council forces rule-makers to more often, more innovatively and more effectively use the directive model and the dual track model — governance mixing tools the EU's regulatory structure readily provides. This approach therefore ensures a degree of heterogeneity and innovation among the constituent Member States of the EU.

E. Governing Information

As mentioned above, the NRAs provide for heterogeneity. In this sense they may foster regulatory competition. However, even if each Member State's choice did not directly affect the payoffs to the choices by other states, each NRA's regulatory setting also provides a test trial for all other NRAs to see what works and what does not. But such innovations will only spread if information about them is available and institutions exist to facilitate the spread of that information.

The EU-mandated creation of independent and, most importantly, *transparent* NRAs has greatly facilitated the flow of information. Most NRAs post their decisions on their websites and make available their regulatory framework.[131] NRA watching organizations across Europe track the latest developments and provide additional informational links.[132] But the most important informational link is provided by the NRAs themselves. They meet, not only at trade conferences, but also at informal regular meetings to exchange ideas and experi-

130. *Id.* at 759-60.

131. *See, e.g.,* Office of Telecommunications (U.K.), *at* http://www.oftel.gov.uk (last visited Apr. 21, 2002); Autorité de Régulation des Télécommunications (France), *at* http://www.art-telecom.fr (last visited Apr. 21, 2002); Reguliecrungsbehoerde für Telekommunikation und Post (Germany), *at* http://www.regtp.de (last visited Apr. 21, 2002).

132. For additional informational links, see TotalTelecom, *at* http://www.totaltele.com (last visited Apr. 21, 2002); European Network for Communication and Information Perspectives, *at* http://www.encip.org (last visited Apr. 21, 2002); and Information Society Directorate General, *at* http://europa.eu.int/comm/dgs/information_society/index_en.htm (last visited Apr. 21, 2002).

ences.[133] They have created an organization — the Independent Regulators Group — as a forum for information exchange.[134] This creates a trans-governmental network, in which NRA officials share their experience and create an entire dimension of informational exchange, directly affecting how they will regulate in their jurisdictions in the future.[135]

Informational networks are also embedded within the EU rule-making process, as it pulls in the relevant career bureaucrats in the telecom ministries. While the Member States' Permanent Representatives to the EU formally keep negotiations going, the substantive work on bargaining a directive is often done by the very ministerial bureaucrats who later will have to transpose the act into national law.[136] They, too, form a trans-governmental network, and have continuous and intense interaction with their Commission counterparts.

In short, heterogeneity is a key part of the EU regulatory approach in telecommunications. This heterogeneity is often framed in terms of national sovereignty or (beneficial) regulatory competition.[137] However, the decision-making structures within the EU actually create a network that is highly effective at diffusing information. Heterogeneity results in experimentation, which creates information, which is then utilized throughout the EU because of the effective networks. Ironi-

133. *See* Independent Regulators Group, *at* http://irgis.icp.pt/site/en/irg.asp (last visited Apr. 21, 2002).

134. *Id.* The self-description of the Independent Regulators Group, drawn from its website:

> The Independent Regulators Group — IRG — was established in 1997 as a group of European National Telecommunications Regulatory Authorities (NRAs) to share experiences and points of views among its members on issues of common interest such as interconnection, prices, universal service, and other important issues relating to the regulation and development of the European telecommunications market.

Id.

135. *See* Anne-Marie Slaughter, *Government Networks: The Heart of the Liberal Democratic Order*, *in* DEMOCRATIC GOVERNANCE AND INTERNATIONAL LAW 199 (Gregory H. Fox & Brad R. Roth eds., 2000).

136. *See* DESMOND DINAN, EVER CLOSER UNION?: AN INTRODUCTION TO EUROPEAN INTEGRATION (2d ed. 1999).

137. *See* Mayer-Schönberger & Strasser, *supra* note 2, at 582.

cally, there is a greater Brandeis-type "laboratories of democracy" effect in the EU than there is in the U.S. [138]

F. Comparisons to the U.S.

If we compare this mix of governance approaches to the United States post-1996 Act framework, a striking difference emerges. First, in the U.S., the crescendo of *market* and *competition* rhetoric surrounding the 1996 Act has not translated into a governance structure that actively attempts to induce regulatory decentralization (and thus some space for regulatory innovation). After decades of demarcated responsibility between the centralized FCC (for terminal equipment and long-distance, i.e., inter-jurisdictional services) and the state public utility commissions ("PUCs"), Congress opted to shift power towards the central authority.[139]

This centralizing approach is not only in contrast with the EU's emphasis on decentralized rule transposition and decentralized rule implementation, it also is surprising for a nation that generally champions the market ideal. The reasons are likely multi-faceted. Political support in Congress may have played a role. The negative experience with decentralized structures in the build-up of the mobile phone network may have weighed in. Finally, Congress may have mistrusted the PUCs to create and implement competitive structures after having overseen and worked with regional incumbents for many decades.

Decentralized rule implementation through NRAs bears some risk. NRAs may be more subject to regulatory capture. They may be incompetent.[140] Even if they are independent and competent, they still create regulatory heterogeneity, which produces transactional costs for inter-jurisdictional telecom providers and thus reduces their efficiency. Not surprisingly,

138. *See* New State Ice Co. v. Liebmann, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting).

139. *See* AT&T Corp. v. Iowa Utils. Bd., 525 U.S. 366, 377-78 (1999).

140. Note that the U.S. and the EU have vastly different ratios of resources relative to their constituent units: the federal have far more resources than individual states; whereas the major states within the EU have far more resources than the EU does. A more decentralized governance approach may therefore be a better match given the existing capacities of governing institutions within Europe.

even in Europe not all experts favor the NRA structure. Instead, some powerful voices point to the U.S., the FCC and the 1996 Act in arguing for the abolition of the existing decentralized system and for the establishment of a European-wide regulatory authority.[141]

A centralized regulatory authority, however, creates a bottleneck in the decision-making process. Whoever wants to stall the deregulatory process only needs to stall the centralized authority. When the FCC, newly empowered by the 1996 Act, handed down its first important regulatory decision, its opponents immediately brought the case before court, hoping — rightly — that this would effectively delay the implementation of any decision for years.[142] To be sure, stalling can happen in a decentralized system as well, but it is harder to do. In the EU, for instance, one would have to fight the decisions of all NRAs in all fifteen Member States to achieve the same result. Neither approach is perfect. Each one has its own advantages and flaws. What is surprising — at least to an extent — is to find a more traditional governance mix in the U.S., and a more innovative multi-dimensional mix in the EU.

V. CONCLUSION

Often, deregulation is equated with the introduction of markets in sectors with former monopolies. It is thus tempting for law makers to conclude that there should also be a market of regulatory structures, permitting competition. In this Article, the authors have shown that this is too simple a view. The authors identify three modes of regulatory interdependence: a competitive, a coordinative and an informational one. The benefits of centralized governance are that it will eliminate coordination challenges (interface, creating scale of production, accountability), and destructive competition among jurisdic-

141. *See* William Lehr & Thomas Kiessling, *Telecommunication Regulation in the United States and Europe: The Case for Centralized Authority*, *in* COMPETITION, REGULATION, AND CONVERGENCE: CURRENT TRENDS IN TELECOMMUNICATIONS POLICY RESEARCH 105, 112-16 (Sharon Eisner Gillett & Ingo Vogelsang eds., 1999); EUROSTRATEGIES/CULLEN INT'L, FINAL REPORT ON THE POSSIBLE ADDED VALUE OF EUROPEAN REGULATORY AUTHORITY FOR TELECOMMUNICATIONS (1999), *available at* http://europa.eu.inte/ISPO/ infosoc/telecompolicy/en/erafl12-99.pdf.

142. *See Iowa Utils. Bd.*, 525 U.S. at 366.

tions (such as race to the bottom effects). However, centralized governance also eliminates much of the possibility of beneficial innovation from jurisdictional competition. An effective governance approach thus needs a multi-dimensional approach that mixes centralization and decentralization, while creating an informational network that leverages the benefits from innovation.

This examination of the EU regulatory framework suggests that it may be a good match for the governance challenges it faces in the telecommunications area. In fact, the regulatory tools at the disposal (at the enactment and enforcement stages) almost require a modulated approach to regulation — dividing up responsibility between the EU and Member States. This legal structure is mirrored in the institutional structure of the EU, where the Commission represents centralization, and the Council decentralization. Finally, the rule-making process within the EU pulls in key decision makers from the Member States, which has the incidental (but very important) consequence of creating an effective informational network. This analysis does not render a *winner* in telecom deregulation, or even compare substantive rule of telecom regulatory regimes. Instead, the authors have aimed to provide an evaluation method for the regulatory structure and its inter-jurisdictional interface, and to assist in answering the question why such a structure works well in a given context.