

The Governance of Competition: the interplay of technology, economics, and politics in European Union electricity and telecom regimes

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ABSTRACT

This study raises two basic questions. How is competition in telecom and electricity governed? What explains the considerable differences in their governance regimes? To answer these questions the study compares the economic and technological characteristics of the sectors; deconstructs the telecom sector into two micro-regimes (terminal type-approval and networks interconnection) and the electricity sector into three (generation, transmission, distribution); defines intergovernmentalism, supranationalism, liberalism, and étatism for each of the five segments of the sectors; distinguishes three different kinds of competition – deregulated competition, regulation-of-competition, and regulation-for-competition; and deconstructs the European policy game into three different games (sectorial, national, and union). The European Union's policy choices are: supranational governance in telecom and intergovernmental governance in electricity. The introduction of competition as an administrative process leaves considerable room for entrepreneurship and political choice by European nation-states and strengthens their regulation capacities. Differences in the governance regime for telecom and electricity are explained by a state-centered multi-level approach.

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Since the very beginning of central-station electricity and voice-telecommunications industries in the last quarter of the nineteenth century, hierarchical forms of governance were tolerable facts of life for policy makers, business users and household consumers.¹ Municipal, regional, and national monopolies on the one hand, and public ownership on the other, were common forms of industrial organization across countries and continents. This situation is now changing, and while the extent of change differs across countries and regions, the momentum towards a more competitive organization of these industries is strong and clear. The changes are especially intriguing because these industries were closely bound up with the nation-state as we have come to know it since the late nineteenth century. The rise of big business, the welfare state, the mixed economy, and the affluent society of the post-war era are all mirrored in the development, consolidation, and governance of telecom and electricity. The central role of the nation-state in these industries was evident in its accelerating the pace of rural and urban electrification; impelling the process of telephonication; nationalizing these industries, nurturing national equipment industries; and constructing nationally-bounded electricity and telephony networks. It is also salient in the different responses of Europeans (nationalization) and Americans (regulation) to the problems of natural monopoly in these industries.²

The transformation of the old order compels us to reconsider what we know about the economic role of the nation-state in this process and about economically efficient and politically feasible structures for the governance of the marketplace. We are told that technology triggers the processes (Sandholtz, 1993); that economic efficiency makes it necessary (Ohmae, 1995); and that internalization and globalization have obliged nation-states to implement it (Strange, 1996). Moreover, national-level changes are coupled with stronger international cooperation and market integration. This tendency is quite clear in the Europeanization of telecom since the mid-1980s and of electricity since the early 1990s, in the extension of GATT rules to telecom by the WTO, and also in the increasing willingness of policy makers all over the world, and especially in Europe, to interconnect national electricity networks. To examine the effects of the creation of markets (liberalization), and of their integration (Europeanization), on the economic role of the nation-state this paper compares the process of Europeanization of the telecom and electricity industries. It especially discusses the question of whether the changes in the governance of these industries imply that the nation-state is on the retreat, or maybe even "hollowing out".³ It seems that Europe is going further in the extent of market integration than any other region in the world, and thus

provides an exceptionally friendly arena for such arguments. This makes the process of Europeanization a critical case for our study of the economic role of the nation-state. If these arguments fail to win empirical support in the context of Europeanization, as will be demonstrated below, they are even less likely to receive support in other cases.

Comparative studies of EU policy making are the exception in the extensive discussion of EU policy making. One notable and intriguing example is Susanne Schmidt's study of the telecom and electricity industries, which was published in the *Journal of Public Policy* (Schmidt, 1997). Schmidt pointed to three problems in the study of the European policy process: (a) case-specific findings, which are too unique to allow for generalization; (b) dichotomous theoretical perspectives, which do not allow a refined view of the integration process; and (c) the scarcity of overlapping research, which constricts empirical and theoretical debate. This paper accepts most of her insights on the problems of the current state of European policy analysis, particularly the shortcomings of intergovernmentalism and supranationalism (see also Anderson, 1995; Risse-Kappen, 1995). However, while building upon her analysis, and while offering an overlapping study that allows a more focused empirical and theoretical debate, it dissents from Schmidt's analysis on two critical points.

First, this paper offers a strategy to compare telecom and electricity liberalization while avoiding the pitfall of "miscomparing" (Sartori, 1991). Here we challenge Schmidt's suggestion that "the difference between the sectors studied is too great for the analysis to reveal a single variable responsible for the different degrees of success in constituting European policies" (Schmidt, 1997, 266). Instead, we point to the common regulatory problems and the different regulatory and governance solutions as the basis for comparative analysis under different technological and economic constraints. This point has general importance as it reflects a tendency to subscribe to the notion that policy determines politics (see Freeman, 1986). Second, and more important, the paper counters her suggestion that intergovernmentalism and supranationalism should be abandoned in favor of multi-level analysis (a suggestion shared by Anderson, 1995, and to some extent by Richardson, 1996). This study takes the multi-level approach to be a method of analysis and treats intergovernmentalism and supranationalism as major theories which cannot be replaced by multi-level analysis. It is suggested here that multi-level analysis should be used to analyze the dynamics aspects of the policy process, while the intergovernmentalism and supranationalism debate should provide us with the criteria as to the policy outcomes. The specific "division of labour" between intergovernmentalism and supranationalism is demonstrated below.

The puzzle that directed our investigation is the variations in the commitment to liberalization and Europeanization in the two sectors. Specifically, the study discusses possible explanations for the creation of supranational and effective governance regimes for telecom competition, and intergovernmental and weaker governance regimes for electricity competition. Two questions were raised: How is competition in telecom and electricity governed? What explains the considerable differences in governance and regulative regimes of the two sectors? The paper characterizes the policy regime in telecom as supranational and the policy regime in electricity as intergovernmental, and suggests that multi-level analysis may be used to compare the regulatory and governance regimes of these two sectors. A multi-analysis is useful (a) to represent interaction between different arenas in both intergovernmental and supranational contexts; and (b) to convey, together with the notions of governance and policy networks, the plurality of actors and the interconnectedness of policy processes in different political arenas. However, in contrast to the usual two-level analysis common in EU policy studies, this study promotes the concept of a three-level analysis. The policy process is deconstructed into three different processes: the union process, the national process, and the sectorial process. Similarities in the aims and competencies of actors on the sectorial and union levels lead us to emphasize the importance of the national arena in determining the different features of the telecom and electricity regime.⁴ In addition, we offer a state-centered interpretation of the multilevel policy process and thus significantly undermine the society-centered approaches to European policy-making analysis. As will be demonstrated below, the supranational regulatory regime in telecom was not forced upon the member-states and it does not imply that they are losing their autonomy, not to mention “hollowing out”.

The governance of telecom and electricity is analyzed with attention to the different components that together construct what we generally refer to as the telecom and electricity industries. Deconstruction of telecom and electricity into a “micro-regime” for the governance of various aspects of these technologies (e.g., in telecom, terminal equipment, central equipment, interconnection, domestic calls and in electricity, distribution, generation, supply, transmission) supplies us with several advantages. First, it allows us to define and compare regulatory regimes as political constructions that are not necessarily reflections of the technological and economic characteristics of the two sectors. Second, it allows us to define clearly what intergovernmentalism and supranationalism means in each of the systems. Third, it allows us to shed light on the different techniques of the promotion of competition (deregulation, regulation-of-competition, and regulation-

for-competition). These distinctions clearly reveal the critical role of regulation-for-competition in the liberalization of these industries and the positive-sum relations between states and markets in what we generally refer to as liberalization and globalization. These features of liberalization demonstrate the rise of the “competition state” – a lean regulatory state that tightens its hold on the markets – not in order to socialize its outcomes as the “welfare state” but to promote competition and commodification.

I. Telecom and Electricity: propensity for competition and cooperation

Telecom and the electricity are constructed around extensive and very expensive grids which represent their natural monopoly characteristics. The grids are strategic assets which allow their owners to control the industry as a whole. Competition is possible in these sectors only on condition that the networks be organized under a “common-carrier” regime, which obliges the owner of the grid to provide everyone with open and equal access to his strategic asset. The ownership rights and control over the networks are regulated in a way that allows customers to shop around for their telephony and electricity service, and allows electricity producers to sell them those services, without being concerned with the question of who owns the grids.

Despite the common regulatory problem that competition in telephone and electricity networks represents, they differ in their propensity for competition for four reasons. First, economically feasible alternatives to copper wire are available for telephony to an extent that does not exist in electricity. Mobile telephony, and then Internet, satellite, and cable telephony, provide alternative networks to the wire-telephony grids. Second, technology offers new options for using electricity grids for the transmission of telecom data (packet-switching) and new options to electricity (and railway) companies to use their internal communication systems (and right-of-way) to supply telecom services. In short, it is possible to use the electricity grids to transfer telecom but not the reverse. There is one-way convergence between these technologies, implying that telecom will face competition from electricity but not the reverse. Third, electricity transportation is sensitive to distance in a way that is unknown in telecom.⁵ Transmission and distribution losses of electricity increase with distance. While at the moment it is feasible to produce electricity in Africa and consume it in Europe, this option is not economically justified. The transmission losses and the considerable costs involved in the construction of electricity interconnections ease competitive pressures from distant generators. Fourth, the transportation of electricity requires grids that cost about ten times

more than the transportation of telecom. This strengthens the sensitivity of electricity to distance and reduces the extent to which it can be traded economically.

At the same time there are also considerable differences in the propensity of the two networks for international cooperation. Indeed, international cooperation in electricity is possible and desirable. First, integration of international electricity networks improves adequate supply in cases of system failure. Second, it may improve the load-base curve as electricity fluctuates on a diurnal and seasonal basis. Fluctuation in demand means that electricity operators (EOs) must invest for the supply of peak capacity but operate only parts of their generation capacity. This increases the capital intensity of the system, itself a force of concentration, and also creates a barrier to entry because it allows short-run manipulation of prices by generators in order to block potential competitors. However, international variations in the patterns of demand may help to “flatten” the demand curve, and thus represent an incentive for cooperation.

Still, the benefits of integration networks across and within countries are greater in telecom. From the user’s viewpoint the larger the number of end-users connected to the telecom network, the higher its value. This is not the case in electricity, where end-users are practically indifferent to the number of connections to their networks.⁶ For this, integration by international cooperation is a value for itself in telephony. The greater propensity of telecom for international cooperation is also evident in the existence of strong international cooperation in telecom but not in electricity. The International Telecommunications Union (ITU), one of the oldest international organizations in the world, which provides a form of international coordination of technological and economic issues in telecom, has no equivalent in electricity.⁷ Moreover, in contrast to telecom, which has extensive international and European standardization organizations, standardization in the electricity sectors is basically an intra-national matter.

The greater propensity of telecom than electricity for international cooperation also derives from the constraints on trade in electricity. First, it is difficult to store large quantities of electricity cheaply. One may store data (e.g., on paper or disk), voice (e.g., messages on an answering machine), and video (e.g., on tapes), but not electricity, at least not in big quantities and at reasonable prices. This means that the consumption and generation of electricity occur simultaneously. Distortions and disparity between consumption and generation, even for a millisecond, may cause burnout, blackouts, and damage to equipment. This does not mean that it is possible to trade in electricity, but it does imply that it will be more difficult to develop markets for electri-

city (to create the legal or trust mechanism for shaping contracts and policing their implementation) than markets for audio, video, or data. Second, trade in electricity is more problematic than in content because electricity is more difficult to control.⁸

The constraints on competition and cooperation are thus greater in electricity than in telecom, and while technological changes are increasing the propensity of electricity for competition and cooperation the overall picture is still of stronger push and pull forces for liberalization and Europeanization in telecom than in electricity. This situation suggests, all other things being equal, that the extent of competition and cooperation in electricity will be weaker than in telecom. Yet it is specifically here that we should not subject our examination of the politics of European telecom and electricity regimes to the “policy determines politics” approach.⁹ Without an examination of the role of politics, the policy process may be reduced to a mechanical set of decisions that reflect technological determinism and economic materialism.

II. The Governance and Regulatory Menu: telecom vs. electricity

Regulatory and governance regimes on the sectorial level are the aggregates of a large number of micro-regimes. We choose to concentrate our analysis on two micro-regimes in each sector and to clarify what we mean by such amply used notions as etatism, liberalism, intergovernmentalism, and supranationalism. In addition, we clarify the options for liberalization without Europeanization and Europeanization without liberalization. These distinctions allow us later to distinguish to what extent national policy choices are constrained by technological and economic imperatives.

Policy regimes for telecom terminals

Telecom terminals are end-users’ mediating devices such as telephony, answering machines, faxes and modems. Terminals are most often subject to state authorization before marketing (type-approval regime). Policy regimes for type-approval may be distinguished by three functional stages, namely setting standards, technical testing, and certification of products, and may be characterized as étatist, liberal, intergovernmental, and supranational (see tables 1–4). In an étatist regime of type-approval, the state sets the technical standards, carries out the technical examinations, and grants authorization for the use of equipment by certification. Under a liberal regime of type-approval, standards are set by voluntary standards organizations (with minimal state intervention), technical tests are done in dependent private laborat-

TABLE 1: *Etatist regulatory regimes for telecom and electricity*

Telecom Terminal Equipment	Telecom Networks Interconnection	Electricity Generation	Electricity Transmission
a) Standards set by the state. b) Technical tests done by the state. c) Certification by the state.	a) One integrated network for all forms of telecom; interconnection by monopolistic ownership. b) Rate structure uniform nation-wide. c) Legal rules cover the territory of the nation-state. d) Policy making, regulatory functions, and ownership in one agency.	a) Public ownership. b) Entry into generation strictly controlled. c) Rate-of-return regulation d) Vertical and horizontal integration. e) Central planning mechanisms.	a) Vertical integration with distribution and/or generation. b) No access for 'third parties' to the "national grid". c) Rate-of-return regulation. d) International connections used marginally to secure supply. e) National constraints over export and especially import.

TABLE 2: *Liberal regulatory regimes for telecom and electricity*

Telecom Terminal Equipment	Telecom Networks Interconnection	Electricity Generation	Electricity Transmission
a) Standards set by mutual voluntary agreement among businesses in nationally based forums. b) Technical tests by independent laboratories. c) Self-certification by business. Liability grounded in national law.	a) Intra-national competition among different networks (similar or dissimilar technologies). b) Open and equal access to the public network, anchored in cheap access rates. c) Extent of open and equal access nationally determined. d) Separation between the role of the government as a policy maker and regulator.	a) Private-domestic ownership. b) Entry to generation lightly controlled. c) Incentive regulation. d) Horizontal and vertical disintegration. e) Decentralized, market-based planning.	a) Vertical disintegration with distribution and generation. b) Open and equal access to the national grid. c) Incentive regulation. d) International connections used to secure supply and to some extent for trade. e) National control over export and especially import.

ories, and there is self-certification by the manufacturers (who declare their conformity with the standards). In an intergovernmental regime, standards are set by intergovernmental bodies and there is mutual recognition of certification and tests among member states. In a supranational regime type-approval, responsibility for these three stages is removed from the government through the creation of common (instead of national) standards, promotion of the European testing

TABLE 3: *Intergovernmental governance regimes for telecom and electricity*

Telecom Terminal Equipment	Telecom Networks Interconnection	Electricity Generation	Electricity Transmission
<p>a) Standards approved in intergovernmental forums. Representation in standard setting bodies based national quotas.</p> <p>b) Technical tests in one country are recognized in all other countries.</p> <p>c) Certification in one country is recognized in other countries.</p>	<p>a) Limited and tightly controlled numbers of international interfaces.</p> <p>b) Nationally-grounded rules and enforcement of competition laws.</p> <p>c) Telephony costs set by inter-governmental agreement about international calls and national discretion for domestic tariff.</p> <p>d) Foreign domestic investment encouraged by national discretion.</p>	<p>a) FDI encouraged.</p> <p>b) Nationally-produced, nationally-consumed.</p> <p>c) Tariffs vary considerably between countries.</p> <p>d) Horizontal and vertical regulation varies among countries.</p> <p>e) International coordination of supply.</p>	<p>a) Plurality of intra-national arrangements for governance of integration of transmission networks.</p> <p>b) Third Party Access to the national grid a matter of national jurisdiction.</p> <p>c) Tariffs vary considerably across countries.</p> <p>d) International connections increasingly used for trade in electricity but on a bilateral basis.</p> <p>e) National control over export and especially import.</p>

TABLE 4: *Supranational governance regimes for telecom and electricity*

Telecom Terminal Equipment	Telecom Networks Interconnection	Electricity Generation	Electricity Transmission
<p>a) Standards set in supranational bodies. Representation not nationally governed.</p> <p>b) Testing of equipment by private laboratories designated by European agency and recognized all over Europe.</p> <p>c) European rules and/or agency for certification.</p>	<p>a) Creation of integrated network across borders.</p> <p>b) Legal rules of competition set and enforced by supranational institutions.</p> <p>c) Rates and structure of calls are cost-oriented without regard to national borders and based on distance and marginal costs.</p> <p>d) Supranational rules and safeguards for equal and open access of foreign TOs to the national networks.</p>	<p>a) Trans-national ownership.</p> <p>b) Extra-national produced and consumed electricity.</p> <p>c) Generation tariffs are regulated by supra-national institution.</p> <p>d) Horizontal and vertical integration follow extranational market considerations.</p> <p>e) Some supranational mechanism for coordination of supply across countries.</p>	<p>a) Common extra-national rules for the governance of transmission networks.</p> <p>b) Third Party Access rules extra-nationally determined.</p> <p>c) Supranational regulation of tariffs.</p> <p>d) International connections eliminates the national networks.</p> <p>e) No control over export and import within the supranational jurisdiction.</p>

industry (the designation of European laboratories), and creation of a European agency and rules for certification.

Policy regimes for telecom networks interconnection

A policy regime for network interconnection determines the conditions that allow the integration of different telecommunications networks, owned by different operators, into one meta-system. Interconnection allows end-users who are connected to different networks and are served by different Telecom Operators (TOs) to interconnect. Interconnection promotes competition by extending the scope of consumer choice.¹⁰ An étatist regime of interconnection is one in which interconnection is achieved through common monopolistic ownership. The rate structures are applied as a tool of nation-building and as a way of decreasing local and regional divisions. In such a regime the network reaches as far as the political borders of the nation-state, and the government combines policy making, regulatory functions, and ownership in one body. A liberal regime of interconnection is characterized by competition among TOs, which enjoy open and equal access as well as friendly interconnection tariffs to the national telecommunications network. In addition, such a regime is characterized by separation of the roles of the government as policy maker and regulator. In an intergovernmental governance of interconnection, international network integration takes the form of autonomous accounting systems with well governed and limited points of interconnection among different national systems. Such a regime affords wide national discretion in determining the rules of competition, in devising the structure and rates of international and domestic calls, and in the extent to which foreign domestic investment is encouraged. A supranational governance of interconnection is one of creation, consolidation, and ownership of integrated networks transcending national borders. The legal rules of competition are set and enforced by supranational institutions. Tariffs are cost-oriented and disregard national borders, and there are supranational rules and safeguards for equal and open access of foreign TOs to the national networks.

Policy regime for electricity generation

The generation of electricity involves the transformation of primary forms of fossil fuels (e.g., coal, oil, gas, uranium) or kinetic energy (e.g., water, wind) into electric energy. Five critical elements define the governance of generation: ownership, barriers to entry and exit,

control over tariffs, the degree to which generation is integrated with distribution and transmission, and the scope and depth of planning.

An étatist generation regime is characterized by public ownership (municipal, regional, cooperative, or state) and monopoly (regional or national). Tariffs are subject to rate-of-return regulation (generators are compensated fully for their costs and “reasonable profit” if they are privately owned). Étatist generation regimes are characterized by horizontal (with generators) and vertical (with transmission and distribution) integration, and generators are subject to central planning. A liberal generation regime is characterized by private investment (essentially domestic), deregulation of tariffs, and minimal regulatory barriers for entry. Such a regime is characterized by disintegration of the industry both horizontally (i.e., from other generators) and vertically (from transmission and distribution). The availability of future supply is a matter for corporate strategy instead of central planning. An intergovernmental regime is characterized by a limited extent of international cooperation as to (a) finance and FDI, (b) security of supply (e.g., coordinating peak-load demands and backing each other in case of supply failures), and (c) trade (limited amount of export and import). These principles are intended to protect national characteristics such as the form of ownership, the national structure of tariffs, and the extent of vertical and horizontal integration. A supranational governance of generation is characterized by transnational ownership of generation as well as by high degrees of cross-border generation and consumption. Such a regime will be characterized by convergence of electricity rate-structures (but not necessarily prices), common rules for horizontal and vertical integration, and a supranational coordinating body for coordination of supply across countries.

Policy regime for electricity transmission

The transmission of electricity involves the transport of high-voltage electricity from generators to distributors and/or end-users.¹¹ Five critical elements define the governance structure of the transmission regime: the extent of integration with generation and distribution, the way tariffs are controlled, the extent of access by “third parties” to the grid, the extent to which transmission is used for international trade in electricity, and the degree of central control over import and export.

An étatist electricity transmission regime is characterized by vertical integration of transmission with distribution and generators as well as rate-of-return regulation of transmission tariffs. The property rights over electricity grids are not limited by regulations, and there are only a few connections (with small capacity) between the national grids.

This regime is also characterized by national control and constraints on international trade, especially import. A liberal (national) electricity transmission regime is characterized by vertical disintegration with distribution and generation as well as common carrier rules for access (open and equal access, which secures equal access for all suppliers to the national grid). Tariffs encourage competition through cheap charges for transmission. This regime is also characterized by incentive regulation of transmission tariffs, limited physical connection of the national grid to other nations' grids, and national control over export and import (international contracts require approval, or are even disallowed). An intergovernmental electricity transmission regime is characterized by national discretion over the extent of vertical integration of transmission networks, third-party access to the national grid, and tariff structures. A supranational electricity transmission regime is characterized by common extra-national rules of the governance of the integration of transmission networks and the creation of transnational networks (e.g., adjacent distribution companies across borders are supplied using the same transmission networks). Access to the transmission grid, the structure of the transmission tariffs, and the rules for cross-border electricity trade are subject to regulations by a supranational regulatory authority.

One critical distinction should be carefully remembered. The regulatory regimes are political constructions. The extent of competition only partly depends on the regulatory and governance regimes, and it is also determined by a set of technological, economic, and environmental constraints on competition. What should be made clear here is that while the extent of competition in telecom and electricity is only partly determined by politicians, the design of regulatory regimes is a matter for political choice. What is comparable are the particular regulatory designs that were constructed by the European policy makers.

III. The European Policy Choices: telecom vs. electricity

Limits of space make it impossible to supply even a short historical analysis of the decision-making process in the European Union (for this, see Schmidt, 1997, 1998; as well as Sandholtz, 1993; Schneider *et al.*, 1994; Thatcher, 1997, for telecom and Padgett, 1992; Anderson, 1993; Cross, 1996; Matlary, 1997 for electricity). Instead we concentrate on an analysis of the substantive policy choices made by the European policy makers in four different micro-regulatory regimes.

*The telecom terminal type-approval regime*¹²

Until the mid-1980s the supply of telecom terminals was the monopoly of the national TOs, which approved or even prohibited the entry of any other supplier (OECD, 1985). This étatist regime was under growing pressures for liberalization in some European countries, notably Britain. Changes became evident with the institutionalization of the type-approval process, which allowed, under strict conditions, the entry of new terminals and new business actors into this market.¹³ In comparison with the old regime it was liberal at the same time, however, it was a national regime, as each country had its own procedures and certification procedures.

In the mid-1980s there is clear evidence of Europeanization of the terminal type-approval procedures. The first move was the initiation of a European process of standardization by the European Commission, which entrusted the project to the hands of CEPT (European Conference of Postal and Telecommunications Administrations). However, CEPT, which was controlled by the national TOs, was hardly interested in the creation of an open regime for terminals and the setting of standards was very slow. To bypass CEPT, the Commission moved to establish a preeminent and independent organization, under private ownership but with public status, which would serve to produce common European standards. Thus, in 1988 the European Telecom Standards Institute (ETSI) was established.

A second foundation stone for a European regime for terminal equipment was laid in 1986 in a Council directive which established mutual recognition of the results of testing by recognized laboratories in member states. In 1991 the Commission went further by extending the principle of mutual recognition to the certification phase of the type-approval process. However, mutual recognition of both testing and certification was in practice confined to those types of equipment with Europe-wide standards, and these standards (CTRs – Common Technical Regulations), which were now the responsibility of ETSI, were very slow to develop.¹⁴ Thus, a dual regime exists in the markets for terminals: those that are governed by European standards and have most of the new digital and technologically advanced equipment (about 25% of the market, and the rest, which are governed by national standards (75%).¹⁵ Thus, the vested national regulatory regimes for terminals are only slowly responding to pressures for Europeanization of type-approval procedures.

Leaving aside the constraints over the European standardization process, the current regime for type-approval has strong deregulatory

characteristics and is governed by a fairly strong supranational regime. Deregulation is evident in the institutionalization of national type-approval processes remote from the control of the national TO. In addition, there are strong tendencies towards “privatization” of testing and certification. Many European countries have designed private (instead of state-owned) laboratories as official testing authorities, and have gone even further by allowing “notified bodies” to certify the terminals. An even more radical move was initiated by the Commission, with the strong support of the business association ECTEL (the European Telecommunications and Professional Electronic Industry). A directive approved by the Council and the European Parliament in March 1998 allows self-certification by the manufacturers. The testing of safety, health, and interoperability of telecommunications equipment was to rely, thereafter, on liability and consumer-protection legislation rather than state-set testing procedures.¹⁶ The supranational principles that govern the terminal equipment market are evident from the transfer of responsibility for setting the standards to ETSI. Despite the slow process of standardization, in the long run it is ETSI that will govern the process of approval, and it will take over the national standardization bodies. In addition, the mutual recognition directive extended the supranational principle to the certification and testing stages of the type-approval process.

Interconnection regime for telecom networks

A similar supranational governance regime is observable in the case of telecom networks. The major difference between the telecom equipment regime and the telecom network regime concerns the regulatory role of the member states: regulation-for-competition of the telecom networks and deregulation in telecom equipment. The starting point in the two cases, however, was the same. Both terminals and networks exhibit étatist provision and monopolist control. In the network segment of the telecom sector this means that there was basically one public network governed by a nation-wide organization, the national TO (which was often organized as an administrative unit of one of the ministries). There was no need in this system for a domestic interconnection regime because there was only one network. The monopoly over the network de facto guaranteed, even in places where there was no codification of the monopoly, that no other competitor would be able to enter the telecom market.¹⁷

As in the case of terminal type-approval, unilateral-national liberalization preceded the Europeanization of this sphere.¹⁸ Yet in its move to institute an open interconnection regime for voice telephony the

Commission went further than any other country, including the UK.¹⁹ In the interconnection directive approved in June 1997 an older general obligation to liberalize the networks was transformed into a detailed and fairly effective European regime for interconnection. The directive determines the principles of the sensitive issue of fixing charges and costs and of establishing a uniform accounting system for cost calculations. The directive requires that the charges for interconnection follow principles of transparency and of cost orientation. It puts the burden of proof that charges are cost-based on the incumbent TOs. The publication of interconnection rates, broken down into compartments, is obligatory, and is intended to render the process transparent. A uniform cost-accounting system for interconnection will be set up to serve the national regulatory authorities (NRAs) as a basis for fixing interconnection rates. The overall regulatory structure is extensive and includes wide powers, which may be called regulation-for-competition (Levi-Faur, 1998). While liberalization in terminal equipment requires the elimination of rules, liberalization in the networks segment requires extension of rules. The new conditions are already evident in the competition for clients, in the reduction in costs of international calls, and in the 500 local-loop licenses that were awarded in the European Union.²⁰ While these conditions do not guarantee success, certainly not all over Europe, it seems that the regime stands a fair chance of being effective and of revolutionizing telecom networks in the EU.

The governance structure of the telecom network regime is supranational. The extent of supranationalism, however, may be controversial. On the one hand, the new regime does not install a European telecom regulator (as suggested in our ideal type) and such a move is unlikely to happen soon (Eliassen and Sjøvaag, 1999, ch. 1). On this basis it would be reasonable to suggest that because the principle of subsidiarity is respected (enforcement of the competition rules is in the hands of the NRAs) the regime is more intergovernmental than supranational. On the other hand, the detailed regulation of the interconnection regime and the competencies of the Commission in monitoring tariffs on and accessibility to network interconnection make it more supranational than intergovernmental. In addition, the directive (a) creates a new sphere of authority for the Commission; (b) obliges the member states to act according to relatively strict principles; and (c) ensures the Commission's active role as both a negotiator and an arbiter in critical issues concerning the future of European telecommunications. Indeed, if these regulations do not suggest a supranational structure, it is doubtful if such an "animal" exists at all.

The electricity generation regime

The European electricity generation regime, which was instituted by the 1996 electricity directive, is (a) narrow in that it does not cover issues like ownership, tariffs, and planning; (b) indecisive in that it allows different forms and degrees of liberalization; and (c) intergovernmental in that it allows governments to make their own choices not only in regard to ownership, tariffs, and planning, which are not covered explicitly by the directive, but also in regard to critical questions such as control over entry, which is covered by the directive.

The generation regime allows two alternative systems for entry control into generation: authorization and tendering. Authorization is based on licensing any generators who meet publicly announced criteria; this implies deregulation and more room for profit-oriented entities in the generation market.²¹ The extent of need for new capacity is, in itself, not a legitimate criterion for denying application for authorization. The second procedure for entry that states are allowed to institutionalize is tendering. According to this system of entry regulations, the governments set up an inventory of the need for future generating capacity and approve new entry on the basis of "objective, transparent and non-discriminatory criteria". This allows governments much more control over entry and the sector.

The issue of separation among generators, transmission, and distribution companies is settled by the directive in a very lax way. It does not require separation of ownership or organization but only the presentation of separate financial accounts for each of the major functions of an integrated utility. This is a very loose regulation, which allows integrated companies to use their economic power to obstruct competition in generation through inflated tariffs for transmission and distribution. Some important issues are not covered by the directive. These include ownership rules, meaning that industrial restructuring depends on the extent to which national and municipal governments are interested in privatization. Nor does the directive introduce a mechanism of incentive regulation that will pressure the industry to become more efficient even before the effects of competition are felt (if this is to happen at all). Finally, by allowing both tendering and licensing regimes, the directive legitimizes both a central planning approach (tendering may serve as a tool for central planning) and a liberal approach (license any would-be generator, and let the market determine the short- and long-term conditions of supply).

By ignoring central issues, the directive de facto leaves the future of Europe-wide competition in generation to the competencies of the competition directorate (DG IV). Despite its minor role in the sector

until now (Slot, 1994), the directorate will most likely expand it, review mergers between established generators, and influence the extent and scope of subsidies that states give their generators.²² Thus, the regulatory approach of the framers of the electricity generation regime may be called regulation-of-competition.

The electricity transmission regime

At the center of the transmission regime are the issues of access to the high voltage grid, which may serve as a veto-point to halt or obstruct the promotion of competition. In what follows we assert that the transmission regime involves (a) regulation-for-competition, (b) intergovernmentalism, and (c) indecisiveness in regard to effective enforcement of common rules for regulation-for-competition. The electricity directive requires member states to ensure that the operation of transmission will be unbundled from other activities of the electricity supply company. Member states are obliged to make sure that the conditions and terms of access and the tariffs are in line with the promotion of competition and the creation of the Internal Electricity Market. In contrast to the past, when most states dealt only with the regulation of the price for the consumer, now they are required to develop capacities to regulate transportation prices and to ensure the effective operation of a competitive market. This is a pro-competitive move but it is not deregulation: it deeply involves the state in the operation of the market, and is therefore best termed regulation-for-competition. More rules and more discretion are given to state regulators, and this is not surprising since deregulation, or even an effort to enforce competition by using anti-trust laws (i.e., regulation-of-competition), will not do in this case. The electricity grid (and this holds for both transmission and distribution) is a strong natural monopoly.²³ The only practical way (as experience and theory tell us) to ensure that the owners of the grids will not use their strategic position to prefer one electricity supplier to another or to extract access profits is to regulate them. Effective regulation guarantees competition at any moment, but no less important, without effective regulation of transmission (and distribution) potential competitors would be hesitant to invest in generation and supply of electricity (Gilbert and Kahn, 1996, 211).

The intergovernmental character of the transmission regime is expressed in three critical elements: the access regime, the transportation tariffs regime, and the reciprocity clause. First, the directive allows member states to opt for a Third Party Access (TPA) principle or for a Single Buyer. In the first case consumers or suppliers negotiate the terms of access with the operator of the grid, while in the second case

TABLE 5: *European Policy Choices: governance and the scope of regulations*

Governance regime/ Regulatory regime	Inter-governmentalism	Supra-nationalism
Deregulation		Telecom equipment
Regulation-of-competition	Electricity generation	
Regulation-for-competition	Electricity transmission	Telecom networks

a single national operator handles all requests for import and is directly responsible for the supply of electricity to the consumers.²⁴ Second, the directive opens the way for the member states to choose a system of either negotiated or regulated access. Here the question of tariffs looms as the central point. The generators and the consumers are critically dependent on the grid operator, which may abuse its power. In this regard, member states can leave the question of tariffs and conditions of access to the “market” (neg. TPA) or regulate it (reg. TPA). While only the second case clearly provides safeguards for competition, the directive allows member states to avoid competition and Europeanization. Third, a reciprocity clause allows member states, up to a period of nine years, to restrict import of electricity from countries that do not open their markets to the same extent.

The effectiveness of the regulatory regime for transmission is weaker than in telecom. As in the case of telecom network interconnection, the issue of transmission and access tariffs is critical in the design of competition. But in contrast to the telecom case, the regime established for electricity does not specify safeguards to regulate prices and is not committed to transmission prices that will encourage competition (in fact, this was one of the issues on which the Commission had to compromise during the five years of negotiations). The regime is also weak in the degree of disintegration that it requires from electricity suppliers and network operators and in the lack of provisions that require incentive regulation of transmission prices. Still, despite these defects, the regime promises to provide more import and export (depending, of course, on the electricity market conditions) than before.

In the making of policy choices different micro regimes were obviously constructed for different segments of the telecom and electricity sectors. A summary of these policy choices is given in Table 5.

An examination of European policy choices reveals close correlation between the sectors’ propensity for competition and cooperation on the one hand, and forms of the European regimes on the other. This may seem to support the argument that “policy determines politics” as well as Schmidt’s argument that variations in the sectors’ characteristics

are serious impediment to comparative analysis. Yet this suggestion is not adequate for several reasons. First, and on the most general level, neither the increased propensity for cooperation nor the increased propensity for competition in the two sectors requires or dictates liberalization or Europeanization. Technology, economics, and concern for the environment supply negative and positive incentives for competition and cooperation. These incentives may be stronger or weaker, but in no way have they made Europeanization and competition a necessity. The pattern of unilateral-national liberalization practiced by Britain in both telecom and electricity was a possible and viable alternative to Europeanization (cf. Sandholtz, 1993, 242). Furthermore, even liberalization in telecom and electricity was not a necessity (it was not even produced by a political or economic crisis). There were some good arguments in favor of liberalization (especially in telecom), as there were against it (especially in electricity). But rational technological and economic responses represent only one limited option for responding to the new situation. More concretely, no compelling sectorial characteristics made supranationalism in telecom and intergovernmentalism in electricity a predetermined outcome. Not only was Europeanization (e.g., the SEA) a political design, supranationalism was a possible result in electricity as much as intergovernmentalism was in telecom.

However, considering the transaction and transition costs involved in electricity competition, and adding them to the costs of the creation of European regimes (e.g., travel, conferences, research contracts, committees, document production, and translation) it is doubtful that electricity competition and Europeanization are cost-effective. The most beneficial aspect of electricity competition may well be the creation of incentives for innovation, although at this stage no one knows whether competition will bring about innovation or not. Nonetheless, it is precisely these facts that allow us to observe clearly how and why politics is so important. It is electricity and not telecom competition that makes the project of liberal Europe so fascinating. Liberalization and Europeanization restructure the world that we live in not only in easier sectors (like telecom) but also in difficult terrain like electricity.

When comparing telecom and electricity, one should distinguish comparison of the regulatory regimes in each (which we have conducted here) from comparison of the technological and economic characteristics of the sectors (which was emphasized by Schmidt). A failure to differentiate between the two may result in adopting one of the two extremes of "politics determine policy" or "policy determines politics" (Freeman, 1986). All in all, both the similarities and the differences in the processes of Europeanization and liberalization of telecom and electricity require us to examine the role of politics.

IV. When and How Does Politics Make Policy? electricity vs. telecom

What explains the considerable differences in the governance and regulatory regimes in telecom and electricity? Particularly puzzling is the willingness of member states to move towards the creation of a supranational an effective regime for competition in telecom (Sandholtz, 1993, 254; Schneider et al., 1994, 486–7; Thatcher, 1997, 321–2), while resisting, delaying, and only reluctantly endorsing an intergovernmental and partly effective regime in electricity. To answer this question, the European policy process is conceptualized as multi-level, namely, one which runs concurrently in the union (or Communion) arena, the national arena, and the sectorial arena. In each arena there are different policy communities, different decision rules, and different decision styles, and actors differ in their survival considerations as well as goals. Comparative analysis of the actors' strategies and preferences in each of the three arenas suggests that the outcomes do not differ because of the sectorial or the union policy processes but because of different state preferences in the national arenas.

The Sectorial policy process

The sectorial policy process, in both telecom and electricity, was played out between a coalition of established and privileged interests on one side and a loose coalition of outsiders and less privileged insiders on the other. The discussion focuses on the extent to which differences in the two regimes may be explained by variations in the power of the sectors' policy communities.

The well established interests in the two sectors were publicly owned corporations that supplied telecom or electricity services. Their common interests at the end of the 1980s, even in Britain, which privatized its TO, was to stop or at least delay the process of liberalization and Europeanization. Because pressures came from both the national and the European arenas, the established operators created intra- and cross-national coalitions. In the intra-national arena they naturally looked for the support of other interests. In telecom the natural allies of the operators were the equipment manufacturers. These were often "court suppliers", with exclusive rights to supply the country's dominant TO. At first the manufacturers cooperated with the TOs, but later multinational manufacturers of telecom equipment such as Siemens, Ericsson, Alcatel, and Nokia reconsidered their position when they found out that liberalization and Europeanization meant more markets and more business opportunities. From the end of the 1980s they developed a positive attitude to a liberal telecom market, at least out-

side their home countries (Sandholtz, 1993, 246–7). In electricity, cooperation between equipment manufacturers and operators did not exist as the electricity equipment industry was internationalized and much less protected in the first place.²⁵ Thus the ability of the operators to create coalitions was limited. Moreover, in countries where generators and distributors were under separate ownership, the latter were much more positive towards liberalization and Europeanization. Indeed, liberalization opened wider opportunities for distribution companies to shop around for electricity, and it promised to turn them into integrated utilities (supplying telecom, water, and gas, and handling waste).²⁶

In the European arena, the coalitions were more formal. In telecom, in 1992 the operators established an interest group – the European Public Telecommunications Network Operators' Association (ETNO) – to represent them in Brussels. In electricity, in 1991 Euroelectric was established to represent the interests of the EU's operators. But in this arena, too, internal cleavages worked to constrain the effective interest aggregation in the two sectors. One important cleavage resulted from the different pace of liberalization in different countries. For example, the British TOs and EOs were among the first to come under the pressures of competition in their home country, and they advocated liberalization (on their own terms, of course) also in Europe. This cleavage of interest, growing deeper with time (because more countries liberalized), restricted the ability of the established TOs and EOs to effectively resist liberalization on the union level. Another cleavage, also effective on the national level, concerned the greater fragmentation of industrial organization in electricity than in telecom. Notwithstanding the telephony case of Finland, the industrial organization of TOs of all other European countries was that of national monopolies (Noam, 1992). By contrast, in many European countries the supply of electricity was characterized by disintegration between generators and distributors. The different interests of generation and distribution made it more difficult for EOs to resist liberalization and Europeanization.

At the same time, incumbent EOs had to face two serious challenges. The first was from established independent electricity generators that produced electricity by more efficient methods²⁷ and the second from generation by environment-friendly generators who were organized in groups such as Cogen-Europe, Euro-heat, and the European Wind Energy Association. Challenges were evident in telecom as well, from suppliers of value-added services and foreign TOs; but in electricity the challengers had a more viable economic claim and a strong social rationale, hence a more solid basis, for lobbying. While the established

EOs were captured by older technologies, the challengers could rely on cheaper and more efficient technologies. Indeed, sunk costs in older technology were also a problem for the monopolistic TOs, but because of the growth of the sector, they could rely more widely on internal revenues in order to renew their equipment. While one should not over-emphasize the power of outsiders, the threat of environmental legislation also made the electricity establishment more politically vulnerable than telecom.

Differences in the industrial organization of electricity and telecom made the organization of factory-level unions in electricity more fragmented. While in both sectors the unions were stronger than other unions in their countries, and while their strength seemed to vary more across nations than across the sectors, the telecom unions were stronger than the electricity.²⁸ Only in regard to the role of industrial users' organizations are there signs of more vulnerability of telecom to competition. In both telecom and electricity the major consumers are businesses, and they are affected by the levels of tariffs and services. To some extent they have proved capable of organizing and working towards a liberalized environment and towards the creation of a European regime, which will give them better value for money. Associations such as the International Telecom Users Group (INTUG) and Energ-8 arose to represent the interests of users in the European arena. A comparison of the users' organizations in the two industries reveals a sustained and more widespread effort in telecom. In addition, as Schmidt has argued, in electricity users complaints could be "bought" and satisfied by special tariffs to an extent that was not possible in telecom (Schmidt, 1998, 179–180).²⁹ Yet despite the role of business users the overall picture of the sectors' political map is of equality in the political vulnerability of the two sectors. This led us to look for differences in political power in other arenas.

The European Union policy process

The union policy process was dominated in both cases by the Commission. It played an important entrepreneurial role in agenda setting, defining the problems of liberalization, formulating possible solutions, circulating information, and creating incentives for collective action by private actors on the European level (not simply by raising awareness but also more directly by encouraging them to do so). It is quite evident that the initiative, the timing of decisions, and the guiding of the process were controlled by the Commission as a whole, and specifically by the directorates general — for telecom (DGXIII), electricity (DGXVII), and competition (DG IV).

TABLE 6: *Electricity: Commission's proposals and the outcomes based on Noomen, 1998*

	The Original Directive (January 1992)	The Final Directive (December 1996)
Entry for generation	Authorization procedure	Authorization and tendering procedures
Access to the network	Regulated TPA	Regulated and Negotiated TPA and Single Buyer
Unbundling	Organizational separation	Financial accounts
Public service obligations	None	Explicit justification for constraining competition

Similarities are also observable in the aims of the Commission. The aims and content of the first reports and drafts that deal with electricity were to create a supranational regime for electricity to enforce an effective regulatory regime in this sector (see Table 6). Only later did the Commission have to compromise on less than it wanted. The different outcomes are even more puzzling when the competencies of the Commission in the field of competition law are considered. In both cases, the Commission enjoyed far-reaching competencies. Especially important are its powers under article 90.3 of the Treaty of Rome, which confirms the right and duty of the Commission to ensure the application of the Treaty rules on competition to monopolies which benefit from special and exclusive rights (e.g., public monopolies in energy, telecom, water, transport) (Hancher and Trepte, 1992). These competencies were applied successfully at various stages of the creation of the European telecom regime. In the telecom sector the Commission used Art. 90 to publish a directive, without the approval of the Council, that obliged the member states to liberalize their terminal and service markets. The member states challenged the unilateral action of the Commission in the court but failed to gain its support. Thus, "it is apparent that the Commission did not shrink away from conflict with the national governments" (Schmidt, 1997, 260).

However, what the Commission achieved in telecom it failed to achieve in electricity. As early as 1990 it resolved not to adopt a directive in electricity on the basis of Art. 90.3. Instead, it turned to (a) case-by-case litigation and (b) consensual decision making, which granted the Council and the European Parliament an important role in formulating the electricity directive. This early move by the Commission, which proved critical at later stages, was the subject of a paper by Schmidt (1998). She discovered that while the legal competencies of the Commission were the same in both cases, the lack of substantial

support for the liberalization program made it hesitant to utilize its legal competencies: “Despite several threats, the Commission did not dare to overcome the clear lack of support in the Council with unilateral action, although it stood good legal chances on the basis of the telecom precedent. Instead it only pursued reluctantly a limited aspect of the existing monopolies through single cases” (Schmidt, 1998, 178). Others argued similarly: “The contrast with telecom is striking. . . . In the electricity sector . . . the political sensitivities have been such that the Commission has not dared to use Article 90” (Sturm and Wilks, 1997, 17). The degree of autonomy of the political actor is thus related to the social support it receives. In the electricity case, the European court proved more reluctant to support the Commission and the Parliament was more critical towards electricity liberalization. However, it is the similar strategy and goals of the Commission that are more important here, and they require us to look beyond the union arena for explanations for the different outcomes.

The national policy process

The national policy process is played out in each of the member states, and included bureaucrats, ministers, parliamentarians, parties, and interest groups. In this arena the participants attempted to define the national interest in a way that best suited their interests and convinced relevant stakeholders that their private interests or ideals were indistinguishable from the national interest. On the agenda, and outside the control of the direct participants in the policy process, were the questions of which forms of liberalization and Europeanization to adopt, and how far to promote them.

As to liberalization, state officials had to calculate the economic, social, and political costs and benefits of the liberalization of the domestic telecom and electricity sectors. What they saw in the two sectors differed considerably. The differences were mainly not in the pressures of the Commission or the political power of the established operators, or in the power of business users. The major differences were the higher political risks of the liberalization of electricity, the bigger fruits of telecom liberalization, and the weaker level of social support for liberalization in electricity than in telecom.

The higher political risks of the liberalization of electricity derived from five factors. First, the gradual approach, which allowed for experimentation and consensus building in telecom, could only be partly applied to electricity. Telecom liberalization started in terminal equipment, then moved to value-added services, to satellite telephony, to mobile telephony, and only then to telecom networks. While gradualism

was possible in regard to eligible consumers,³⁰ it was impossible to split the electricity reform into several stages. The electricity regime — generation, transmission, and distribution — had to be put in place all at once since all segments of the industry were closely interdependent. One cannot accommodate meaningful competition in generation without opening the grids to the new generators.³¹ Second, telecom was, and still is, a growing sector.³² While layoffs are common in the dominant TOs, the growth of the industry provides plenty of new jobs in other businesses. This is not the case in electricity, which experiences only very moderate rates of growth in Europe. Since you can compensate losers, and you don't have to push your opponents to the wall, the politics of plenty (telecom) involves fewer risks than the politics of scarcity (electricity).

Third, electricity liberalization involves considerable costs in terms of leveling the field for new and old players. While entry of new suppliers is supported by new and efficient technologies of generation, the old integrated monopolies generate by less efficient methods (from nuclear energy to coal-burnt generation). Fair competition may mean that the incumbents will have to be bailed out from inefficient generation at enormous cost.³³ Fourth, electricity liberalization implies that state officials have to realise some of their control over the “energy mix”,³⁴ which for some member states implies a considerable increase in the measure of their energy dependency. Considering the exigency of electricity, national sensitivities over the control of the system — although gradually eroding in comparison with the past — are still high enough to make reorganization in this sector far more risky than in telecom. Finally, system reliability is more critical in electricity as in the extreme case system failure may involve loss of life, and ordinarily social and economic chaos. Although liberalization does not presuppose system failure, it involves some problems of control during the transition period that make it risky for ministers, governments, and prime ministers.

To some extent, policy makers' agenda are prioritized towards solving the most urgent problems. To that extent, the liberalization of telecom reflects their calculations that not only are the costs of electricity liberalization higher than those of telecom, but its benefits are lower. While both telecom and electricity are sources of competitive advantage for national economies, telecom services are critical for the most dynamic segments of the business community, namely those involved in the information industry. In an era of global production telecom facilities are a critical element in the decision by multinationals on where to locate. Integration of telecom systems across countries is required, so the reforms not only assume liberal forms but also demand coordination and cooperation across countries.

The policy makers' attitude to liberalization was also affected by the recognition that the extent of social support for liberalization of telecom is always wider than it is for liberalization of electricity. One reason is that in most households the electricity bill is lower than the telephone bill. Another is that competition, even if successful in reducing tariffs, will marginally affect the households bills. But the most important reason is that telecom liberalization has acquired a special status in the political and social perceptions of large and important segments of the public. Telecom technologies are commonly perceived as "technologies of freedom" and represent the more positive aspects of the dynamics of global, economic, and political change (Pool, 1983). The contemporary popular notions of "information society" and "information economy" are not natural representations of future social and economic trends. They are part of the "politics of symbols" which has shaped our perceptions of the good and the bad, the possible and the inevitable. If electricity technology is identified in our minds with large, polluting, mysterious, and dangerous generation technologies, telecom technologies are identified with the digital telephone, the fax, the modem, and more recently the Internet – all common households gadgets. The opening of new venues in telecom has become quite a popular idea with the elites and the public, whereas such support is lacking in electricity.

Europeanization also involved sustained efforts to coordinate the policies and regulations of the member states in these two sectors. Still, the politics of cooperation in telecom is easier than in electricity. Indeed, a deadlock in the EU electricity coordination game was finally resolved only after being subjected to broader considerations in a Franco-German deal. Cooperation proved to be harder in electricity because here differences existed not only in the size of would-be competitors (which is also true in telecom) but also in their industrial structures and their economic profiles. It is hard enough to justify telecom liberalization when the small hellenic Telecom, the Greek TO, has to compete with the giant Deutsche Telekom of Germany. But it is far harder to require the smaller and recently disintegrated Dutch EPON to compete with the EdF, the giant integrated French EO. More important, a large and influential state like France was required to reorganize its dominant, powerful, and highly assertive electricity operator, the EdF, so that it could accommodate the structures of electricity provision of other countries. Despite some debates on the industrial organization of TOs, the scope of the problem was limited and did not represent a complex coordination problem, as in electricity.³⁵

No less problematic is the economic profile of would-be competitors

in electricity. Past commitments to different sources of energy by governments have long-lasting effects on the final cost of electricity.³⁶ Coal-oriented generators in Germany can hardly compete “fairly” with nuclear electricity generation in France. Because sunk costs in nuclear generation are larger than in coal, the incentive and ability of the French generator to manipulate its prices are greater. While the two of them cannot “co-exist” easily, and while transition costs for both of them are high (transition to new fuel, e.g., gas), very minor differences in operating costs may in a very short period cause the collapse of some operators. Similarly, competition between the German RWE Energy, which accounts for 60–80% of the value-added in the electricity tariffs, and Danish operators, who provide only 27% of the added value, is hardly competition between equals (Hvelplund, 1996, 141).³⁷ Some of the coordination problems can be solved by delaying negotiations between the countries, and using the time to prepare for a new reality.

Thus, national policy makers had good reason to allow Europeanization and promote liberalization in telecom, and at the same time to limit both Europeanization and liberalization in electricity. It is here that policy makers shaped clearly different preferences, and it is in this arena where there is compatibility between the interests of policy actors and policy outcome.

V. Conclusions: state-centered multi-level governance

It is now possible to suggest that the differences in the making of telecom and electricity regimes arose from different preferences of state officials regarding liberalization and differences in the extent of coordination problems that they faced in the two sectors. The extent of national discretion they allowed themselves in each of these sectors is consistent with their perceptions of the risks involved, the degree of social support they enjoyed, and the problems of coordination they faced. The policy processes which led to the creation of these governance and regulatory regimes were analyzed as multi-level processes, namely as a policy process conducted in three interdependent arenas (sectorial, national, and union). The three-level analysis allowed us to examine the considerations and constraints of the national policy makers without “reducing them to a position of sector-level players. Similarities in the approaches of key actors and in the politics of liberalization on both the union and the sectorial levels led us to conclude that differences in the outcomes were to be sought in the national arena, in particular the different preferences of states. While in both cases there is clear evidence of Commission activism and of Commis-

sion interest in an effective supranational regime, it was insufficient to move electricity as far ahead as telecom. It seems plausible to suggest that Commission activism and competencies are necessary but insufficient conditions for a supranational and effective European regime.

The critical role of state officials does not imply, however, that we can return to the state-centered one-level analysis in order to understand European (and global) policy making. Multi-level policy making is a necessary tool of analysis and it may well be that in other cases (bringing "state-failure" in) other arenas will determine the policy results. Critical at this stage is evidence of the conditions that produce state-centered multi-level governance as against business-centered or union-centered governance. To obtain it, a bridge is necessary between the intergovernmental-supranational debate of international relations on the one hand, and the interest intermediation literature on the other. We should be careful not to reproduce the divide between international relations and public policy, something that may happen if we avoid the debate between intergovernmentalist and supranationalist as recommended by Schmidt (1997) and Anderson (1995).

The comparative strategy employed in this paper deconstructs the notion of European governance (into intergovernmentalism and supranationalism) as well as that of regulatory regimes (étatisme and liberalism) and of competition (deregulated competition; regulation-of-competition; and regulation-for-competition). All these notions were examined on the micro-level, so comparisons could be made on the basis of the most similar case. These research strategies, and the decision to pursue the comparison in the regulative arena, made it possible to identify the European policy choices for governing these two sectors: supranationalism in telecom and intergovernmentalism in electricity. Liberalization was clearly observable in each of the four segments of these two sectors, but different types of competition were advanced in each of them: deregulation in terminal type-approval; regulation-of-competition in electricity generation; and regulation-for-competition in telecom networks and in electricity distribution and transmission. These techniques aimed at contributing to the comparative study of competition policies, which present new challenges for comparativists in general and for the comparative study of the European Union process in particular (cf. Doren and Wilks, 1996).

Competition has been portrayed here not as a market phenomenon (in the sense of a natural process beyond the reach of states and governments) or as a function of technologies. It is the product of a political process with critical inputs for state actors. This political process is about the administration of competition, and it requires political

skills, bargaining, and good technical knowledge of the sectors. The construction of a regime of competition for any economic sector, even the deregulatory regime of telecom terminals, involves massive and extensive political bargaining, which imposes heavy demands on politicians and bureaucrats. Even the relatively simple case of telecom terminals has already been on the agenda for fifteen years. It may well take fifteen more years of negotiation and discussion before it is finally off it. If this is the case with simple things it is easy to see why the administration of competition in the other segments of the two sectors will remain on the docket.

Competition policies and regulation-for-competition occur simultaneously. The high value that contemporary political and social elites place on competition resulted in the rise of administrative agencies – semi-independent regulatory bodies – that regulate for competition in a specific sector. These agencies work in various ways in different sectors and sub-sectors, and the measure of their success in the promotion of competition depends on a mixture of deregulation, regulation-of-competition, and regulation-for-competition specifically tailored for every sub-sector. The rise of competition policies entails the rise of these agencies, and in effect means the creation of a new form of political control over the economy. Furthermore, the higher the value we place on competition, the more assertive the role of these agencies is likely to become. Regulation does not imply retreat of the state, and it is not a marginal tool in the construction of markets. Regulation may be used in very sophisticated ways, and it holds out tools of control that may tempt regulators to exert even more controls over the development of markets than ever before. There are obvious signs of change, but it is change in the preferences of state officials, who place less value on development and welfare and more on competition. The welfare state and the developmental state are required to provide more room for a new form of state, namely the “competition state”.³⁸ A new layer of governance and institutions is being superimposed on the old one as the historical process of state building continues. Thus, state-centered analysis is still a relevant feature of the policy process, even in the context of multi-level policy making and the governance of competition in Europe.

NOTES

- 1 Telephony was first invented by Alexander Graham Bell in 1876. In electricity the first great breakthrough in the end user side was the invention of the incandescent lamp by Edison in December 1879, followed by the construction of the first central station supply system in 1882.
- 2 Natural monopoly is a century-old concept which was first used in the US gas supply industry, and soon was “captured” by the American electricity supply industry also (e.g., Samuel Insull).

- It was then reformulated and theorized by the social sciences. In natural monopoly situations the most efficient provision of a product or service is carried out by only one firm, so competition between two or more firms may produce sub-optimal economic results. In time the concept came to function not only as an explanation but also as justification for natural monopolies.
- 3 According to this thesis, the European member states are losing functions upwards to the Union's institutions, downwards to different interest groups, and outwards to independent regulatory agencies (Rhodes, 1997, 17).
 - 4 This is in contrast to Schmidt's argument that parallelism in the strategies of the Commission in the two cases precludes the possibility that both intergovernmentalism and supranationalism will provide a valid theoretical framework.
 - 5 In the first days of telephony the technology was effective for a distance of only a few kilometers. In time, this sensitivity to distance became far less important.
 - 6 As long as they are not required to finance the expansion of the network.
 - 7 There is the International Union of Producers and Distributors of Electrical Energy (UNIPED), but this is only a shadow of the powerful and resourceful ITU. Even on the regional level, organizations such as UCEPT, which coordinates electricity supply in Western Europe, are only minimally institutionalized.
 - 8 By use of controllers such as semiconductors, low-voltage electricity carrying analogue or digital data can be directed from one point in the network to any other point among the billions of end-points that compromise the global telecom network. Such manipulations are not possible in electricity because of multiple loop transmission and reactive power.
 - 9 Politics, or policy regimes, are seen, according to this approach, as an outcome of the characteristics of the sectors involved (Lowi, 1964). This approach provides important insights into the dynamics of policy process, yet it should be complemented by examining how "politics determines policy", namely how politics may affect, shape, and perhaps determine the extent and form of competition and Europeanization in these two industries (Freeman, 1986; Atkinson and Coleman, 1989).
 - 10 Without an efficient and open interconnection regime, competition between telecom operators is ineffective because telephone grids are natural monopolies.
 - 11 Transportation of electricity allows securing emergency supply, pooling reserve capacity (because of different patterns of demand fluctuations), trade, and the efficient operation of geographically dispersed generation (maximizing the use of the most efficient generators and minimizing the use of the least efficient).
 - 12 The discussion of the two telecom regimes is based on Levi-Faur 1999a, 1999b.
 - 13 Probably the most important step was the provision that allowed new customers to buy their first telephone set from any recognized supplier. Under the new regime of national type-approval processes, standards were set not by the TO but by either the state (a special department in the Ministry) or private or semi-public standard organizations. Equipment was tested not by the TO but by the state or private laboratories. Certification was a matter of autonomous discretion of the ministry as a regulator rather than as the operator of the public network (OECD, 1992).
 - 14 The first CTRs were published in September 1993 but it is expected that only 30–40 CTRs will be in force by the end of 1999.
 - 15 This estimate is an approximation of data cited by two different interviewees: one was a member of the EU Commission and the other was chairman of the European Association of Designated Laboratories and Notified Bodies (ADLNB).
 - 16 The initiating of the Mutual Recognition Agreement (MRA) between the European Union and the United States in June 1997 promised to make the regulatory processes even easier for the manufacturers of equipment. The MRA ensures that a product tested and approved by one party, according to the other party's quality and safety standards, will be approved for sale without having to undergo another round of certification procedures. The principle that governs the new regime is "approved once and accepted everywhere in the new transatlantic marketplace".
 - 17 As noted earlier, the value of a telecom network increases with the rise in number of people connected to it. The effect means that even without government monopolization a situation of winner takes all is most probable.
 - 18 Again, it was the UK which introduced competition policy, between Mercury and the dominant TO, British Telecom.
 - 19 The critical moment was the Council resolution of June 1999 to open voice telephony, both domestic and international, to competition as of 1 January 1998. This was a very

- important step at the time and meant that the public network would be open to different operators, under complex commercial and technological conditions and over the opposition of the national TOs, which were the effective owners and gate-keepers of the networks.
- 20 By the end of February 1998 more than 500 local loop licenses had been allocated in the European Union (see foreword to Eliassen and Sjøvaag (1999)).
- 21 For example, system safety, energy efficiency, protection of the environment and land use, as well as the applicant's technical, economic, and financial capabilities.
- 22 In the form of direct aid or as compensation for using domestic sources of energy, such as coal in Germany.
- 23 Unlike telephone wired-lines, electricity grids do not face competition from complementary products. There is no other economically viable technology to transfer electricity.
- 24 The Single Buyer option originated as a French proposal intended to maintain the integrity of their system. It is not clear if the French will eventually opt for it, but still, the most important thing for our purposes is the freedom of choice of the member states.
- 25 The attitude of telecom equipment manufacturers to liberalization was very cautious at first as they had long-established relations with the TOs, and for all manufacturers the most profitable and stable markets were in their home countries. But with the digitalization of telecom there were more and more grounds for internationalization, and these manufacturers came to learn the advantages of a liberal market for their products.
- 26 Even in EdF's France, some independent distribution companies were able to voice their favor of liberalization and Europeanization (Eising, forthcoming).
- 27 Such as cogeneration and Combined Cycle Gas Turbines, and from renewable energy (generation from wind, waste, etc.).
- 28 The destructive nature of a strike by electricity workers made it much more difficult for unions to use this weapon. This was also true despite the important role of EdF's labour union in challenging the liberalization of European electricity.
- 29 One may challenge this argument by emphasizing the power of user organizations as the most important actors in the sectors. This is doubtful. But even if true, at best it will result in the conclusion that there are no sectorial differences in the extent of opposition to liberalization. It thus will reinforce our conclusion that the political reasons for the differences in governance and regulatory regimes should be sought in other arenas of the European policy process.
- 30 I.e., consumers who were entitled to shop freely for electricity.
- 31 The situation was different in the 1890s, when liberalization all over the world was directed only at generation. A decade later, liberalization of the generation sector alone was widely perceived as too modest.
- 32 Electricity consumption is expected to grow very slowly in Europe (1–3% in the next decade) as compared with telecom (7–12%). The fact that the consumption of primary energy makes the electricity industry a player with relatively low added value is also an important point that may add to governments' interest in giving priority to telecom reform.
- 33 In California the total sum transferred to the electricity supply industry for competition was about \$7 billion. In the Netherlands the bill is estimated to be \$1 billion.
- 34 The primary energy sources for the generation of electricity.
- 35 Most prominent were the issues of their entry into fields of cable TV and Internet provision.
- 36 It may take ten to fifteen years to build a new generation plant.
- 37 RWE Energy owns mines as well as electricity equipment manufacturers, and these account for the higher value-added share.
- 38 The term "competition state" is usually understood as a synonymous with "liberal state" (see, e.g., Cerny, 1997). My interpretation emphasizes its neomercantilist features: see Levi-Faur, 1998.

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