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Regulation of Network Sectors in the EU: A Federalist Perspective

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Abstract

The vertical allocation of regulatory powers within the European two-level system of network sector regulation is analysed from the perspective of the economic theory of legal federalism. The analysis shows that sophisticated combinations of harmonised European rules along with sufficient scope for decentralised decisions of national regulators seem to be optimal. Especially interesting is that networks of regulatory authorities (as BEREC in telecommunications) can play an important role in regard to balancing the advantages and disadvantages of (de)centralisation. Whereas in regard to telecommunication a further shifting of regulatory powers to the EU level cannot be recommended, both in energy and railway markets it might still be necessary to strengthen the regulatory power of the EU.

Keywords: EU sector regulation, legal federalism, regulatory networks, telecommunication

JEL classification: K23, H77, F15

1. Introduction

Since the 1980s the EU has triggered a process of liberalization, deregulation and reregulation of monopolized network industries. However, the introduction of effective competition and market integration has not been equally successful. Currently discussed problems include, e.g., different technical safety standards in the railway industry, limited capacities of interconnectors in electricity markets, and huge price disparities in telecommunication. But also different traditions, goals, and scope of regulation in the member states are said to prevent the completion of the internal market in these sectors (*Sutherland, 2008*). In the existing two-level regulatory regime, the national regulatory

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authorities have the power to regulate their domestic network markets. However, their regulatory scope is considerably limited through a dense net of European rules.

The de facto centralisation and harmonisation of regulations differs considerably across sectors. The European Commission as well as part of the literature (e.g. *Pelkmans/Renda*, 2011) claim that a more centralised and harmonised regulatory system for these network industries is necessary for solving the remaining problems in regard to a sound regulatory regime. A recent example is the European proposal to introduce a new veto power for the Commission over certain national remedies in the telecommunication sectors. However, a part of the literature as well as many member states are sceptical about more centralisation and defend a more decentralised approach (e.g. *Haucap/Kühling*, 2006).

In this paper, we want to analyse the question of the optimal vertical allocation of regulatory powers for network sectors within a European two-level system of regulation. In section 2, we show that a number of key arguments about the positive and negative effects of (de-)centralised regulatory solutions can be derived from the economic theory of legal federalism, and be applied to the regulation of European network industries (i.e. to the sector of telecommunication). The analysis leads to the important result that the identified trade-off problems suggest sophisticated mixed solutions between full centralisation and decentralisation. A particular interesting new institutional solution is the role of regulatory networks of national regulatory authorities between the EU and the member states level, which will be analysed in section 3. We demonstrate the potential of such networks to balance advantages and problems of regulatory (de)centralisation by using the example of BEREC, the regulatory network in telecommunication. Some policy conclusions will follow in section 4.

2. European System of Network Sector Regulation: Optimal Vertical Allocation of Regulatory Powers

2.1 Theoretical Framework

Network sectors require governmental regulation due to natural monopoly problems in parts of their network infrastructure. Economic theory claims that regulatory authorities should ensure non-discriminatory access to monopolistic networks and regulate access fees (ex-ante regulation). Beyond this regulation of the monopolistic bottlenecks, liberalization, deregulation and reregulation should ensure competition on the down- and upstream markets (*Joskow*, 2007). However, the theory for natural monopolies does not offer criteria for deciding whether such a regulation should be established at the EU or the member state

level. This issue can be analysed by using the economic theory of legal federalism (and regulatory competition), which - based upon a more general economic theory of federalism - offers a well-established set of criteria for assessing the advantages and disadvantages of (de-)centralisation of regulatory powers and potential effects from regulatory competition (*Van den Bergh, 2000; Kerber, 2008* with many references). The general experience with the application of this approach to various fields of law and regulation has shown that there are often both advantages and disadvantages of centralised and decentralised solutions, leading to difficult trade off-problems with some splitting of regulatory powers between both regulatory levels (see, e.g., *Kerber/Grundmann, 2006*, for an application to contract law within the EU).

So far only a few studies have applied the economic theory of federalism to the problem of the European network sector regulation (*Haucap/Kühling, 2006; Trillas, 2010, 2013; Bickenbach, 2000*). What are the key effects that should be considered generally in regard to the (de)centralisation of these regulations? With a strongly decentralised system of ex-ante regulation, there might be a danger that the implemented regulation to ensure non-discriminatory access and competition in down- and upstream markets is not sufficiently effective. The risk of such a regulatory failure results primarily from either political capture through dominant incumbents or emerges through limited regulatory capacities (e.g., in case of new EU members and smaller national regulators). Unexploited economies of scale, higher transaction costs, and a higher level of uncertainty due to different regulatory practices on the national level as well as entry barriers for non-domestic firms may impede the reaping of the advantages of the internal market, also by discouraging investment (*Kovacic, 2007*). The problem of entry barriers is also directly linked to the issue of negative cross-border externalities, caused by national regulatory measures.

Since, however, the domestic conditions, e.g. in regard to the infrastructure as well as the industry structure, differ often widely and also different preferences in regard to policy objectives exist, some scope for applying non-uniform regulatory policies at the member state level might be necessary (*Baldwin/Wyplosz, 2006, 79*). This is supported by the experience that national regulatory authorities often have much better specific knowledge about their domestic network sectors than a regulator at the central level. Since for many regulatory problems the best solutions have not been found yet (or are changing through rapid technological change), parallel experimentation with different regulatory innovations, which allows for generating and spreading knowledge about best practices (yardstick regulatory competition), might be crucial for improving the effectiveness of network regulation and its fast adaptation to technological and economic change (*Haucap/Kühling, 2006, 336 f*).

Therefore, also in regard to the regulation of network industries large trade-offs between the advantages and disadvantages of centralised and decentralised regulatory powers exist, suggesting that sophisticated combinations of a certain degree of uniform European regulations and sufficient scope for decentralised regulatory powers might be optimal. However, solutions may be space or sector specific (*Trillas, 2010, 3*) to consider varying circumstances.

2.2 Application to Telecommunication, Energy, and Railways

In telecommunication the largest progress has been achieved in comparison to other network sectors, in terms of liberalization, competition, and effective regulation. After introducing full liberalization in 1998 by prohibiting the member states to keep up with legal monopolies and implementing policies for ensuring competition, a comprehensive regulatory framework was established. Although the architecture of this regulatory system is primarily based upon the regulatory decisions of the national regulatory authorities, they have to comply with a number of European rules. Since most of these rules were formulated as directives (binding to aims but not means), the member states and the national regulatory authorities had a considerable degree of latitude (*Larouche/de Visser, 2006, 129*). However, the scope of the national regulators for making their own decisions has been increasingly restricted by additional European rules and measures to intervene into national market regulation (*Veith, 2010, 6 ff.*). Particular important in this respect are the so-called “Article 7/7a procedures” of the Framework Directive (2002/21/EC as amended by 2009/140/EC and 544/2009), which allow the Commission to monitor and influence regulatory decisions of the national regulators. The specific role of the regulatory network BEREC in this context will be discussed in the next section.

What are important arguments about the optimal vertical allocation of regulatory powers in telecommunication? A more centralised regulation can save regulation and transaction costs for regulatory authorities and also regulated firms, because not having to deal with different national regulations reduces compliance costs for firms and avoids duplicated set up costs of the regulators for different regulatory practices. Therefore, European rules which limit the discretionary scope of the national regulators and lead to a more uniform, standardized regulation can be justified due to cost arguments. However, since most of the regulated telecommunication services are non-tradable, the economies of scale of the application of uniform rules are limited, because the existence of national or even regional markets requires a separate market regulation procedure in each member state (*Haucap/Kühling, 2006, 337*). If we take additionally the information advantages of national regulators into

account, the market regulation seems to be allocated more efficiently at the national level. Also other issues may support the idea of a more decentralised and less uniform regulatory solution. For example, the preferences of the population about the necessary extent and conditions for universal services (e.g., different population density, shares of urban/rural areas) vary across member states (*Haucap/Kühling, 2006, 342*). Additionally, the historically existing domestic infrastructure (shares of cable, fixed line, and mobile telephony) shows considerable differences leading to different regulatory requirements to ensure effective competition. More regulatory discretion for national regulators would therefore allow for a better matching of regulations to the specific needs of citizens and conditions in the member states.

Another group of relevant effects are discussed under the heading of regulatory risks. These entail well-known political economy problems as regulatory capture through the national telecommunication incumbents. A strict and well-enforced uniform European regulation to ensure sufficiently open markets for new entrants and effective competition might be necessary as well as some protection against national overregulation. In that respect, the powers of the EU Commission to ensure a coherent definition of those markets (and assessment of market power) that should be regulated by the national regulators can be assumed to be justified. Especially challenging is the set up of a regulatory system in regard to new markets or technologies, which include a trade-off between investment or innovation incentives and the safeguarding of competition through access regulation. This led to several vertical jurisdictional conflicts. For example, the enactment of article 9a in the German telecommunication law in 2009 to allow a temporary abolishment of ex-ante regulation for next-generation broadband for providing more investment incentives was seen by the European Commission as an infringement of European rules. However, the particularly fast technological change in the telecommunication sector might require more regulatory scope for experimentation with different new solutions through national regulators, allowing for some regulatory competition (as yardstick competition) as a process of parallel experimentation and mutual learning. One example for such an innovation diffusion process is a complex cost model for the set up of an unbundled local loop, introduced by the German regulatory authority, which subsequently spread to other member states (*König, 2002, 592*).

A key argument for the allocation of regulatory powers at the European level exists in the case of large cross-border externalities. A crucial example in telecommunication is the market for international roaming. Although it still seems not entirely clear what the reasons for the competition problems in regard to high roaming prices in the past have been, it can be argued that national regulators had serious problems in dealing with the issue (both in regard to their incentives and coordination) (*Berger-Kögler, 2007*). Therefore, a strong justification to

solve this problem at the European level is given, although the specific policy of setting directly maximum prices through regulations can be seen critically from an economic policy perspective.¹ The example of international roaming fits very well into the general picture that in regard to different dimensions of telecommunication regulation and their application significant advantages of both centralisation and decentralisation can exist. Therefore, sophisticated combinations of harmonised EU rules and regulatory scope for national regulators might be particularly suitable for solving these complex trade off problems. While there seem to be good reasons that for EU telecommunications a strong and to a large degree centralised and harmonised regulatory system is advisable, the analysis from an economic perspective also leads to the conclusion that national regulators should retain also a good deal of discretion, esp. in regard to a better matching of different preferences and conditions as well as allowing for some experimentation with new regulatory solutions.

A similar analysis of the advantages and disadvantages of the allocation of regulatory powers at the EU and the member state level could also be made for the energy and railway sector. This cannot be done in this paper. Since the technological and economic features of these sectors differ from telecommunication, the results of such analyses would lead to somewhat different results about the optimal allocation of regulatory power in the respective two-level regulatory systems, but also in these sectors a combination of uniform European rules and some scope for member states and national regulators can be viewed as appropriate.

A large problem for the regulation of the electricity grids as natural monopolies is that energy policy encompasses much more objectives (such as security of supply, ecological objectives as climate protection and renewable energy and industrial policy objectives) with only a limited consensus among the EU member states. This leads to unresolved conflicts with the development of an internal market and the competition objective. The German "Energiewende" is a good example that shows that the member states still have strong decentralised policy competences, whose use can have large externalities to other member states, including negative effects on the internal market and undistorted competition. It is not clear to what extent such unilateral policies of member states can be justified from an economic perspective (*Monopolkommission*, 2013). This broader policy context leads to the problem that the European regulatory framework is much more limited in the energy sector but also still lacks in terms of its implementation. Currently, the European Commission focuses mainly on alleviating the problems of cross-border trade of energy, where the third regulatory package included considerably extended specific powers to the Commission

¹ The decisions of the national regulators of Portugal and Spain to mutually abolish roaming charges shows that externality problems can also be solved bilaterally in a decentralised way.

(*Hacher/de Hautecloque*, 2010, 5). Key objective is the elimination of discrimination in regard to the transport of electricity and gas and the increasing of interconnection capacities at the national borders to allow for a better exploitation of economies of scale and the internalisation of cross-border externalities through the development of a more integrated pan-European infrastructure.

European railway markets remain primarily dominated by national firms with very limited access for competitors from other member states. Despite considerable European efforts (currently the fourth EU legal railway package is being discussed), there is no internal market or effective competition within sight (*Beria et al.*, 2012). As even independent regulatory agencies at the national level are still frequently lacking, the implementation of European rules on the domestic level is considerably delayed. Discrimination of domestic and foreign competitors and the support of “national champions” is still common. Further, inconsistent technical safety standards and non-transparent train path allocations in member states cause negative externalities through non-tariff trade barriers on foreign competitors. Prominent example for a strategic use of safety precepts to exclude competitors is the case of the “channel tunnel” in 2010, where the French government tried to retain monopoly rights of tunnel use for the French firm Alstom. The resulting call for a strengthening of the EU regulatory powers in order to accelerate the enforcement of competition and the internal market in the rail sector, can also be supported from the perspective of legal federalism.

3. Regulatory Networks as an Innovative Institutional Solution in a Two-Level System of Network Sector Regulation

3.1 Networks of Regulatory Authorities

In the last section we have seen that from the perspective of the economic theory of legal federalism the current basic architectural structure of a two-level system of regulation might be generally appropriate. The question that has to be answered is about the specific design of this two-level system, i.e. what specific regulatory powers should be allocated to the EU level and what kind of regulatory scope should remain for the member states and the national regulators. It is a very interesting phenomenon in the European context that within this two-level regulatory structure an additional type of actor emerged between the EU and the member state level: networks of national regulatory authorities.

In the telecommunication sector BEREC (Body of European Regulators for Electronic Communication) and in the energy sector ACER (Agency for the Cooperation of Energy Regulators) were established as networks of the national regulators with own functions and

competences within the two-level system of regulation. The establishment of ACER, but in particular of BEREC was the result out of compromises about the vertical regulatory power allocation between the European Commission (preferring more centralisation) and the Member States (wanting to preserve powers for the national regulatory authorities) (*Hancher/Larouche, 2011, 776 f*). Although both networks work differently, their basic task is to help the development and better functioning of the internal sector markets, i.e. through closer cooperation between the national regulators. However, these networks might a) help to ensure a more consistent application of European rules through the national regulators, and b) they might also function as a vehicle for the national level to form a countervailing power against heavy regulatory decree from the EU level. Therefore, these regulatory networks can be seen as a part of the complex institutional structure of the two-level system of regulation, which play an own role in regard to balancing the advantages of centralisation and decentralisation.

Regulatory networks are a recent institutional phenomenon which received a lot of attention in political science literature as one of the new forms of governance (e.g. *Maggetti/Gilardi, 2011; Levi-Faur, 2011*). Similar to networks of firms, also networks of public regulatory authorities can be either informal and voluntary (as, e.g., the International Competition Network as a world-wide network of competition authorities) or also established in a more formal and institutionalised form. Political science literature considers European regulatory networks as a cornerstone of a flexible, multi-level architecture for enhancing consensus-building capacity, harmonization and convergence in areas that are resilient to "hard" integration and Europeanization (*Maggetti 2013, with additional references*). They are used in very different policy contexts: Besides BEREC and ACER for the regulation of natural monopoly sectors, e.g., the Committee of European Securities Regulators (CESR, now ESMA) was established for financial market regulation, and the European Competition Network (ECN) as network of the national competition authorities plays an important role within the two-level competition law regime in the EU.

Regulatory networks can play important roles in improving the effectiveness of regulation: (1) Best practices and policy learning: Regulatory networks can help to improve the policies of the regulatory authorities by analyzing regulatory policies, identify best practices, and recommend them in formally non-binding guidelines. They can also be seen as an institution, within which decentralised experimentation with different policy innovations and mutual policy learning can take place.² (2) Coordination, communication, and monitoring: Regulatory networks can also help in regard to the coordination, monitoring and reporting of activities of

² In regard to best practices and policy learning there are close similarities with the "Open Method of Co-ordination" (OMC) as a new form of European governance (see *Kerber/Eckardt, 2007, with a specific focus on the laboratory federalism dimension of the OMC*).

national regulators by providing an institutionalised communication environment. This might improve the consistent implementation of EU rules and reduce regulatory uncertainty. (3) Rule-making: Regulatory networks with their comprehensive experience and expert knowledge can also have an important role in developing, adapting, and refining regulatory rules, either by deciding themselves on rules (e.g., guidelines) or giving advice in rule-making processes at the EU or member state level.

3.2 BEREC as the Regulatory Network in Telecommunication

BEREC was established in 2009 as the result of a compromise after the EU Commission was not able to set up a new regulatory authority at the EU level against the resistance of the Council and the European Parliament, who could not see sufficient cross-border problems to justify such a centralized approach.

BEREC consists of a Board of Regulators, which is represented by the heads of the national regulators, expert working groups (experts from national regulators) and the Office. In contrast to its much more informal predecessor, the “European Regulators Group” (ERG), BEREC is a full autonomous Community body with own formal competencies, esp. within the Art. 7/7a procedure and can therefore play a much stronger role in the two-level system of telecommunication regulation.

In regard to "best practices and policy learning", BEREC (with their working groups) develops guidelines, identifies best practices and publishes common positions as “bottom-up” agreements among the national regulators on certain regulatory issues. Between October 2011 and July 2013, BEREC published ten common statements (giving guidance on specific issues such as the imposition of remedies in the relevant market for wholesale broadband access) and eleven guidelines on more general issues, such as net neutrality and retail roaming services. In terms of "monitoring and reporting", BEREC seems to be active mainly on its own initiative producing various studies, collecting and systematizing information (*Batura*, 2012, 7). Within the time period outlined above, BEREC published 38 reports on very different regulatory issues. Combined with an increased institutionalization of coordination between national regulators, this does not only lead to simplified mutual policy learning processes and the emulation of successful regulatory concepts, but also provides a breeding ground for decentralized experimentation with different regulatory innovations. Moreover, if the national regulators jointly agree on a specific measure for example, this strengthens their position vis-à-vis the European level and additionally supports the peer pressures on national regulators to stick to commonly agreed rules. These activities of developing guidelines show that BEREC is also very active in regard to making and fine-

tuning rules and regulatory practices. Through the combination of general expert knowledge and the informational advantage of national regulators, BEREC is also in an eminent position for providing expert advice to European institutions in regard to rule-making at the European level. Overall, all these activities can contribute to the task of BEREC to ensure greater convergence of regulatory approaches across Europe in order to support the development of a Single telecommunication market (Art. 1 (3) "BEREC Regulation" (EC) No 1211/2009).

Beyond these functions that could also be fulfilled by more informal regulatory networks, BEREC has also very plain formal competencies in the two-level system of telecommunication regulation, which are getting important in cases, where the EU Commission and national regulators disagree on regulatory measures (Art. 3 (1) BEREC Regulation). Under the current EU regulatory framework national regulatory authorities are required to investigate on a set of telecommunication markets which may need ex ante regulation. This includes three different elements: The national regulator must (1) define the relevant geographic and product market, (2) assess whether one or more firms on this market possess significant market power, and (3) impose certain regulatory measures (remedies) if a market lacks effective competition. Before taking any of these decisions, the national regulator has to inform the EU Commission (in case that the draft may affect the trade between member states), which can agree with the proposed decision or oppose it. What happens in the case of disagreement? After the Commission has raised "serious doubts" about the draft decision of the national regulator, BEREC as the network of all national regulators has to cooperate with all parties involved and develop an expert "opinion" about this disagreement. BEREC can support either the Commission or the national regulator (or suggest other solutions). Now it is crucial for understanding the vertical allocation of regulatory powers that in regard to the definition of markets and the assessment of market power it is the Commission who has the final right to veto a proposed decision of the national regulator (Art. 7 Framework Directive), whereas in regard to a decision about the appropriate remedy, it is the national regulator who can ultimately decide (Art. 7a Framework Directive). However, in both cases all parties have to take the opinion of BEREC into the "upmost account".

Although BEREC is not a real arbitrator between the EU Commission and the national regulator, because it cannot decide itself, the institutional structure - with its stipulation that the final decider has to give "upmost account" to the opinion of BEREC - puts the regulatory network into a very strong position in regard to the final decision in cases of disagreement. Has BEREC so far supported more the EU Commission or the national regulators through these opinions? An analysis of the opinions since 2010 shows that the initially perceived tendency to agree more with the serious doubts of the Commission, has changed to a more

balanced record, because, in the meantime, BEREC has adopted several opinions supporting partially or completely the draft decisions of the national regulators (*Batura, 2013, 2*). Overall, both the Commission and the national regulators followed mostly the opinions of BEREC in their final decisions in those cases of disagreement. The institutional structure and the practice of BEREC shows that the regulatory network can be understood as a kind of balancing (expert) force in regard to the regulatory powers of the EU Commission and the national regulators.

What does this mean for the assessment of the current proposal of the EU Commission (COM (13) 627 final) to grant also the ultimate decision about remedies proposed by national regulators in case of European providers to the EU Commission? First, even now the regulatory latitude remaining with the national regulators in telecommunication is small. Its competence to adopt regulatory remedies is limited by the Art. 7a proceedings, which include "recommendations" of the Commission and "opinions" of BEREC. It cannot be seen that a further reduction of this scope would help in any crucial way to strengthen competition and the internal sector market. On the contrary, from the perspective of legal federalism both the arguments of decentralised knowledge (about the domestic markets and firms) and the advantages of some experimentation with new regulatory solutions are strong arguments to protect the given regulatory discretion of national regulators. Second, this proposal would also jeopardize the balancing role of BEREC within the two-level structure of regulation, because in the current structure, the opinions of BEREC sometimes attempt to limit the regulatory powers of the Commission, whereas in other instances, BEREC might support the EU level against the national regulators. To endanger this system of checks and balances might have negative effects on the entire role and effectiveness of the regulatory system. Therefore, our analysis would suggest that this part of the EU proposal should be rejected (likewise BEREC itself, BoR (13)142, 2013, 4).

Although BEREC as the regulatory network in the European telecommunication sectors is still in a phase of development in fulfilling its tasks, it showed already a high level of activity in terms of best practices and policy learning, shaping and setting of rules as well as monitoring of sector developments. Its crucial role within the Article 7/7a procedure underlines its key role to establish competition on a pan-European scale. The success of BEREC suggests that a regulatory network can be a valuable part of two-level systems of European network regulations.³ Therefore, regulatory networks should not be seen only as a transitory

³ For energy regulation, the former rather informal regulatory network ERGEG was turned in 2009 into ACER, which is de facto a European agency. However, even equipped with a higher level of formality, the structure still strongly relies on national regulators in a network-based way (*Levi-Faur, 2011*). Compared to BEREC, ACER shifts more power to the European level as its activity includes subsidiary powers for specific decisions (in case national regulators cannot agree or ask jointly for a dispute resolution) on cross-border issues (*Hancher/de Hauteclouque, 2010, 6*). EU rail regulation on

phenomenon that has emerged through political compromises but as an important institutional innovation whose specific institutional characteristics offer particular advantages for balancing the tradeoff between the (dis-)advantages of centralisation vs. decentralisation.

4. Conclusions

In EU network industries considerable problems in regard to the completion of the internal market and effective competition remain. The analysis of the current regulatory system through the lens of economic theory of legal federalism has shown that sophisticated combinations of harmonised European rules along with sufficient scope for decentralised decisions of member states and national regulators seem to be optimal. Therefore, calls for an entire centralisation of regulatory powers and full harmonisation of regulatory rules must be rejected. Regulatory networks (of national regulators) as additional actors can play a key role for improving the effectiveness of the European regulatory system - also from a long-term perspective. In European telecommunications the overall regulatory systems seems currently to be well balanced in terms of vertical competence allocation, taking advantages of both decentral and central allocation of competences. A further shift of competences, as for example proposed by the recent call for a veto on certain remedies by the Commission, cannot be justified from an economic point of view. For the situation in EU energy and rail markets, however, a reinforcement of regulatory power on the central level seems to be justified to achieve the objective of a working competitive internal market.

the other hand, contrasts sharply with such institutionalized form of regulatory cooperation. Here only a purely informal regulatory network exists (the Independent Regulators Group – Rail), which has developed on the initiative of national regulators.

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