

# The Politics of Network Governance in Europe: The Case of Energy Regulation

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# The Politics of Network Governance in Europe: The Case of Energy Regulation

MARTINO MAGGETTI

*Networks are considered increasingly important for policy-making. The literature on new modes of governance in Europe suggests that their horizontal coordination capacity and flexible and informal structures are particularly suitable for governing the multilevel architecture of the European polity. However, empirical evidence about the effects of networks on policy-making and public policies is still quite limited. This article uses the case of the European network of energy regulators to explore the determinants of the position of network members and, in turn, the domestic adoption of soft rules developed within this network. The empirical analysis, based on multivariate statistics and semi-directive interviews, supports the expectation that institutional complementarities increase actors' centrality in networks, while arguments based on organisational resources and age are disproved. Furthermore, results show that the overall level of adoption is considerable and that centrality might have a small positive effect on domestic adoption.*

Networked organisations are increasingly relevant for policy-making. The seminal work of Rhodes shed light on the role of networks of civil servants and politicians as horizontal governance structures that complement and sometimes supplant markets and hierarchies (Rhodes 1996). Policy networks operate as coordination-and-control devices for the formulation and implementation of public policies (Klijn and Koppenjan 2000; Klijn *et al.* 1995). Collective action has also been studied from a network-based perspective. Various actors – politicians, representatives of interest groups, experts – are said to cooperate and make decisions through networks conceived as ‘advocacy coalitions’ (Sabatier 1988), ‘epistemic communities’ (Haas 1992) and ‘transnational movements’ (Diani and McAdam 2003). More recent research focused on ‘transnational government networks’ as the cornerstone of a ‘new world order’,

wherein governments interact to respond to the challenges of interdependence, which concern numerous boundless issues, such as human rights, the environment, finance, trade and organised crime (Slaughter 2004). According to this argument, contemporary governance is crucially shaped by the transnational activity of regulators, judges and legislators, who exchange information, coordinate policies, enforce laws and regulate markets in informal, specialised, decentralised networks (Djelic and Quack 2010; Djelic and Sahlin-Andersson 2006; Slaughter 2004; Zürn 2000). The European Union is considered a particularly advanced networked polity that functions as a 'regulatory state' (Majone 1996), coordinates policies through 'informal' instruments of 'soft law' (Christiansen and Piattoni 2003) and advances integration through an 'experimentalist architecture' based on autonomy granted to lower-level entities and learning platforms promoting reporting, peer review and deliberative procedures (Sabel and Zeitlin 2010). New governance studies suggest that European institutions encourage informal network governance for functional and instrumental reasons, that is, to enhance consensus-building capacity, harmonisation and convergence in areas that are resilient to 'hard' integration and Europeanisation (Héritier 2003). Above all, network governance is crucial in coordinating a fragmented political system in a context of denationalisation (Hooghe and Marks 2001, 2003). Therefore, European integration is expected to lead to the institutionalisation of a multilevel governance structure in Europe, wherein authority is relocated on different territorial and functional levels and public and private actors interact to co-produce public policies (Bache *et al.* 2005; Piattoni 2010).

European regulatory networks (ERNs) are one of the main institutional manifestations of this process. They consist of transnational groups that federate the regulatory authorities of EU member states as well as of some non-member states. ERNs represent a very interesting case for the study of network governance as they are particularly sophisticated networked organisations governed by a separate administrative entity (Kenis and Provan 2009; Provan and Kenis 2008) that could bring into being a new level of governance at the interface between nation-states and the European Union. Indeed, an increasing number of studies deal with their establishment, functions, operation, development and consequences. These have shown that ERNs were created following a process of 'double delegation' from EU institutions and from national governments as a 'second best' solution, given member state unwillingness to dismiss their national regulatory authorities (Coen and Thatcher 2008a; Thatcher and Coen 2008). ERNs subsequently expanded gradually and incrementally and in some cases were transformed into European agencies. The rationale behind agencification at the EU level is similar to that behind domestic independent regulatory agencies, and includes the need to enhance the credibility of regulatory policies (Wonka and Rittberger 2010). However, the emerging European regulatory space is quite complex, as networks have achieved different degrees of institutionalisation and European agencies still function as networked organisations that have to rely on their domestic

counterparts (Levi-Faur 2011). The development of ERNs has been interpreted as an opportunity to reconcile the regulatory gap created by the coexistence of a common market with regulatory institutions and policies that continue to be located at the domestic level (Eberlein and Grande 2005). In that regard, preliminary evidence indicates that networks provide a 'distinctive, flexible, and effective mechanism' for international coordination (Eberlein and Newman 2008). ERNs indeed appear quite active in coordinating regulatory policies, namely, when the level of interdependence among member state authorities in a given issue area is high (van Boetzelaer and Princen 2012). What is more, participation in networks can indirectly enhance the independence of national regulatory authorities (Maggetti 2007; Yesilkagit 2011).

The development and adoption of soft rules is the crucial meta-regulatory task of ERNs and the one that exerts potentially the strongest and more direct impact on policy-making and public policies. Previous research on the Committee of European Securities Regulators (CESR), the most institutionalised network, has shown that the soft rules developed within this ERN are quite successful (Maggetti and Gilardi 2011). In fact, after some years, they are adopted in the vast majority of jurisdictions. What is more, it seems that national interests affect the centrality of national agencies in the network and that their position has an effect on the timing of adoption. However, these results represent a sort of 'ceiling for adoption patterns' within ERNs, derived from a 'most likely' case of successful adoption. To what extent can we extend these findings? How do we explain centrality in other cases, for example, in the more 'typical' cases of less institutionalised, more informal networks? What is more, what is the effect of centrality on adoption, a question that is still pending? Finally, what are the causal mechanisms at work? To explore these questions, this article focuses on the case of the energy network, a 'typical' regulatory network in a domain of substantive importance for scholars and policy-makers, in order to extend existing knowledge about network centrality and the adoption of soft rules developed in networks and to examine the underlying causal mechanisms. These issues correspond to key assumptions of the literature on network governance, which however still lack a systematic test. The rest of this paper is structured as follows. The next section introduces ERNs and the case of energy regulation. Theory and hypotheses are discussed in the subsequent section, followed by an examination of the methodology and empirical analysis.

### **ERNs and the Case of Energy Regulation**

European regulatory networks are transnational groups that federate the regulatory authorities of EU member states as well as some non-member states, such as Iceland, Norway and Switzerland. The EU Commission is usually represented at ERN meetings, too. Five main networks exist, charged with the regulation of energy, finance, telecom, competition and broadcasting. The energy network brings together the bottom-up and top-down groups of national

electricity and gas regulators, that is, the Council of European Energy Regulators (CEER) and the European Regulators' Group for Electricity and Gas (EREG, now ACER). The Committee of European Securities Regulators constitutes the leading network of the Lamfalussy process, devoted to the implementation of the new system of regulation of the European financial markets (replaced by the European Securities and Markets Authority on 1 January 2011). The Independent Regulators Group of telecommunications (IRG) is closely related to the European Regulators Group (ERG, now BEREC), which was set up as an advisory group by a decision of the European Commission. The European Competition Network (ECN) consists of national competition authorities and the EU Commission. The European Platform of Regulatory Authorities (EPRA) is an informal forum that brings together broadcasting regulators. The first two networks have recently acquired the legal status of European agencies, thus becoming more institutionalised and resourceful, but they still have to rely on national regulatory authorities and they are organised in a network-based way.

The ERNs' organisational model normally comprises a separate administrative entity (a secretariat or similar) in charge of day-to-day duties, a management board, a general assembly and a number of permanent committees and ad-hoc working groups, whose members convene on a regular basis. Committees and working groups frequently involve academic experts and business representatives and are in charge of preparatory meetings and metaregulatory functions, such as reporting, rule setting and peer review assessments. ERNs were established following two parallel developments (Coen and Thatcher 2005, 2008a, 2008b; Thatcher and Coen 2008). National regulatory authorities – generally independent regulatory agencies (IRAs) decided to establish transnational groups to exchange information and coordinate their operations at the international level. These regulators were looking for partners to improve their coordination and to protect their common interests before national governments and the regulated industries. At the same time, in the eyes of the European Commission, networks represented a second-best solution to advance the harmonisation of European regulation and promote pro-competition rules, given member states' unwillingness to dismiss their domestic authorities.

The case of the energy network was selected because it represents a 'typical case' of a regulatory network (Gerring 2007; Seawright and Gerring 2008). To begin with, energy regulation is confronted with the classic dilemma of coordinating policies and ensuring transnational cooperation in a field that involves 'hard' politics associated with high security concerns and national strategic issues. In the European Union, energy regulation is confronted with the convergence of the gas and electricity markets in a context of path dependence on the existing infrastructures and on technical and economic domestic structures (Künneke 2009). At the same time, supranational institutions have to manage the natural interconnectedness of energy policies and infrastructures in a context shaped by strong national interests (Finger and Varone 2009). As a response to these challenges, national energy regulators began to coordinate

actively in an informal but progressively institutionalised way from 1997. The Council of European Energy Regulators was established in 2000 and the European Regulators Group for Electricity and Gas was set up by the European Commission in 2003, providing a platform for the further development of the internal energy market within the framework of the second Internal Energy Market directive (Glachant and Lévêque 2009; Vasconcelos 2005). The CEER and ERGEG are networked organisations that worked together until 2010, when the latter was replaced by the ACER (Agency for the Cooperation of Energy Regulators), which took over the powers of ERGEG (which, itself, still functions as a network of national regulatory authorities). The main purpose of these organisations, which overlap in practice, is to facilitate cooperation between national authorities and to promote the convergence of rules in the markets for electricity and gas. On the organisational side, the CEER/ERGEG is moderately institutionalised and remains informal in terms of structures, rules, procedures and resources. What is more, this network disposes of monitoring and review procedures to favour the implementation of soft rules at the domestic level. The IRG/ERG, the ECN and many other European and extra-European networks have similar characteristics. Therefore, the CEER/ERGEG can be considered a ‘typical’ regulatory network, the idea being that the lessons from this case will be valid for other, comparable networks.

### **Network Position and the Domestic Adoption of Soft Rules**

The present analysis examines the factors that determine the position of independent regulatory agencies in the CEER/ERGEG and explores the domestic adoption of soft rules developed within this network. To begin with the first question, we have to identify the dependent variable. The most straightforward positional measure is degree centrality (Hanneman and Riddle 2011), a concept that is usually associated with the ‘systemic power’ of an actor within a network (Cook 1977). Centrality is one of the most studied concepts in social network analysis (Borgatti 2005; Borgatti and Everett 2006), but it is rarely treated as a dependent variable. However, some literature exists from which to derive theoretical expectations about the centrality of agencies in networks. First, in line with resource mobilisation theory (Jenkins 1983; McCarthy and Zald 1977), it has been observed that a public sector agency’s position in a local resource exchange network is significantly affected by the organisational resources at hand (Boje and Whetten 1981). Resources, namely staff size, are expected to influence decisively the ‘systemic power’ of network members by providing them the means to attain their strategic goals. Second, research about clients’ networks indicates that organisational age is positively related to centrality, because organisations acquire competencies, status, legitimacy and expertise over time (Hoffman *et al.* 1990). Third, beyond structural-organisational factors, actors are expected to be central if they have the incentives to be active at the network level (Faust 1997; Marwell *et al.* 1988). Therefore, in

the case of European regulatory networks, the ‘institutional complementarity’ (Mattli and Büthe 2003) between the domestic regulatory framework and the soft rules developed within the network should encourage agencies’ engagement in the network. Since ERNs promote the spread of pro-competition rules, the most ‘complementary’ agencies are those located in the most liberalised and competitive countries in the energy market.

Concerning the adoption of soft rules at the domestic level, previous research has shown that the conditions typically used to explain compliance – such as the ‘misfit’ between domestic and European regulations and the number of veto players – are not very relevant (Maggetti and Gilardi 2011). Instead, domestic adoption could be shaped by the same organisational conditions that are expected to foster their centrality, namely, agencies’ resources expressed as the number of employees, and organisational age. In fact, these variables should affect, not only the capacity of agencies to be active at network level, but also the possibility of actually adopting the soft rules developed within networks. Alternatively, all things being equal, it is possible that the network centrality of agencies has an independent effect on their willingness to adopt these soft rules at the domestic level. Central agencies are expected to have more information, more motivation, more legitimacy and also more reputational pressures on them to adopt the rules that they decisively contributed to developing at the network level. Therefore, three hypotheses can be formulated for explaining network centrality, and three hypotheses for the domestic adoption of soft rules. Gross domestic product (GDP) per capita should be taken into account as a control variable.

- *Hypothesis 1.* The centrality of agencies in networks is expected to increase (a) with the staff size of agencies, expressed as the number of their employees; (b) with the age of the agencies; and (c) when agencies are embedded in highly liberalised and competitive economies and, thus, have more incentives to actively engage in networks.
- *Hypothesis 2.* The domestic adoption of soft rules developed at the network level is expected to be more likely (a) when agencies are well staffed; (b) as member agencies grow older; and (c) when agencies hold central positions in the network and, thus, have more incentives to adopt the rules that they decisively contributed to develop at the network level.

## Methodology

The first hypothesis will be tested via an analysis of the positions of independent regulatory agencies in the CEER/ERGEG. In relational terms, their position corresponds to the centrality determined by the structure of interaction within the network (Carrington *et al.* 2005). Centrality (the dependent variable) is measured using the most straightforward approach – the number of ties for any given nodes – that is, their local connectivity (Everett and Borgatti

2005; Knoke and Yang 2008; Scott 2000). In this article, degree of centrality is calculated using a survey-based matrix of collaboration ties among participants. A survey was sent to all participants in the CEER/ERGEG, asking with whom they collaborate the most when drafting soft rules and making decisions at the network level about these rules. Collaboration ties are interpreted quite broadly to include teamwork, support and the exchange of information. The response rate was 68 per cent. This is a relatively high response rate for a survey inquiry, but a network analysis would ideally require information on the full network. It was decided to analyse this incomplete network with confidence about its validity, because a number of semi-structured interviews with network key players confirmed that agencies that refused to take part in the survey were not only the smallest but also the most marginal in decision-making. Hence we can infer that non-responding actors were also peripheral in the network. It is worth noting that the empirical analysis focused on interaction among member agencies only, because, according to all respondents, the real work was done and actual decisions were taken within CEER before ERGEG meetings, which also include the representatives of the Directorates-General of the EU. Therefore, the latter were excluded from the analysis. In turn, the independent variables are operationalised as follows. Staff size is measured as the number of employees, calculated from agencies' websites and annual reports. The organisational age of national regulatory agencies is best approximated using the date of EU accession, which accounts both for the need to develop informal coordination tools among agencies to ensure integration and for the date of their full membership in the CEER/ERGEG. These two factors are operationalised by taking the log of the original numbers (the unlogged values however do not alter the results). Finally, the degree of domestic sector-specific liberalisation is calculated using OECD product market regulation indicators about regulation in energy, transport and communications (ETCR), which can also be disaggregated into different items to perform robustness checks.

The second hypothesis is operationalised through examination of the domestic adoption of the voluntary rules developed at network level in the reference year 2011. The dependent variable is the level of domestic adoption of the Guidelines for Information Management and Transparency in Electricity Markets. They represent the most important rules among a small number of existing CEER/ERGEG standards – and there are only two rules for which there is full data on implementation. The goal of these soft rules is to establish across Europe a consistent approach for the provision of market-related information to market participants (suppliers, generators, energy traders, large customers and demand-side participants). To be precise, the guidelines (a) suggest that agencies set out the required level of transparency that shall, at the minimum, be in place across the European market; (b) provide a set of rules required, as a minimum, for the organisation of information and its dissemination across the European market; (c) define general principles governing information release, either through publication or through information released to market participants



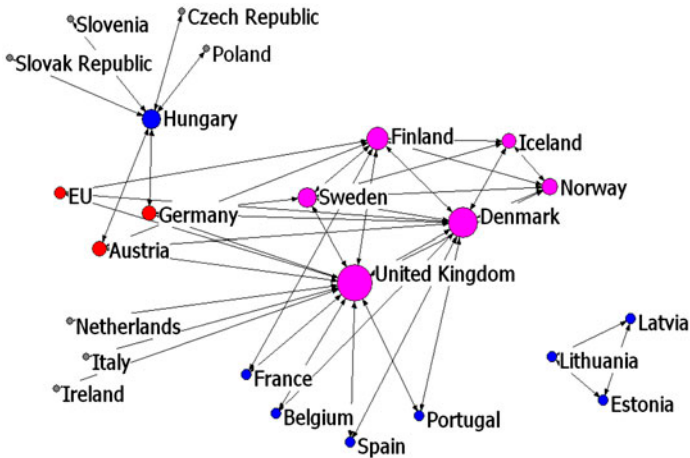
on request, and (d) apply an analytical approach to determining information/data to be released and their key characteristics. Data come from the ERGEG Compliance Monitoring Reports in various years. These surveys are largely based on self-reporting by regulators and therefore may suffer from the usual biases and limitations of this type of document. However, in this case, their reliability is enhanced by the mutual controls among network members that exist in the dedicated working group. What is more, these surveys are made public and thereby are expected to generate pressures for effective compliance. Other variables are the same as used for the first analysis except for centrality, which becomes an independent variable in the second analysis. GDP per capita is included as a control variable. The units analysed are the 29 national independent regulatory agencies participating in the CEER/ERGEG.

The empirical analysis is performed with standard OLS multiple regression in Stata. First, OLS regression is used to estimate the parameters of the equation: (1)  $Y = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$ , where  $Y$  is the centrality of agencies in the CEER/ERGEG,  $X_1$  is the logged number of employees,  $X_2$  is the logged number of years since EU accession and  $X_3$  is the degree of liberalisation according to ETCR indicators. The second analysis estimates (2)  $Y = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$ , where  $Y$  is the degree of domestic adoption of soft rules as measured in 2011,  $X_1$  and  $X_2$  are the same as for the first analysis,  $X_3$  is centrality and  $X_4$  is the GDP per capita. The statistical analysis was completed with five semi-directive interviews with CEER/ERGEG key players (former executives, senior managers and working group chairs). The goal of these interviews was to validate previous findings and to gain in-depth knowledge of network-level dynamics to improve the interpretation and understanding of the causal mechanisms at work.

### Empirical Analysis

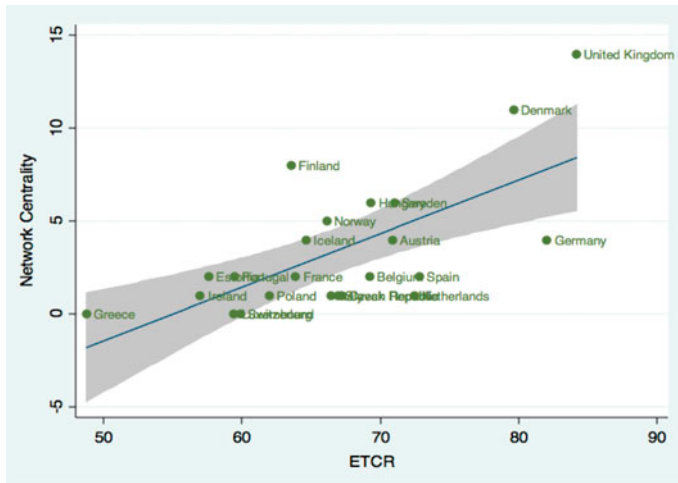
The CEER/ERGEG can be represented as a social network using the software UCINET (Borgatti *et al.* 2002). The size of the nodes reflects degree centrality (see Figure 1). Countries are included when there is a reciprocal tie; disconnected countries are not shown in the diagram. These ties account for collaborative interaction, such as teamwork, support and the exchange of information. This type of interaction unfolds not only during the general assembly of the network and working group meetings that take place on average every one or two months, but also through more frequent contacts among working group members in charge of specific tasks, such as the development of position papers and official documents. On this basis, some clusters of more connected agencies can be identified. They are labelled with the name of the country of origin in Figure 1. There is a central cluster of Scandinavian countries together with the UK (OFGEM), which is very well connected with almost all other authorities. Then there are some less connected groups and a rather isolated cluster of Baltic countries. It is interesting to note that Hungary seems to play

FIGURE 1  
THE NETWORK



a crucial brokerage role towards eastern European countries. This structure is not trivial, as it illustrates cross-border linkages that go beyond regional cooperation.

As regards the determinants of network centrality, variables referring to agencies' staff (hypothesis 1a) and to years of EU membership (hypothesis 1b) have no effect (see model 1 in Table 1). Instead, hypothesis 1c is strongly supported by the empirical analysis: the variable ETCR has a very clear positive effect on centrality (see Figure 2). These results are stable regardless of other model specifications, for example, when using unlogged variables or when including GDP per capita as a control variable. It is worth remembering that ETCR is taken from the OECD market regulation indicators, and measures the aggregate competitiveness of domestic utilities (ETCR means 'energy, transport and communications regulation'). In this regard, it is interesting to note that liberalisation or privatisation alone have no effect, showing that real competition requires a complex mix of liberalisation, privatisation and re-regulation, in line with previous research on regulatory reform. The interpretation of this finding is that the theory of institutional complementarities wins over competing explanations for explaining the central position of agencies in networks. In other words, centrality does not depend on the number of employees or on the organisational age of agencies but on the higher capacity and incentives of agencies, which regulate highly competitive domestic markets, to be active in a network promoting pro-competition standards for harmonising the internal market. The reverse causal effect is not plausible, because competitiveness is measured before the adoption of soft rules, that is, in 2007, and, in addition, our robustness checks proved that sectoral liberalisation alone has no effect, as it would be otherwise expected.

FIGURE 2  
CENTRALITY

Five semi-structured face-to-face and phone interviews with key network players permitted us to refine the interpretation of this result and to explore the underlying causal mechanisms. Concerning hypothesis 1, it is confirmed that what matters for explaining centrality is the ‘complementarity’ between the pro-competition goals of the European network and the domestic context, rather than the human resources or the expertise available. To begin with, as a former executive in CEER/ERGEG (respondent 5) put it, the agencies representing countries with the most competitive market ‘naturally’ took the leadership in the network. Another key player in the CEER/ERGEG (respondent 1), representing an independent regulatory agency regulating energy in a big European country, explained that agencies have incentives to be active when their regulated markets are already in line with the regulatory policy of the network, that is, to promote competition and facilitate European market integration by removing barriers to trade. Another key player (respondent 2) confirmed that differences in terms of the number of employees between regulatory agencies exist but they are not relevant to explain their active participation in the network. Indeed, even the strongest regulators must choose topics on which they will concentrate their attention, as is the case for agencies with fewer resources. Network members tend to focus on topics that are the most ‘strategic’ for their countries. In that regard, the importance of the ‘complementarity’ between the domestic framework and the pro-competition goals of the network was constantly mentioned by our respondents. For instance, for agencies representing countries ‘like Ireland or Portugal’, it is much more difficult to agree on common pro-competition rules, because the structure of their electricity or gas markets is less suitable for competition than, for instance, the UK

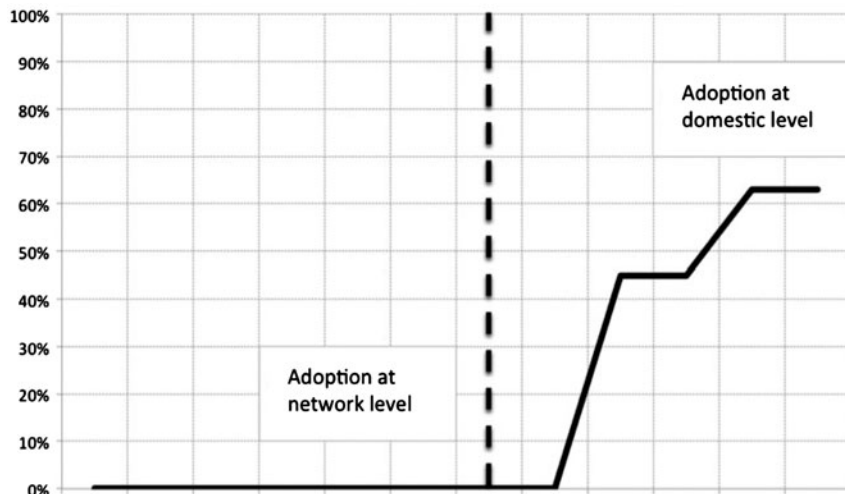
TABLE 1  
OLS ESTIMATES

	Models	
	(1)	(2)
ETCR (2007)	0.41*** (0.08)	
Number of employees (log)	-1.74 (0.81)	-0.08 (0.08)
Years of EU membership (log)	46.12 (63.81)	1.77 (10.28)
Centrality		0.04** (0.02)
GDP (per capita)		-0.00 (4.84)
Constant	-366.16 (485.20)	-12.19 (78.39)
Adj R2	0.53	0.23
N	19	23

Notes: The dependent variables are network centrality (Model 1) and adoption (Model 2), both measured in 2011. Standard errors are shown in parentheses; \*\*significant at 5%; \*\*\*significant at 1%.

(respondent 1). The anticipated cost for them to implement harmonised pro-competition soft rules would be higher and the benefits lower. Conversely, the overall centrality of the Scandinavian cluster, as shown in Figure 1, can be explained by the high complementarity of their regulatory model with the network goals (respondent 2). In fact, Nord Pool (the organisation leading the power market in northern Europe, owned by the Nordic transmission system

FIGURE 3  
THE ADOPTION OF SOFT RULES



operators) is considered an excellent example of 'good practice'. Many elements of Nord Pool, such as 'market coupling' regulations, have been promoted in other countries as well. This way, this standard was imported from the Scandinavian model and ultimately became a legally binding requirement of each member state.

The second hypothesis focuses on the domestic adoption of soft rules developed within the network (model 2 in Table 1). The rule-making agenda is usually set by the board of directors, which is assisted by the secretariat for the management and external representation of the network. The substantial work is done in a decentralised way through working groups in charge of specific issues. Finally, decisions and the approval of official documents are made in the plenary meetings of the general assembly. The Guidelines for Information Management and Transparency in Electricity Markets were approved at the network level in 2006 and then progressively diffused among member states. The domestic adoption rate is more than 60 per cent and is plausibly still growing (see Figure 3). The process of harmonisation has therefore been quite successful. As regards explanatory factors, results show that there is a weak but significant effect of centrality on adoption, and no effect of other factors. This result disproves hypotheses 2a and 2b, while providing some support to hypothesis 2c. A possible interpretation is that traditional explanations of compliance do not apply to voluntary principles, but agencies' positions in the network matter for domestic adoption, in line with previous research (Maggetti and Gilardi 2011). Therefore, there is some evidence of a self-reinforcing process, in which domestic competitiveness increases network centrality, which, in turn, facilitates the adoption of pro-competition harmonised rules. However, as we can see in Table 1, model 2, this effect is small and the significance and overall fit of the model are not particularly high, indicating the need for better specifications in further research.

Our interviews confirm the finding that the process of harmonisation based on soft rules does not purely follow domestic-level explanations. Our respondents claim that 'in order for CEER and ERGEG to influence European policies, there is a natural tendency to take a European view' (respondent 3). This point has to be understood in a diachronic perspective. First, the CEER emerged as a voluntary association of national regulatory authorities, with the aim of facilitating consultation, coordination, cooperation and assistance amongst regulators. It was established to institutionalise informal exchanges among European regulators taking place when agencies used to meet in so-called regulatory forums twice a year. At the outset, interactions among regulators were limited to technical exchanges of information. Then, network members developed meta-regulatory tasks to deal with greatly interdependent policy issues that concerned national regulators in charge of implementing energy policy (respondents 1, 3 and 4). Some years later, the EU Commission created the ERGEG as an attempt to reassert its authority over an increasingly self-governing network with another, overlapping, top-down organisation, but the latter remained largely irrelevant until the partial agencification of the

network. Thus, quite unexpectedly, the CEER/ERGEG became a relatively autonomous governance network following a process that is close to the logic of multi-level experimentalism (Sabel and Zeitlin 2010), whereby domestic 'best practices' contribute to the development of transnational soft rules that, in turn, have an impact on national policies.

Member agencies tend to agree that cooperation is beneficial not only for each regulator but also for the group as a whole. For instance, regarding the range of support schemes across Europe for renewable energy, the adoption of the same approach is inherently considered more efficient, and therefore harmonisation is a goal in itself for network members. Furthermore, our respondents underline the relevance of group dynamics that are developed through close interaction in the network (respondents 5, 1 and 4). When soft rules are agreed upon at the network level, although non-binding, they create normative pressures for compliance at the domestic level. CEER/ERGEG executives can demand accountability from national regulators, because their soft rules were approved by everyone at the network level, therefore, they should also be adopted by everyone at the domestic level. In this way, transnational soft rules may have a considerable influence on domestic policies. This piece of evidence elucidates the mechanism behind the overall quite high level of adoption. However, as mentioned above, the rationale for explaining the variation in the level of adoption from agency to agency remains partially underspecified.

To conclude, following our five interviews with CEER/ERGEG's key players, it is possible to add some information on the mechanisms of interaction among member agencies within the network. It seems confirmed that CEER/ERGEG is a genuine transnational arena, where independent regulatory agencies interact to establish non-binding rules. Member agencies are central in networks when they have motivational incentives to become active following the complementarity between the network's pro-competition goals and the degree of domestic liberalisation and competitiveness. These soft rules, in turn, gain a kind of moral authority due to their procedural legitimacy, as they are agreed at the network level, which helps their domestic adoption. These additional pieces of information qualify adoption as a process that seems driven by network-level dynamics rather than by national explanations. We can conclude that the network actually matters, alongside (but not replacing) European institutions, as it can successfully promote the domestic adoption of soft rules that originate from the network itself. It is also possible to affirm, on the basis of our interviews, that these soft rules go beyond the lowest common denominator and provide substantial policy change; thereby network outputs are considered qualitatively and quantitatively satisfactory by network members. However, more evidence is needed to identify the most relevant network-level factors for explaining variation in adoption patterns, the extent to which the network really constitutes a cohesive community and whether it brings into being a new, effective, autonomous and durable layer of multilevel governance.

## Conclusion

For at least two decades, various streams of research have emphasised the relevance of networks for policy-making and public policies. Above all, the literature on new modes of governance in Europe underlined that the networks' horizontal coordination capacity and their flexible and informal structures are particularly suitable for governing the multilevel architecture of the European polity (Coen and Thatcher 2005; Héritier 2003; Héritier and Eckert 2008; Hix 1998; Marks *et al.* 1996; Papadopoulos 2007; Papadopoulos and Benz 2006; Piattoni 2010; Rhodes 1996; Sabel and Zeitlin 2010). Networks are expected to compensate for the growing mismatch between increasingly integrated European markets and regulatory authority that is still located at the national level. In this regard, European regulatory networks are a core institutional feature of the ever-evolving European regulatory state (Gilardi 2008; Majone 1994, 1999; Moran 2002). They consist of transnational groups, created and reformed during the 2000s, that federate the national regulatory authorities of EU member states as well as of some non-member states. These regulatory authorities correspond to independent regulatory agencies, with few exceptions. ERNs represent a very interesting case for the study of network governance as they are sophisticated networked organisations governed by a separate administrative entity (Kenis and Provan 2009; Provan and Kenis 2008) that could bring into being a new level of governance at the interface between nation-states and the European Union (Maggetti and Gilardi 2011). This article first aimed at investigating what accounts for the position of member agencies in networks. Degree centrality is used as the most straightforward positional measure and it is operationalised with a survey-based matrix of collaboration linkages between all the regulatory agencies participating in the target network. Second, the factors influencing the domestic adoption of soft rules developed by the network have been examined. In fact, the development of soft rules is the crucial meta-regulatory task of ERNs. These rules might be adopted at the domestic level as binding regulations and, thus, could have a direct impact on policy-making and public policies. The case of a 'typical' regulatory network was selected – the European network of energy regulators, the CEER/ERGEG. This choice implies that some findings could be also applied to similar cases, that is, moderately institutionalised networks governed by a separate administrative entity, federating a small-to-medium number of homogenous actors, in charge of developing soft rules to be adopted by network members at the domestic level.

According to our theoretical expectations, a number of factors could increase the centrality of network members. The size of the staff at the disposal of an agency, expressed as the number of employees, could have a positive effect on the agency's centrality (hypothesis 1a). The organisational age could also be associated with centrality (hypothesis 1b). Finally, the institutional complementarity between network pro-competition goals and the degree of domestic liberalisation should produce the incentives for agencies to be active in the network (hypothesis 1c). In turn, we expect the domestic adoption of

soft rules developed at the network level to be positively influenced by staff size (hypothesis 2a), by the age of agencies (hypothesis 2b) and by the central position of agencies within the network (hypothesis 2c). In fact, central agencies should be more motivated to adopt the rules that they decisively contributed to develop at the network level, and, for the same reason, they could also have more reputational pressures to do so. Descriptive statistics showed that the overall level of domestic adoption is considerable, that is, greater than 60 per cent (and possibly growing). Therefore, one can observe that the CEER/EREG seems to be quite effective in the promotion of harmonised soft rules.

The multivariate statistical analysis corroborated hypothesis 1c and provided some support to hypothesis 2c while disproving the other hypotheses. Concerning the first hypothesis, it is confirmed that agencies are central in the network when they have incentives to be active. Similar to the case of standard-setting processes (Mattli and Büthe 2003), member agencies become active when their domestic markets are regulated in a way that is compatible with the pro-competition model supported by the network as a whole. What is more, there is evidence of a self-reinforcing process, where domestic competitiveness increases network centrality, which, in turn, facilitates the adoption of pro-competition rules.

The first implication of these findings is that European regulatory networks seem to function in a horizontal way: Members that have incentives to become more active can eventually reach central positions. In that regard, governance networks contrast with power-based arenas, which rely on the asymmetry of resources. What is more, it is confirmed that the network matters for domestic policy-making and public policies. Indeed, soft rules that were endogenously initiated, developed and promoted by the network were adopted in a robust majority of jurisdictions and became legally binding. In that regard, network members are generally satisfied with the quality and quantity of network outputs. This is a remarkable achievement for an ERN, a 'technocratic' institution with scarce democratic legitimacy and very limited 'hard' power. However, regulatory networks are not a miracle solution. They prove to be particularly helpful for member agencies that have domestic 'institutional complementarities' with the goals defined at the European level. What is more, energy regulation is a policy issue perceived as very interdependent by European regulators. The interaction among network members dealing with less interdependent issues might follow a quite different logic and the effectiveness of their networks remains to be proven. Moreover, interview-based information allowed us to confirm the existence of a supranational logic of interaction within the CEER/EREG and indicated the existence of 'peer pressures' that enhance the overall level of adoption. However, regarding the second hypothesis, the rationale for explaining the variation of domestic adoption of the soft rules developed by the network remains unclear. There are preliminary indications that network-level variables are more relevant than agency-level explanations, but further systematic comparative research is required.



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