

The rewards of cooperation: The effects of membership in European regulatory networks

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Abstract. Networks famously epitomize the shift from ‘government’ to ‘governance’ as governing structures for exercising control and coordination besides hierarchies and markets. Their distinctive features are their horizontality, the interdependence among member actors and an interactive decision-making style. Networks are expected to increase the problem-solving capacity of political systems in a context of growing social complexity, where political authority is increasingly fragmented across territorial and functional levels. However, very little attention has been given so far to another crucial implication of network governance – that is, the effects of networks on their members. To explore this important question, this article examines the effects of membership in European regulatory networks on two crucial attributes of member agencies, which are in charge of regulating finance, energy, telecommunications and competition: organisational growth and their regulatory powers. Panel analysis applied to data on 118 agencies during a ten-year period and semi-structured interviews provide mixed support regarding the expectation of organisational growth while strongly confirming the positive effect of networks on the increase of the regulatory powers attributed to member agencies.

Keywords: agencies; European Union; governance; networks; regulation

Introduction

Networks are ubiquitous in contemporary politics. Networked policy communities and advocacy coalitions are decisive in shaping the policy process (Rhodes 1990; Sabatier 1988). Political collective action emerges through networks of transnational social movements and knowledge-based experts (Djelic & Quack 2010; Haas 1992; Stone 2004). Functionally disaggregated state actors, such as courts, regulatory agencies, executives and legislatures, interact within transnational government networks to deal with highly interdependent issues (Hooghe & Marks 2003; Slaughter 1997). Private and public sector organisations have created interorganisational networks to improve their performance and the delivery of public services (Klijn et al. 1995; Provan & Kenis 2008). Scholars have dealt with these phenomena with a ‘Babylonian’ variety of applications by treating the concept of ‘network’ alternatively as a metaphor, an approach, a method or an object of inquiry (Börzel 1998; Dowding 2008).

An extensive empirical literature on networks exists, dealing with their formation, structure, composition, evolution and implications (Adam & Kriesi 2007). For the sake of the argument developed in this article, a crucial point is that great expectations have been formulated about the benefits of interacting in networks. Networks give participants opportunities to increase their knowledge and to improve their involvement in politics (McClurg 2003). Social capital – that is, the stock of mutual trust derived from durable interactions in

networks – is considered vital to solve collective action problems (Pennington & Rydin 2000). Networks can help actors to communicate and mobilise in the policy process (Sandström & Carlsson 2008). Networks are also considered catalysts and channels of policy diffusion (Cao 2010; Gilardi 2012), whereby innovative ideas can percolate into new policy areas and produce policy change (Howlett 2002). Eventually, interorganisational networks can affect the flow of information in society and thus have an impact on socio-economic outcomes, such as hiring, price, productivity and innovation (Granovetter 2005).

At the same time, some concerns have been expressed about the downsides of networks. Dense networks with strong social bonds may have a ‘dark side’, promoting interactions that are detrimental to democratic politics – for example, by encouraging parochial and even criminal behaviour (Gargiulo & Benassi 1999; Putzel 1997). Networks tend to be selective, opaque and inward-looking. Hence, they might fail to solve legitimacy problems in complex governance environments; their disconnection from electoral legitimacy may even reduce the democratic accountability of politics (Papadopoulos 2003, 2007). Networks can also damage the pluralism of democratic processes by favouring capture by interest groups (Greenaway et al. 2007). Finally, the analysis of networks recurrently faces the criticism of providing tautological or trivial results – in other words, the criticism of lacking analytical leverage and explanatory power (Dowding 2002).

For good or for bad, in political research, network effects have usually been framed from the point of view of the group as a whole or, less frequently, in terms of larger outcomes for society. Another category of effects has been largely overlooked and yet is extremely relevant: the effects of networks on their members. Does network membership empower participants, or, on the contrary, is the maintenance of network ties a futile effort? If any, what kind of empowerment does take place, and how? The literature on interorganisational networks has mainly focused on the impact of individual organisations on policy formulation and implementation (Hanf & O’Toole 1992). The social determinants of individual behaviour have been studied in social epidemiology, showing, for instance, that the existence of network ties is associated with the spread of obesity and that clustering and other social network phenomena are relevant for explaining smoking cessation (Christakis & Fowler 2008). Instead, this article adopts a policy-oriented perspective on the member-level effects of networked organisations that function as governance structures.

To this aim, ‘governance networks’ are examined (Klijn 2008; Provan & Kenis 2008; Torfing 2005) – that is, institutions that configure a ‘new’ mode of governance, in addition to markets and hierarchies, wherein a number of political actors interact and cooperate to tackle interdependent problems in different issue areas. Governance networks typically consist of networked organisations that endorse policy-making tasks, which have well-defined boundaries and whose structures may shape the actions of participating actors (Blom-Hansen 2002). This type of network is expected to have considerable influence on the efficiency and legitimacy of policy making and to have an impact on public policies (Börzel 1998). What are their consequences for network members?

This article examines the member-level effects of four European regulatory networks (ERNs) that federate the domestic regulators of finance, energy, telecommunications and competition in Europe. The empirical findings of panel analysis (using annual data between 2001 and 2011) and 20 semi-structured interviews lend support to the main hypotheses while also allowing one to qualify them. On the one hand, network membership tends to

produce an increase in the staff size of independent regulatory agencies. However, this effect is small and becomes barely significant in some specifications. On the other hand, network membership has a clear, direct, significant and very robust positive effect on the reinforcement of the regulatory powers of member agencies. Qualitative evidence suggests that networks provide their members with an internationally valued model for reform, which implies extensive regulatory powers, and with the political support for it. This allows member agencies to make the most of their ‘double-hatted’ position (Egeberg & Trondal 2009) by which they can successfully ‘lobby’ their political ‘principal’ at the domestic level and obtain more delegated competencies. This effect is not limited to small, peripheral regulators, but also concerns well-staffed agencies from big countries. For instance, the powers of regulatory agencies that are in charge of energy regulation have been reinforced shortly after network membership both in Germany and France.

These findings add to the existing literature in three important respects. First, member-level effects of networks are fundamental for the analysis of public policy and regulatory governance. The literature has examined the creation, diffusion, independence, performance and accountability of independent regulatory agencies (Busuioac et al. 2011; Carpenter 2001a; Christensen & Laegreid 2006; Coen & Thatcher 2005; Gilardi 2005, 2007, 2008; Groenleer 2009; Jordana & Levi-Faur 2004, 2005; Levi-Faur 2003, 2006; Lodge 2004; Maggetti 2007, 2010, 2012a, 2012b; Martens 2008; Thatcher 2002a, 2002b, 2005). However, research on the political behaviour of regulators *after* delegation with reference to the institutional evolution of the regulatory state is quite scarce and inconclusive. To be precise, evidence exists regarding the relevance of independent regulatory agencies (IRAs) as the ‘third force’ in regulation (Thatcher 2005), but the growing importance of regulators, even when they were expected to have only a passive, reactive role, was quite unexpected and still needs a systematic assessment (Levi-Faur 2005; Wilks & Bartle 2002). This article points to an endogenous explanation for the institutional development of the regulatory state, whereby regulatory agencies themselves successfully cooperate not only to solve common regulatory problems, but also to extend their regulatory powers.

Second, public administration scholars typically have focused on the management, the structuration and the performance of networks and were able to identify different organisational forms that could shape their effectiveness for the delivery of services (Keast et al. 2004; Kenis & Provan 2009; Klijn et al. 1995; Klijn & Koppenjan 2000; Meier et al. 2007; O’Toole 1997; Provan & Kenis 2008; Provan & Milward 2002; Robinson 2007). However, the relationship between the resources of participants and network membership has never been clearly articulated with a systematic comparative perspective. The findings of this article suggest that the direction of causality is that networks actually empower their members – not the other way round. The hypothesis that a process of self-selection is at work so that only resourceful actors take part or become active in governance networks is thus disconfirmed.

Finally, in European Union (EU) studies, networks are considered the cornerstone of a flexible, multilevel architecture that could enhance consensus-building capacity, harmonisation and convergence in areas that are resilient to ‘hard’ integration and Europeanisation (Bache & Flinders 2005; Christiansen & Piattoni 2003; Héritier 2003; Piattoni 2010; Radaelli 2000, 2004; Sabel & Zeitlin 2010). Recent pieces of research have shown that ERNs can be quite effective in promoting harmonised rules at the domestic level, although they enjoy

few formal powers (Eberlein & Grande 2005; Eberlein & Newman 2008; Maggetti 2013; Maggetti & Gilardi 2011). However, it remains to be determined whether networks have effects on domestic politico-administrative relations as well. Above all, we still need to know exactly how networks matter. The findings of this article indicate that networks can influence domestic political actors by altering the balance of power in favour of their members as they provide them with an institutional model for reform and the political support to it, following a logic close to a two-level game (Grande 1996; Moravcsik 1994).

The remainder of the article proceeds as follows. The next section illustrates the main features of ERNs. The ensuing sections present the theoretical argument, discuss data and methods, present the empirical analysis and assess the robustness of the findings. A conclusive discussion follows.

European regulatory networks

ERNs are purposely created transnational groups that institutionalise the interactions among the regulatory authorities of EU Member States as well as some non-Member States, such as Iceland, Norway and Switzerland. For the vast majority, these regulatory authorities correspond with IRAs. Each ERN usually possesses a secretariat, a management board and a number of permanent committees and ad-hoc working groups. Four main ERNs exist and are in charge of the regulation of finance, energy, telecommunications and competition. The Committee of European Securities Regulators (CESR, now ESMA) constitutes the leading network of the new system of regulation of the European financial markets. The energy network brings together the bottom-up and top-down groups of national regulators of electricity and gas – that is, the Council of European Energy Regulators (CEER) and the European Regulators' Group for Electricity and Gas (ERGEG, now ACER). 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 through a decision of the European Commission. The European Competition Network (ECN) consists of national competition authorities and the EU Commission. In 2011, the first two networks acquired the status of European agencies, thus becoming more institutionalised and obtaining new legal instruments, but they still rely on national regulatory authorities for participation and implementation, and they remain organised in a network-based way (Levi-Faur 2011).¹

ERNs were established following two concomitant processes (Coen & Thatcher 2005, 2008; Thatcher & Coen 2008). First, national regulatory authorities decided to establish networks to exchange information and to coordinate their operations at the international level. At the same time, in the eyes of the European Commission, networks represented a second-best solution to favour the harmonisation of European regulation, provide expert-based advice and promote pro-competition rules, given Member States' unwillingness to dismiss their domestic authorities. The development of ERNs has thus been interpreted as an opportunity to reconcile the regulatory gap created as a result of the co-existence of a common market with regulatory institutions and policies that continue to be located at the domestic level (Eberlein & Grande 2005). While the spread of network governance was initially limited, and they enjoy few formal powers (Coen & Thatcher 2008; Thatcher &

Coen 2008), recent evidence indicates that networks might provide a ‘distinctive, flexible, and effective mechanism’ for international coordination by making the most of their soft approach (Eberlein & Grande 2005; Eberlein & Newman 2008; Maggetti 2013; Maggetti & Gilardi 2011). ERNs indeed appear to be remarkably active in coordinating regulatory policies – namely when the level of interdependence among Member State authorities in a given issue area is high (Van Boetzelaer & Princen 2012). The development and dissemination of soft rules in the form of pro-competition standards, principles and guidelines is the crucial meta-regulatory task of ERNs, aiming to favour the harmonisation of national regulations in the common market. Previous research on the Committee of European Securities Regulators (CESR), the most institutionalised network, has shown that these soft rules are quite consistently adopted at the domestic level (Maggetti & Gilardi 2011).

ERNs configure a very sophisticated type of governance network, consisting of networked organisations in charge of developing and approving similar soft rules to be adopted by their members, which have their own resources, and where a separate administrative entity is established specifically to manage and coordinate the network (Kenis & Provan 2009; Provan & Kenis 2008). What is more, they federate the same type of representative, relatively homogenous and mutually interdependent organisations from the same Member States. Therefore, the selected ERNs ensure comparability regarding the scope conditions that are pertinent for the study of the effects of governance networks on their members. This type of network combines the classic properties of networks, such as informality, horizontality and flexibility (Kenis & Schneider 1991; Rhodes 1990; Van Waarden 1992) with specific organisational features – long-term commitment, frequent interaction, relative smallness and clear boundaries (Boyt et al. 2005; Elgström & Jönsson 2000) – that not only make them potentially effective governance tools, but also could produce sizeable member-level effects.

The effects of networks on their members

This contribution aims to assess the ‘net’ impact of network membership on crucial attributes of their members, according to an ‘effects-of-causes’ approach (Mahoney & Goertz 2006). This analytical approach neither intends to give a comprehensive explanation of all possible causes of these effects nor does it intend to fully account for all the consequences of network membership. Instead, the presence and the size of specific effects as well as the overall pattern of fit are crucial. In the case of ERNs, network members are IRAs – that is, public sector organisations that enjoy formal independence from elected politicians and that are entrusted with regulatory tasks to be executed at the domestic level.

Previous research suggests that membership in ERNs can indirectly enhance the *de facto* independence of IRAs (Maggetti 2007; Yesilkagit 2011). Instead, the arguments developed here point to the direct effects of networks on the official attributes of IRAs, which have been assigned by their political ‘principals’. This perspective concerns formal politico-administrative relationships in a post-delegation context, which may reshape the principal-agent structure of delegation. In the case of public sector organisations, relevant effects that can be determined as a result of network membership correspond with

organisational growth (i.e., the resource dimension) and with the delegation of additional regulatory powers (i.e., the power dimension). On the one hand, organisational growth is an important variable as large organisations benefit from reduced managerial constraints, have attenuated dependence on their environments, dominate their interorganisational fields and have more chances to secure their existence (Aldrich 1976; Osborne 1993; Giauque 2003). On the other hand, the extent of regulatory powers is vital for agencies to perform their duties, to become active players in the regulatory game and to improve their positions with respect to other actors in the regulatory space, such as co-regulators and the regulated industries (Gilardi 2008; Majone 1996; Thatcher 2002b). It is worth adding that these two attributes are complementary rather than alternative but they do not necessarily co-evolve in the same direction because it is at least theoretically possible that agencies are big but have limited regulatory powers and, respectively, that relatively small agencies hold considerable powers. What is more, an increase in staff size comes at a cost, while increasing competencies does not necessarily require more expenses.

The first hypothesis to be considered in this context is that network membership will increase the probability of organisational growth. The argument has two steps. The first step is that network membership can be interpreted as a signal of an agency's status of prestige by domestic actors – namely by their political 'principal' (Podolny 1993; Spence 1974). Membership in networks that hold a crucial position as policy experts in the regulatory space – such as ERNs – can signal a status of prestige because these networks are expected to provide member organisations with unique information and valuable knowledge, and, respectively, to inflict collective sanctions in case of misbehaviour (Jones et al. 1997). This signal is transmitted according to a logic of bounded rationality whereby the sender of the signal (e.g., the agency) has more information than the receiver (e.g., the domestic actors) because the signal has to do with signaller's properties or conducts that are not immediately observable by an external audience (Gambetta 2009). The second step is that an agency's enhanced status – derived from network membership – is expected to have an impact on organisational growth. Agencies that acquire a positive 'bureaucratic reputation' are more likely to expand and become more institutionalised over time (Carpenter 2010; Carpenter 2001b), in line with the goals of their top managers (Galaskiewicz et al. 2006; Whetten 1987). Indeed, in a context of bounded rationality, the political 'principal' should be more inclined to use 'normative shortcuts' and thus, *ceteris paribus*, reinforce the human resources of agencies that enjoy a status of prestige.

The second hypothesis is that network membership will increase the probability of delegating further regulatory powers to member agencies. This time, networks are expected to provide member agencies with a model for reform and with a political strategy for supporting it. This argument extends the classic theory of bureaucratic delegation (Bendor et al. 2001; Thatcher & Stone Sweet 2002) to post-delegation politico-administrative relationships. The 'agent' is expected to become an active 'player' in domestic politics, which strives to increase its powers. First, agencies in networks develop and actively promote the 'appropriate' organisational model for regulators, which typically includes extensive regulatory powers. This model is expected to become a preformatted blueprint for institutional reform (Blyth 2003) as it embeds a coherent framework about the role and duties of regulators, which is endorsed by the transnational community at the forefront of the regulatory issues at stake. Second, and most importantly, networks should enable member

agencies to make the most of their 'double-hatted' position to actually obtain the new regulatory powers incorporated in the model for reform supported by the network (Egeberg & Trondal 2009). Agencies are expected to use their commitments at the network level to strengthen their bargaining position *vis-à-vis* their domestic 'principal', following a logic close to a two-level game in the European context (Grande 1996; Moravcsik 1994). On the one hand, agencies can put pressure on their political 'principals' about the risk of public blame if they do not to adopt rules that were collectively agreed at the network level; on the other, they can convincingly argue that a lack of powers when interacting in the network will create an unfavourable position for them *vis-à-vis* their counterparts that could be damaging for the Member State as a whole. This strategy should allow member agencies to endorse a prominent role in the incorporation of new regulatory powers in domestic practices and/or legislation through 'insider lobbying' (Abney 1988) of governments and legislatures after initial delegation.

Data and methods

To examine these theoretical predictions, I first assess the effect of network membership in the four main ERNs.² Then I examine qualitative evidence in order to have a grasp of the mechanisms at work. To begin with, I perform a panel analysis of all of the 118 agencies that participated in the four ERNs between 2001 and 2011, using a newly collected dataset, including a cross-sectional and a longitudinal dimension. Thereby, the dataset encompasses a total of 1,416 agency-year observations. The time span corresponds with the early stages of network operations until the time for which full data are available. Two dependent variables operationalise the two hypotheses. Therefore, each one is treated separately.

The first dependent variable is the staff size of agencies in any given year, operationalising organisational growth. Data refer to full-time equivalents and were extracted from official sources, such as agency websites and annual reports. They have been completed via e-mails and phone inquiries to agencies' secretariats. In the main model, this variable is log transformed to account for the skewness of data distribution. The second dependent variable is binary, indicating the occurrence of a reform that attributes new regulatory powers to a given agency in a given year. Accordingly, 167 reforms increasing regulatory powers have been coded as '1' in the observed time period – that is, on average 1.4 reforms per agency. Data were collected as for above. Concretely, this variable measures whether a statutory reform has attributed more competencies to the agency. For instance, the competencies of the Belgian financial regulator (CBFA) were extended in 2002 to the supervision of all market actors in addition to banks, and the power of imposing administrative sanctions was given. In 2004, the energy regulator in the Netherlands (DTe) was given the power to impose fines and to monitor the marketing practices of energy suppliers in order to tighten the supervision of electricity grids and gas network managers as well as electricity and gas suppliers. Similarly, the French telecommunications regulator (ARCEP) extended its responsibilities in 2005 to encompass the postal sector, from the design of postal items to delivery. It is worth adding that in the period under consideration, a reduction of competencies occurred in very few cases. The explanatory variable is network membership. This variable is coded '0' in every year that an agency is not a member of the

network, and it is coded '1' when the agency becomes a member. Data are collected from official documents that are available on agencies and networks' websites and completed with e-mails and phone inquiries to agencies and networks' secretariats.

In the first analysis, to explain the growth of staff size, I use panel analysis with time and fixed effects at multiple levels. These models estimate the effect of network membership, operationalised as a string of '0' and '1', with a '0' for each year before participation and a '1' afterwards. In this way, the impact of network membership on staff size *per se* can be distinguished from other unobserved factors that have to do with entity characteristics and time effects (Cameron & Trivedi 2009; Frees 2004). It is important to note that the coding '1' indicates the year after full membership. In the preceding year, agencies generally participate in the network as observers. Therefore, it is reasonable not to include any additional lag in the baseline model. A series of lag from one year to four years will, however, be tested as a robustness check in the dedicated section. Coefficients of the regressors indicate how much (logged) staff size changes when agencies become members. I include the log of gross domestic product (GDP) per capita in the statistical models to control for the possible effect of economic growth on regulatory reforms. The variable of EU membership accounts for the years since accession. What is more, a lagged dependent variable is added to correct for serial correlation. Robust standard errors clustered on the network level are used to account for the non-independence of observations for the same network (Kezdi 2004).³

The second set of models estimates the effect of network membership on the attribution of new competencies for any given year, operationalising regulatory powers. The variable network membership is the same as for above. These models use logistic regression and random effects, which is the appropriate analytical framework for panel analysis with a binary dependent variable (Baltagi 2009; Stock & Watson 2003). Because the interpretation of these coefficients is tricky, the odds ratio is calculated (Larsen et al. 2004). EU membership and the cumulative number of previous reforms are included as control variables. The latter variable also accounts for different starting points in regulatory reforms. I also include a measure of veto players derived from the political constraints index POLCON3 (Henisz 2002). This second set of models neither implements unit dummies nor a lagged dependent variable; thus, it is less sensitive to the potential dangers of 'standard' panel analysis (Plümper et al. 2005). The cubic polynomial approximation, that Carter and Signorino suggested, is added to the regression (Carter and Signorino 2010) in order to deal with temporal dependence in binary data (Beck et al. 1998). Robust standard errors are also clustered on the network level.

The panel analysis is supplemented with 20 semi-structured interviews with network key players – that is, chairs, board members, secretary-generals and executive members (4–6 top-level managers have been selected for each network, following their availability).⁴ The goal of this qualitative analysis is not only to validate quantitative evidence, but also to gain knowledge of the mechanisms at work – understood as the processes by which an effect is produced (Gerring 2010). To be precise, in this article, the study of mechanisms proceeds through the distillation of 'causal narratives' to check, on the one hand, whether 'variable-oriented' inferences based on 'aggregated cross-case associations' are supported by a cross-case argument at a more fine-grained level, and, on the other hand, whether hypotheses accurately theorise the 'how' question (Mahoney 2000; Steinberg 2007).

Four interview questions were specifically dedicated to the effect of network membership on member agencies: ‘What are the main goals of [the network]?’; ‘Is [the network] effective?’, with the follow-up question ‘... in what exactly?’; ‘Does [the network] have any influence on national regulators?’, with the follow-up question ‘... on their human resources and regulatory powers?’; and ‘How does this influence materialise?’ These questions acted as a springboard for structured discussions. Indeed, this type of interview allows diversions and new arguments to emerge, which enable the interviewer to gain an in-depth knowledge of the actors’ perceptions on the topic.

The determinants of network membership

Two key issues exist for the study of the member-level effects of networks. First, the self-selection of similar actors (homophily) – that is, in this case, that big and resourceful agencies co-opt similar regulators in ERNs – must be excluded. This problem is vital for the analysis of social networks – namely for those based on friendship and kinship ties, where self-selection dynamics are very likely and may generate wrong inferences (McPherson et al. 2001). This issue is generally less relevant for governance networks because specific procedures for taking part in networked organisations exist. Indeed, the historical account of the establishment of ERNs allows one to exclude self-selection effects. European institutions created the CESR and the ECN with a top-down decision; hence, the timing of participation approximately follows the process of EU integration and enlargement. The CEER emerged as an offspring of the Florence Forum for Electricity that Italy, Portugal and Spain started. Seven other agencies joined the network in the early 2000s, and the other agencies joined shortly thereafter following the functional need for coordination that stemmed from the EU’s second energy package. Similarly, the IRG was established as an informal group for sharing expertise and exchanging opinions, which grew bigger as new candidates, observers and Member States put into operation their national regulatory agencies. To sum up, the timing of participation in ERNs is related to the formal and informal process of EU integration. At the same time, the discrepancies across networks regarding the sequence and timing of network structuration provide variance on network membership. Therefore, it is possible to take advantage of the contingency of this process to rule out any self-selection effect. Of course, it will be crucial to control for the influence of EU membership.

The second problem involves any possible omitted variable bias, where an unobserved factor co-determines membership in networks and member-level effects. This issue can never be eliminated, even with the inclusion of a large number of relevant control variables (Clarke 2009). However, panel analysis allows one to exclude the confounding influence of entities and time-invariant factors on the dependent variable. Thus, the occurrence of any bias is restricted to agency-level factors that also vary across time, which, in this case, are relatively rare, except for resources and competencies – that is, the dependent variables at stake. What is more, previous empirical work on ERNs found evidence of the impact of some variables, such as the relative importance of the regulated sector in the national political economy and the degree of domestic liberalisation, on the position and role of member agencies in the networks, but their mere participation has been treated as

epiphenomenal (Maggetti 2013; Maggetti & Gilardi 2011). Therefore, in this case, no apparent omitted variable bias seems to affect the estimated models.

Empirical analysis

Table 1 reports the estimation results. I report two sets of models: 1–4 for the first hypothesis and 5–8 for the second. Model 1 simply estimates the bivariate relationship between network membership and the staff size of regulators. The second model includes GDP per capita and a lag of the dependent variable to correct for serial correlation. The third and fourth columns present the full model with the inclusion of EU membership and two slightly different specifications of the fixed effects. Model 3 includes entity, country and time-fixed effects with network clustering, while model 4 includes entity, country, network and time-fixed effects.

The results lend limited support to the first theoretical expectation. Indeed, coefficients are positive and moderately significant in all models. The effect of network membership on the staff of regulators is particularly discernible in model 4, where the significance level is decent ($p < 0.05$). Because the dependent variable is logged, the dependent variable coefficients must be exponentiated to account for a one-unit increase in the independent variable. In the full estimation (models 3 and 4), one would say that network membership results in an $\exp(0.08) = 1.08$ increase in the average (geometric) staff size. This effect is rather small, as it means that only one position, roughly equivalent to a full-time job, is created on average after agencies become members of the networks. Interviews confirmed that member agencies may create a limited number of positions specifically in charge of managing network relations, but no other effect is perceived regarding the growth of staff size due to membership in ERNs.

Model 5 estimates the bivariate relationship between network membership and the attribution of new regulatory powers to agencies. The model after that includes GDP per capita and the number of veto players. The latter, as expected, are negatively related to the dependent variable and are only barely insignificant. The seventh column of Table 1 also presents the cubic polynomial approximation that Carter and Signorino (2010) suggested. The variables t , t^2 and t^3 are significant, indicating time dependence. Very importantly, however, network membership remains highly significant also when controlling for time dependence and the coefficient grows even bigger. The full model also includes the occurrence of previous reforms. The coefficients of network membership are highly significant in all models. The odds ratios for network membership are 2.29 for model 5, 2.77 for model 6., 3.26 for model 7 and 2.97 for model 8. In the full model, this means that if an agency switches from non-membership to membership, the probabilities of obtaining new competencies are multiplied by 2.97. In other words, an average agency is almost three times more likely to receive new regulatory powers when it becomes a member of a network than in a case of non-membership. This effect is considerable and strongly supports the second hypothesis. This effect is not limited to smaller regulators, but also concerns prominent agencies, such as the IRAs that are in charge of energy regulation in Germany and France, whose competencies were considerably reinforced shortly after network membership.

Table 1. Panel regressions, 2001–2011

Variables	Organisational growth				Regulatory powers			
	1	2	3	4	5	6	7	8
Network membership	0.32*** (0.09)	0.08* (0.02)	0.08* (0.02)	0.08** (0.03)	0.82*** (0.34)	1.02*** (0.37)	1.18*** (0.40)	1.09*** (0.04)
Lag dependent variable	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)	0.00*** (0.00)				
Log of GDP per capita		-0.12 (0.17)	-0.12 (0.17)	-0.12* (0.07)		-0.17 (0.13)	-0.13 (0.14)	-0.15 (0.14)
EU membership			0.04** (0.01)	0.04*** (0.00)			0.00 (0.00)	0.00 (0.00)
Veto players						-0.56 (1.12)	-0.30 (1.12)	-0.23 (1.12)
Previous reforms								0.23 (0.11)**
t							1.88*** (0.69)	1.89*** (0.70)
t ²							-0.32*** (0.11)	-0.33*** (0.11)
t ³							0.01*** (0.00)	0.02*** (0.00)
Network clustering	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Entity-fixed effects	Yes	Yes	Yes	Yes	No	No	No	No
Country-fixed effects	No	No	Yes	Yes	No	No	No	No
Network-fixed effects	No	No	No	Yes	No	No	No	No
Time-fixed effects	No	Yes	Yes	Yes	No	No	No	No
Random effects	No	No	No	No	Yes	Yes	Yes	Yes
N	966	771	771	771	1,209	1,083	1,083	1,083
Adj. R ²	0.10	0.98	0.98	0.98	-	-	-	-
Prob > F	0.03	0.00	0.00	0.00	-	-	-	-
Prob > Chi ²	-	-	-	-	0.01	0.03	0.00	0.00

Notes: The dependent variables are the log of staff size (models 1–4) and new competencies (models 5–8). The option ‘robust’ is used in all models to control for heteroskedasticity. Numbers reported in parentheses are panel-corrected standard errors. Results from entity and time dummies are not reported. The odds ratios for network membership are 2.29 for model 5, 2.77 for model 6, 3.26 for model 7 and 2.97 for model 8. *** p < 0.01; ** p < 0.05; * p < 0.1.

Interviews are very helpful for validating quantitative inferences. Remarkably, all 20 of the respondents – that is, people who hold key positions in the four ERNs – confirmed that network membership was useful for strengthening the regulatory powers of member agencies at the domestic level. The connection between network membership and the attribution of new regulatory powers to agencies is thus corroborated. What is more, the respondents highlighted very similar cross-case patterns. For instance, a former board member of a network observed that membership in these ‘prominent’ European networks ‘reinforces the position’ of domestic regulators ‘in front of their government’. More specifically, the member of another network remarked that: ‘There is . . . pressure to make [the network] work and to support and strengthen the other members.’ Similarly, according to a board member of a third network, ‘[the network] is effective, highly effective. It is a huge advantage for agencies to be part of a network . . . , which can exert such pressures at the domestic level’. A board member of the last network confirmed that: ‘The authorities consider [the network] very useful. Being part of a group recognized at the Community level also strengthens the role of regulators at the national level and empowers them in front of their governments.’

Regarding the mechanisms at work, interviews are equally informative, allowing one to enrich and qualify the quantitative analysis. Regarding the process by which the effect is produced, an interview with the former secretary-general of a network is remarkably clear:

It’s interesting, many [agencies] used the agreements on which we agreed to come home and say, but wait, I do not have this power, they have it in other countries, we are the only ones not to have it. And in fact, it was a great tool for member regulators, when they returned home, to see their ministry and say, we must change the law, because I cannot cooperate efficiently with other agencies if you do not give me such power. And therefore, the network has been a great tool for strengthening the authority, I would say legal and moral, of national regulatory agencies in their own country.

Many interviewees confirmed that the ‘best practices’, which have been developed and approved within networks and published in official documents, are used strategically by member agencies as they typically require extending the powers of regulators. In that regard, a former secretary-general of another network noted that: ‘Regulators have used extensively [these ‘best practices’] to strengthen their role at the national level.’ Another respondent explicitly said that: ‘They can be used as a political instrument, to support a political view, to support a certain policy, also to harmonize, to reinforce the regulators that lack of authority. I think that’s what they serve for, actually.’ In a similar vein, the chair of the last network noted that: ‘Soft power, having things out, being able to publish documents, has a significant impact. . . . Member regulators may tell [to their political ‘principal’]: but wait, these [new regulatory powers] have been approved by everybody, what do you expect to adopt them?’

An example about energy regulation clearly illustrates the underlying mechanism. In that regard, a network member said:

For example one thing CEER is working on is the harmonization of support schemes for renewables . . . where we identified a lack of authority to regulate cross-border

issues. Our guidelines address this problem. They represent the regulators' view, what the regulators agreed as the best practice approach. . . . Then, if a regulator has fairly limited power in its own country, they could try use our work in CEER, our guidelines for good practice . . . to influence discussions [at the domestic level] about giving more powers to regulators on a voluntary basis. And . . . more powers were actually given to regulators to set up harmonized, stricter rules on cross-border issues.

Therefore, it clearly appears that models for reform incorporating extensive regulatory powers, which are actively promoted by ERNs and made public, can be used strategically by member agencies to reinforce their bargaining position at the domestic level. Very much in line with my second hypothesis, it can be concluded that network membership provides member agencies with an opportunity to push for obtaining more regulatory powers by 'lobbying' their political 'principals' at home. It is also possible to refine this hypothesis: indeed, it appears that 'best practices' developed and approved at the network level play an important role in reinforcing the regulatory powers of domestic agencies.

Robustness

The first set of models (1–4) is partially affected by alternative model specifications and therefore should not be considered as very robust. In particular, the inclusion of other operationalisations of GDP reduces (but does not eliminate) the significance of network membership. The second set of models (5–8), instead, is very robust. First, I assessed the sensitivity of the results to other definitions of the sample. I added the observations for the years 2000 and 2012 (which are incomplete). I also excluded regulators from very small countries, which could be regarded as atypical cases. Notwithstanding, the main results remain substantially unchanged. Second, I tried alternative operationalisations of the independent variables. I used all of the possible GDP measures, such as the logged GDP, the unlogged GDP and GDP growth. I also re-ran the analysis with different operationalisations of the EU variable – that is, using the date of accession, the years since accession and the cumulative years since accession. I included other variables that are available only for a smaller sample, such as the ETCR indicators of liberalisation. Finally, I excluded the veto player variable from the final model. Again, the results are very robust in all cases. Third, a series of lags from one year to four years for network membership were included as the effect could be time-sensitive. Results are extremely similar, although, as expected, the significance of the effect tends to diminish over time. Fourth, I slightly modified the estimation procedure by activating the option `vce(bootstrap)` in Stata, as Cameron and Trivedi (2009) recommend. Results remain qualitatively unchanged.

Discussion and conclusion

Networks are becoming pervasive in political research. In particular, considerable attention has been given to governance networks – that is, networked organisations that bring into

being a 'new' mode of governance, wherein a number of political actors interact to tackle interdependent problems in different issue areas and to make public policies. However, while the implications of network governance have been studied from the point of view of the group as a whole, or, less frequently, in terms of larger outcomes on society, the member-level effects of networks have remained largely unexplored in political research. This article provides a systematic comparative assessment of the effects of network membership on their members, using the case of European regulatory networks (ERNs) that are in charge of coordinating the domestic regulators of finance, energy, competition and telecommunications. I performed a panel analysis of the 118 independent regulatory agencies (IRAs) that participated in the four main ERNs between 2001 and 2011, using an original, newly collected dataset. In addition, I conducted 20 semi-structured interviews with key players in networks so as to gain a fine-grained knowledge of the mechanisms at work.

Results on the effect of network membership on organisational growth are rather inconclusive. Indeed, the empirical analysis indicated a positive effect on agencies' size, but this effect is small and becomes less significant in some of the model's specifications. Instead, my analysis strongly supports the hypothesis that network membership favours the delegation of further regulatory powers to member agencies. In this case, this effect is positive, significant, sizeable and robust. Interviews confirmed that participation in networks strengthens member agencies' bargaining position in front of their domestic 'principals' by giving them a model for reform and a political strategy for supporting the delegation of further regulatory competencies.

First, these findings have significant implications for the literature on public policy and regulatory governance as they point to an endogenous explanation for the institutional development of the regulatory state after initial delegation. IRAs are not only the 'third force' in regulation (Thatcher 2005). They also actively cooperate to extend their regulatory powers, making the most of their interaction in networks. This sheds quite a different light on the principal-agent principle as it is usually applied to model politico-administrative relations. After delegation, the 'agent' becomes an active 'player' in domestic politics, which strives to increase its powers.

Second, these findings contribute to the literature on public administration and public management by showing that governance networks do matter and how so (Klijn 2008; Provan & Milward 2002). They actually empower members and not the other way round, disconfirming the hypothesis that a process of self-selection is at work so that only resourceful actors take part or become active in networks.

Third, EU studies have shown that ERNs might be quite effective in promoting harmonised rules at the domestic level (Eberlein & Grande 2005; Eberlein & Newman 2008; Maggetti 2013; Maggetti & Gilardi 2011). This article's findings contribute to this literature by indicating that networks can influence domestic politics by altering the balance of power in favour of their members, following a logic close to a two-level game (Grande 1996; Moravcsik 1994). Networks provide their members with the opportunity of taking advantage of their 'double-hatted' position (Egeberg & Trondal 2009), by which they can use their commitments at the network level to argue that increased regulatory powers are required according to collectively agreed 'best practices' and at the same time they are needed to cooperate efficiently with their counterparts.

All in all, the emerging picture is that governance networks are not depoliticised. On the contrary, network members make policies and play politics. Further research should examine the micro-foundations of the mechanisms of interaction in networks and should explain accurately the possible variations in the rewards of cooperation. What is more, these findings show that networks offer distinctive advantages to their members, in a way that was probably unexpected at the time of their creation. This confirms that institutions, once created, ‘take on a life of their own’ (Pollack 1996), while institutionalisation often goes with ‘goal displacement’ (Chisholm 1992). Network governance, as a complex system involving various categories of actors and articulating different territorial scales and functional levels, seems particularly prone to unexpected consequences. This calls for the development of a comprehensive theory of unintended consequences generated by new governance arrangements.

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Notes

1. This article examines ERNs as governance networks, which are in charge of developing and approving soft rules to be adopted by their members. In a broad sense, several networks exist in Europe, but few of them match the narrow definition of ERNs. The CESR is the leading network of the Lamfalussy process and therefore is selected to represent the financial sector, while the CEOPS and CEBS only have a secondary role. The IRG/ERG subsumes the networks in the telecommunications sector. The CEER/ERGEG subsumes the networks in the energy sector. In addition to Coen and Thatcher (2008), the ECN is added as another relevant governance network, even though it is not sector-specific. Water, broadcasting, privacy, aviation safety, gender equality and human rights networks, mentioned by Levi-Faur (2011), are not included as they consist of networked ‘fora’ for informal discussion, advice and expertise. In the areas of consumer protection, railways safety and anti-fraud, networks are organisationally closer to ERNs but have no proper rule-making capacity. Finally, European agencies, although being networked organisations with regulatory powers, are based on Community law, have more formalised structures and powers, and are more accountable to EU institutions than ERNs.
2. The rationale for case selection is explained in the section **Empirical regulatory networks** and in Note 1 above.
3. The question of the variation across networks is potentially very interesting. However, in this article, I decided to focus on something else – that is, the average effect of network membership on the organisational growth and regulatory powers of member agencies. In the panel analysis, the variation across networks and across sector-specific factors is controlled by clustering member agencies at the network level.
4. The list of interviews is as follows: (1) CEER/ERGEG member; (2) CEER/ERGEG executive; (3) CEER/ERGEG member; (4) CEER/ERGEG executive; (5) CEER/ERGEG member; (6) former CESR executive; (7) former CESR member; (8) IRG/ERG member; (9) IRG/ERG member; (10) IRG/ERG member; (11) EPRA executive; (12) IRG/ERG executive; (13) CESR member; (14) ECN member; (15) CESR executive; (16) ECN member; (17) ECN member; (18) ECN member; (19) IRG/ERG member; (20) CEER/ERGEG executive. Note

that the functions of chair (in addition to board membership) or secretary-general (in addition to executive roles) are not mentioned because the corresponding interviewees could be identified unequivocally.

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