*Danica FINK-HAFNER, Meta NOVAK, Luka KRONEGGER, Patrycja ROZBICKA**

POLICY NETWORKS: LOOKING FOR THE DECISIONAL CENTRE IN EU POLICYMAKING**

Abstract. *Responding to the call for cooperation between the policy network and governance literature, we apply social network analysis (SNA) to a study of European multi-level policymaking using empirical data gathered as part of the INTEREURO project. We focus on the studied network's characteristics and, building on hypotheses developed in the policy network and governance literature, judge the potential capacity to coordinate EU networks. Based on our analysis, we redefine the decisional centre of EU networks and argue that coordination capacity varies among different policy fields.*
Keywords: *interest groups, social network analysis, European Union*

Introduction

During the last major globalisation wave of policy coordination, politics ever more strongly became a matter of interlinked actors and activities taking place beyond nation-states. Indeed, it is networks rather than formal institutions that have been increasingly taking over governance. Global public policy networks are on the rise (Reinicke, 1999–2000). Like at the global level (Reinicke, 1997), also in framework of the regional EU political system (Scott, 2009) questions were raised concerning whether one can talk about supranational policy as governing without government.

The policy network literature shows that policy networks can explain the policy process and results of policymaking at the national level (see e.g. Howlett, 2002) and EU level (see e.g. Daugbjerg, 1999; Peterson, 1995; Peters, 1998). In particular, authors from governance theory have encouraged policy network analysts to contribute to network governance in future

* *Danica Fink-Hafner, PhD, Professor, Faculty of Social Sciences, University of Ljubljana, Slovenia; Meta Novak, PhD, Assistant Professor, Faculty of Social Sciences, University of Ljubljana, Slovenia; Luka Kronegger, PhD, Assistant Professor, Faculty of Social Sciences, University of Ljubljana, Slovenia; Patrycja Rozbicka, PhD, Lecturer in Politics and International Relations, Aston University, Birmingham, United Kingdom.*

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research (Torfing, 2016; Sørensen and Torfing, 2005a). Such research undertakings are also crucial for studying EU policy networks beyond the simple distinction of national, sub- and supra-national levels of government. Based on that literature, we start from the thesis that the EU policy networks are NOT built based on national borders nor are constituted by the same level actors. More precisely, we view the EU policy process as a 'marble cake' of multi-level and multi-national networks.

We respond to a call to integrate governance theory and policy network studies and move beyond identifying the EU as merely complex policy networks. *Our study's goal is to judge the potential of EU networks' coordination capacity.* Specifically, we refer to two competing hypotheses concerning the centre of decision-making within EU policy networks. The interest intermediation theory proposes it is impossible to locate the centre of decision-making (e.g. Heclo, 1978; Hanf and Scharpf, 1977). In contrast, the literature on lobbying in the EU political system contends the central role is held by the European Commission (e.g. Richardson, 1994). However, and that is when policy network literature is able to help, when considering Olsen's (2002: 593–4) research on institutional change, it is more reasonable to expect there is not just one principal actor in the centre of polycentric, multilevel policy networks. The notion of a policy network centre has yet to be sufficiently clarified and we seek to help close this gap. Further, based on Peters (1998) and van Waarden (1992), both with a background in the study of policy networks, we suggest the coordination capacity of EU networks depends on the stability of relations within EU networks/network sections, the variety of types of actors active on the same kinds of EU policies, the inclusion of actors from different countries and which level they stem from. In line with Rhodes (1997), who highlighted both the EU's extraordinary differentiation and the varying relationships found between interest groups and government in certain policy areas, *we expect that the potential of EU networks' coordination capacity varies among EU policy processes.*

We reveal EU policy networks as constructed during the preparation of national positions on a selection of the 20 most salient directive proposals tabled between 2008 and 2010 (Table A in the Appendix). Data were obtained from national policy officials as part of the INTEREURO Multi-level Governance Module (Beyers et al., 2014; INTEREURO, 2014). Our analysis focuses on the actors' positioning with respect to particular issues in those proposals recognised at the European and national level while the Commission which prepares EU policy proposals is regarded as the centre (it is excluded from the data analysis to allow the relations among stakeholders to be revealed). We conduct the study using Social Network Analysis (SNA), which helps us better understand the nature of actors' relations in multi-level policy circumstances. Using concepts and terms from the SNA

like closeness and betweenness centrality, we operationalise the policy actors' complex multi-level relations, and treat SNA as an analytical tool.

In the next section, we outline the theoretical framework for the analysis, which is followed by the methodology section. Based on our empirical analysis, the EU policy networks under study are described and hypotheses are commented upon. In the concluding section, we summarise the strengths and limits of the analysis while proposing further research avenues.

Theoretical approach

In this article, we link several approaches to the study coordination capacity of networks and policy networks in general (Table 1). While policy analysis primarily focuses on the meso level of politics (that is, public policymaking), the governance literature is increasingly looking at ways to include the meso level into the macro one.

Table 1: APPROACHES TO STUDYING POLICY NETWORKS

Approach	Authors	Key characteristic	Level of analysis	Aspects studied	Broader framework
Policy analysis	Van Waarden (1992)	Policy network (PN) concept; analytical tool based on the actor approach	Micro, meso	PN described with the number and characteristics of actors, PN functions, centrality…	Description of policy networks Studying the impact of (changes in) PN characteristics on policy outcomes
	Scharpf (1993)	Policy network as a specific social structure	Meso	PN as a form of organisation	Description of policy networks
Governance literature	Börzel (1997) Sørensen and Torfing (2005) Torfing (2016)	Networks as a form of governance	Macro	Policy networks as theory of governance Networks of networks	Studying governance and the governance of governance *(meta-governance)*
Social Network Analysis	For an overview, see Wasserman and Faust (1994) and Carrington et al., eds. (2005)	An analytical approach to studying social networks	Adaptive (micro, meso, macro)	Relationships among social entities; characteristics of social networks based on mathematically developed analytical tools and software	An ever-growing range of SNA applications spilling over to various academic disciplines and subjects of research

Source: Authors' own analysis.

Coordination problems

Contemporary governments' efforts that seem to exacerbate their inherent coordination problems have led to various authors hypothesising different solutions. Unlike other authors who focused on hierarchical coordination (Kochen and Deutsch, 1980; Davis, 1995), the market as a steering mechanism (Marin, 1990), and "new institutionalism" (March and Olsen,

1989), Peters (1998) proposed concentrating on networks of loosely linked actors and the achieved degree of coordination between them along with assessing the causal factors supporting that. He argued that fully analysing and comprehending the decisional capacity of government requires thinking about the interactions among not just individual organisations, but also about how 'networks' of organisations interact. The proposed network perspective on the coordination problem had the advantage of allowing the inclusion of non-state actors and involved more negotiation and mediation patterns than in more traditional models. After Scharpf (1997), Peters (1998) argued the continuous interaction of a network's members and their sharing of at least some values may "generate sufficient trust to permit more effective problem solving and positive-sum solutions" (1998: 299). Policy networks can help explain not only the 'second-order' decisions on 'how do we do it'? (Peterson, 1995), but also decision-making in new policy sectors, and to predict conflicts in EU policymaking and implementation (Howlett, 2002).

From policy networks to governance

Policy networks have thus far been related to two main theoretical schools – the interest intermediation and governance schools. While the interest intermediation school regards policy networks as types of interest group–state relations at the meso level (policymaking and implementation), the governance school views policy networks as a theory of a specific form of governance (Börzel, 1997).

The governance school (initially the 'Max Planck' School composed of Renate Mayntz, Fritz Scharp, Patrck Kenis, Volker Schenieder and Edgar Grande) regards policy networks as a particular form of governance, whereby "policy networks present themselves as a solution to coordination problems typical for modern societies" (Börzel, 1997: 5). They were also known as "governance without government" (Rosenau, 1992). On the global level, policy networks were seen as being potential coordinators of activities at times when the word "government" is neither desired nor feasible (Kenis and Raab, 2003).

Although attempts to develop a network theory per se have been unsuccessful, the search for theories compatible with particular policy network analysis has continued (e.g. linking policy network analysis with resource dependency theory and diffusion theory; Kenis and Raab, 2007). Previous labels (such as neo-corporatism, policy communities, private interest government, advocacy coalitions) used when talking about governance networks have today been replaced by governance networks being interpreted as informal governance arrangements, partnerships, joined-up government,

co-governance mechanisms, strategic alliances, deliberative forums, advisory boards or policy task forces (Sørensen and Torfing, 2009: 237). Governance literature has shown particular interest in the question of the democratic potential of governance networks and – in this framework – in networks as tools of government. The stress remains on both the effectiveness and democratic character of networks (Sørensen and Torfing, 2005b). This orientation demands a stronger focus on the governance–governing relationship, including the issue of decision-making centres.

Interestingly, various schools and authors have disagreed on whether policy networks actually have centres. Van Waarden (1992: 31) concluded that networks do not necessarily have a power centre or are coordinated by hierarchical authority, but instead thrive based on horizontal bargaining. Heclo (1978) and Hanf and Scharpf (1977) even maintained it is impossible to locate a decision-making centre in policy networks. On the contrary, researchers looking at EU policy networks have stated that there is indeed a centre of policy networks to consider. Richardson (1994: 140) believes this is the European Commission acting as a policy broker supported by none static key actors and groups. This agrees with Majone's emphasis on the Commission's role in the EU as a "regulatory state" (Majone, 1994). Nevertheless, the lack of policy coordination continues to be stressed while studying EU policymaking.

Hypotheses on the functionality of policy networks

Peters (1998) developed several assumptions (A) regarding the functionality of networks. He first argued that (1) less integrated networks are less likely to coordinate effectively (A1). This is largely to do to with the building of trust and experience among members of networks. He added that (2) coordination is less likely when organisations are in similar policy areas but lack common ideas about solutions (A2). Put differently, networks that have a more unified 'epistemic community' are capable of generating coordination more easily than networks consisting of organisations that hold conflicting views. Third, he pointed out the importance of the international character of current policymaking, saying that (3) coordination should initially occur at the national level in order to provide for successful interaction at higher levels (A3). An extension of those assumptions came in Peters' call to primarily concentrate on the inclusion of those organisations most affected by the results of policymaking: national, regional and local groups, with their presence guaranteeing a focus on practical and realistic aspects of implementation.

While Peters' assumptions can guide our analysis in the search for EU networks' coordination capacity, we still need to operationalise the variables.

Here, we deploy indicators proposed by Jordan and Schubert (1992) within policy analysis literature and operationalise them with the use of SNA concepts (see Table 2). We consider three main criteria for evaluating the EU policy network. We look at: (1) the level of a network's institutionalisation, especially its stability across policy issues; (2) the scope of the policymaking arrangements (whether the network is sectoral or trans-sectoral); and (3) the network's participants (how diverse is the network's membership). A similar categorisation was used by van Waarden (1992). He looked at the number and type of actors involved (referred to as the number of participants in Jordan and Schubert 1992: 12), the structure, institutionalisation, and rules of conduct – which Jordan and Schubert combined under the label of "level of institutionalisation" – along with power relations and actors' strategies (within the scope of the policymaking arrangements). By combining all of these, we hope a more comprehensive picture of the EU policy network will emerge.

Table 2: BREAKDOWN OF HYPOTHESES AND OPERATIONALISATION

Assumptions	Peters (1998)	Criteria of network evaluation	Jordan and Schubert (1992)	*Operationalisation*	Operationalisation and SNA concepts
	less integrated networks are less likely to co-ordinate effectively (A1)		(1) the level of a network's institutionalisation, and in particular its stability across policy issues		Non-stable relations (activity of pairs or more of actors on single directives) and stable relations (activity of two or more identical actors within more than one directive) SNA: value of ties (links) between nodes (actors)
	H1. If we identify more non-stable relations within EU network/network sections, we can conclude that the EU networks are less likely to co-ordinate effectively.				
	co-ordination is less likely when organisations are in similar policy areas but lack common ideas about solutions (A2)		(2) the scope of the policy-making arrangements (whether a network is sectoral or trans-sectoral)		Are actors within the network diversified according to type of organisation? Are groups active on the same type of directives? Can we identify actors or a group of actors responsible for integrating networks? SNA: diversity and density of a network, betweenness and closeness centrality
	H2. If we identify that different types of actors are active on the same types of directives within network/network subsections, we can expect less coordinated networks.		(3) network's participants (diversification of a network's membership)		
	the co-ordination should initially take place at the national level in order to provide for successful interaction at higher levels (A3)		(3) network's participants (diversification of a network's membership)		Are actors within the network diversified according to country and level of origin? SNA: diversity and density of a network, relations among network participants, number and types of actors, cross-policy relations, centrality measures, structural holes, network stability
	H3. If we identify that actors within network/network sections are coming from different countries and levels of origin, we could expect more effectively coordinated networks.				

Source: Authors' own analysis.

Here is the list of questions guiding our empirical research: What is/are the social structure/s of the revealed networks (their diversity)? What can we say about the density of the policy networks and thus about the effects on their coordination capacity (density of network and ties/links between

actors)? Is there one or several centre/s and what is its/their structure? But, most of all, how do particular aspects of the network matter? Based on the above reading of Peters, what can be expected to occur and is it possible to develop any hypothesis on casual relations focusing on the policy networks' impact on a future policy process?

Methodology - Social Network Analysis

It is only social network analysis that allows flexibility while analysing networks at various levels – micro, meso and macro. While we agree with Varone, Ingold and Jourdain (2016: 323) that SNA offers a valuable method for empirically describing and assessing the key variables that determine a policy network's characteristics (which may thereby also determine the policy process), we also believe it holds potential while analysing networks' capacities. This potential lies not only in its mathematical, conceptual and analytical foundations facilitating the description of rational configurations, but also in its precision and visualisation, offering new relevant insights into complex configurations and relationships (Schneider, 2017). Indeed, the visualisation of policy networks can go beyond mere 'illustration' and "help to improve communication about the data to third parties and help the researcher to explore specific properties of certain networks better or facilitate the exploration of differences across several networks; or it could even help to discover explanations for policies" (Brandes et al., 1999: 76).

Data

We reconstruct EU policy networks as they were created in the process of establishing national positions on the 20 most salient EU directive proposals between 2008 and 2010. The data were collected within the framework of the INTEREURO Multi-level Governance Module (Beyers et al., 2014; INTEREURO, 2014). The proposals concern three policy fields: the environment and energy, finance and the economy, and rights. For example, the Directive Proposal on Deposit Guarantee Schemes falls within the finance and economy policy field, the Directive Proposal on Patients' Rights in Cross-border Health Services is a representative of a policy field focused on rights, and the environmental field is best denoted by the Directive Proposal on Promotion of Renewable Energy Sources. In a much finer policy field categorisation, we distinguished between policy fields which are distributive, redistributive and regulatory in their nature (Lowi, 1972).

Interviews were conducted with national and European policy officials who were asked to indicate all non-state and para-state actors involved in the debates on several of the most conflictive issues related to the studied

directives' proposals. We asked policy officials to place different stakeholders active within the debates on those issues on a scale from 0 (a position that favours less integration or less regulation) to 100 (encouraging full harmonisation on the European level). Following Helbling and Tresch (2011), we assumed the most controversial issues would have entailed larger debates, thus allowing us to better control for the size of a network.

We considered actors from five EU member states (Germany, Netherlands, Slovenia, Sweden and United Kingdom) and further expanded by including European-level organisations and institutions. The country selection controls for several national characteristics, ensuring variation with respect to population size, national wealth, state-interest groups' traditional models, and political system. Four countries have income per capita higher than the EU average, with Slovenia falling below it. Lijphart's index of interest group pluralism (2012) for the selected countries shows quite a spread, with the most corporatist being Sweden (0.5) and the most pluralist being the UK (3.38), with Slovenia and Germany being placed closer to a weak version of corporatism (0.88).

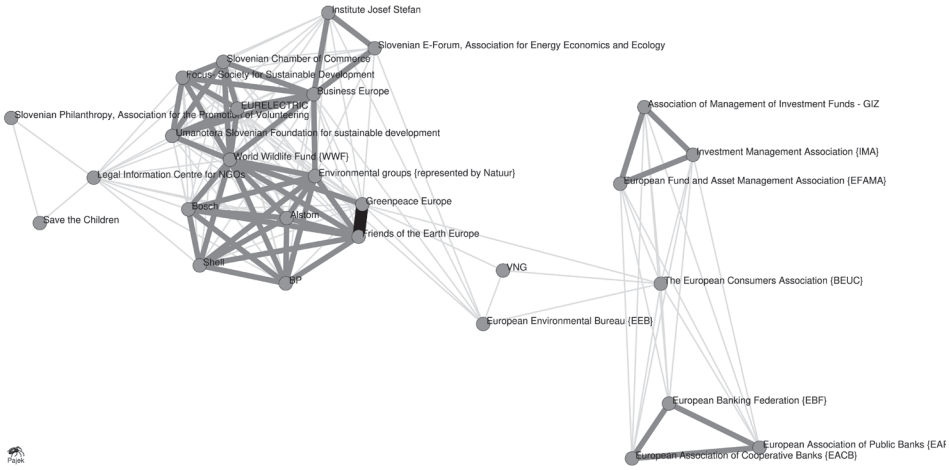
In total, we identified 56 issues. The full list of units included 254 actors. For the analysis, the European Commission was excluded from the data due to its special role as a central actor in all EU policymaking networks (it is not exclusive in our 20 directives). Thus, the network's border (i.e. the list of eligible actors) consisted of 253 units (254 minus the Commission). The majority of actors have an economic background (142), followed by non-governmental organisations (65), para-state actors (30) and expert organisations (16).

Network description and revisiting the hypotheses

The analysed data are conceptualised as a two-mode (bivariate) network where one set of units represents the network's stakeholders, while the second set of units represents directives in a policy proposal. The relationship between these two sets is defined as an organisation's involvement in conflicting issues that form part of a certain directive proposal.

The focus of the analysis is the networks of organisations involved in more than one directive. Therefore, organisations connected to individual directives were removed. The network was further reduced by eliminating disconnected directives. The reduced data consisting of 17 directives and 27 organisations were reordered into the analysed one-mode network of 27 organisations (Figure 1).

Figure 1: ONE-MODE REDUCED NETWORK WHERE TIES AMONG ACTORS INDICATE ACTIVITY ON THE SAME DIRECTIVE



Source: Authors' own analysis.

Relations among actors in our analysis

Two units (actors) in this network are linked when they worked on the same directive, meaning there were indicated in an interview as being active on the same particular directive. For example, the World Wildlife Fund and Greenpeace Europe were mentioned as being active on the Directive on Renewable Energy Sources, thus in our social network they will be linked by a tie. Ties (links) between two actors are valued according to the number of different directives they were both involved in together (e.g. the more directives they were involved in, the larger the value of the tie). Given the characteristics of the available data, which do not include information on actual relations between actors but actors' activity on issues concerning the same directive, we are talking about a proxy for network relations.

Number and types of actors

Table 3 includes all our units/actors in the network after the reduction (namely, after removing actors that are only active with respect to one directive). We can already observe several things about the network. With regard to the country of the origin of the actors, we see the disproportional representation of EU-level and Slovenian organisations, respectively 10 and 8 (66.5% of the network). Those actors' overwhelming presence is explained by the fact most interviews were conducted with EU-level

officials and Slovenian policy officers (20 and 34, respectively, compared with 8 in Germany, 5 in the Netherlands, 10 in the UK, and 5 in Sweden). A comparison of the ratio of interviews with the number of actors mentioned would not apply here because we reduced the network to only actors that were active in relation to more than one directive (253->27). The network includes 13 economic groups (e.g. banking associations, investment manager associations), 1 expert organisation (the Slovenian Jozef Stefan Institute), and 12 NGOs (mostly environmental organisations, e.g. European Environmental Bureau), and 1 para-state organisation (VNG – Association of Dutch Municipalities).

Table 3: ACTORS IN THE NETWORK AFTER THE REDUCTION

Name	Country of origin	Type of organisation	No. Directives	Aggregated constraint (structural holes)	Degree	Closeness	Betweenness centrality
Alstom	INT	Economic	2	0.277545	13	0.577778	0.006044
Association of Management of Investment Funds - GIZ	SL	Economic	2	0.542496	6	0.382353	0.000000
Bosch	DE	Economic	3	0.277545	13	0.577778	0.006044
BP	GB	Economic	2	0.277545	13	0.577778	0.006044
Business Europe	EU	Economic	4	0.236552	16	0.619048	0.030623
EURELECTRIC	EU	Economic	2	0.256342	15	0.604651	0.012527
European Association of Cooperative Banks (EACB)	EU	Economic	2	0.542496	6	0.382353	0.000000
European Association of Public Banks (EAPB)	EU	Economic	2	0.542496	6	0.382353	0.000000
European Banking Federation (EBF)	EU	Economic	2	0.542496	6	0.382353	0.000000
European Consumers Association (BEUC)	EU	NGO	3	0.328511	9	0.541667	0.369231
European Environmental Bureau (EEB)	EU	NGO	2	0.277565	7	0.553191	0.059780
European Fund and Asset Management Association (EFAMA)	EU	Economic	2	0.542496	6	0.382353	0.000000
Focus- Society for Sustainable Development	SL	NGO	2	0.256342	15	0.604651	0.012527
Friends of the Earth Europe	EU	NGO	4	0.268598	13	0.577778	0.006044
Greenpeace Europe	INT	NGO	5	0.216079	17	0.702703	0.370733
Jožef Stefan Institute	SL	Experts	2	0.285642	10	0.520000	0.003077
Investment Management Association (IMA)	GB	Economic	2	0.542496	6	0.382353	0.000000
Legal Information Centre for NGOs	SL	NGO	2	0.227220	14	0.500000	0.147692
Natuur	NL	NGO	3	0.241540	16	0.619048	0.030623
Save the Children	EU	NGO	2	0.849490	2	0.342105	0.000000
Shell	NL	Economic	2	0.277545	13	0.577778	0.006044
Slovenian Chamber of Commerce	SL	Economic	2	0.256342	15	0.604651	0.012527
Slovenian E-Forum, Association for Energy Economics and Ecology	SL	NGO	2	0.285642	10	0.520000	0.003077
Slovenian Philanthropy, Association for the Promotion of Volunteering	SL	NGO	2	0.849490	2	0.342105	0.000000
Umanotera Slovenian Foundation for sustainable development	SL	NGO	2	0.256342	15	0.604651	0.012527
World Wildlife Fund (WWF)	INT	NGO	3	0.244639	15	0.604651	0.012527
VNG	NL	Para-state	2	0.482614	3	0.481481	0.000000

Source: Authors' own analysis.

Cross-policy relations

In order to gain an insight into a network's fabric, we look at cross-directive collaborations where actors are jointly active on more than one directive. The process of reducing the network to those actors left us with 27 units. The reduction process also led to lowering the number of directives from 20 to 17.

While we see more economic actors in the network, it is worth pointing out that the majority of them were only active in relation to two directives (the exception BusinessEurope for 4 and Bosch for 33). Cross-directive activity better characterises NGOs (2 to 5 directives), with Greenpeace being active with respect to 5 directives. All directives in which Greenpeace was active are examples of environmental directives (on waste management, ship source pollution, renewable energy resources, CO2 storage, radioactive waste disposal) (Table A in the Appendix). A similar conclusion emerges with regard to all the other NGOs' activities (expanding the list for Greenpeace with directives on the energy performance of buildings and greenhouse gas emissions).

When focusing on the actors' country of origin, the only conclusion we can draw concerning the cross-policy relations is that organisations from Slovenia (without distinguishing the type of actor) and those at the EU level are, more often than others, working on more than one directive. Given the cross-policy character of EU-level organisations, this is a reasonable conclusion. The argument for Slovenia, unlike for other countries studied in the article, could stem from the fact that the country is much smaller population-wise while its interest groups system is less professionalised and thus we can expect that certain national organisations become more cross-directive in orientation due to the limited number of groups that are active on European issues.

Centrality measures and structural holes

Closeness centrality. Our analysis expands when we look at variables that are more characteristic in social network studies. Closeness measures ties across all networks, not just in the immediate vicinity of an actor. Thus, paraphrasing, we can see who is the most central in the network, the closest to all other actors. The actor with the highest value for closeness centrality is Greenpeace (0.70), followed by Natuur (0.62) and BusinessEurope (0.62). These three actors are the most embedded in the network. The potentially have the broadest access to all actors in the analysed part of the network.

Betweenness centrality and bridging actors. Betweenness centrality measures the role of an actor as a hub. Actors with the highest betweenness-centrality value hold the greatest potential to link different sections

of the network. A 'bridging' actor in this sense is the most important actor for linking parts of the network. In our analysed section of the network, Greenpeace has the highest value (0.370), followed by BEUC (0.369). This is seen especially in Figure 1. Greenpeace and BEUC play the role of articulation points where removing them from the network would cause it to fall apart in two separate components. Interestingly, while BEUC has a very broad role as a bridge, it is connected to the network's section only through ties with a value of 1. Considering our definition of stable/non-stable networks (see below), BEUC is part of an unstable relationship.

Bridging structural holes. The kind of relationship (as described above) is important only in addition to the sheer number of relations. Having many relations within a group exposes an actor to the same information over and over again, whereas relations outside of one's group yield more diverse information which is worth passing on or retaining to make a profit (de Nooy et al., 2012). The higher the presented aggregate constraint of an actor, the less 'freedom' that actor has to withdraw from existing relations or to exploit structural holes. People or organisations with a low aggregate constraint are hypothesised to perform better (Burt, 2001).

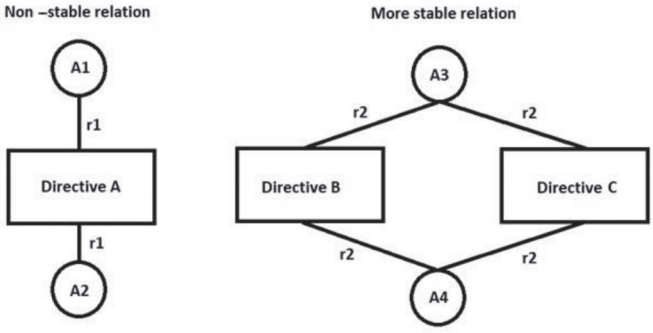
In the analysed network, those organisations with the lowest constraints, and therefore the greatest opportunity to create new relevant ties to fill the structural holes, are once again Greenpeace Europe, BusinessEurope, but also the Legal Information Centre for NGOs. This again underlines the quite privileged role and function of Greenpeace and BusinessEurope.

Network stability

We are interested in cross-directive collaborations. Actors working on more than one directive have a wider interest and a more elaborate agenda. Instead of being just part of an issue network (involved only in debates on individual issues), they are part of multiple-issue policy networks. If two actors engage on two common directives or more, we may talk about a more stable relationship (in social network terms) compared to two actors only engaged on one common directive (see Figure 2). In mathematical-SNA terms, we calculate a network's stability by the weight/value of the ties between actors. A more stable relationship (stable policy network) has a value of at least 2 and a less stable one (defined as only a single-issue network) has a value of 1.

In the analysed network, actors/units have at least 1–3 directives in common. Most ties have a weight of 1 (e.g. two actors were active on the same directive). The strongest connection is between Friends of Earth and Greenpeace, which is the sole tie with a value of 3. Both organisations were involved in three directives, namely the Directive Proposals on: Renewable

*Figure 2: NETWORK STABILITY – SIMPLIFIED MODEL FOR EXPLANATION**



Source: Authors' illustration.
*A1, A2, A3, A4 – different hypothetical units/actors within a network
Directives A, B, C – three hypothetical directives
r1 and r2 – ties in a two-mode network, indicating unit/actor activity on a particular directive

Energy, Carbon Capture and Storage, and Emissions Trading Scheme, with all three being categorised as environmental directives.

If we focus on more stable relations (ties with a value of 2 or more), the policy network that is revealed is clearly divided into three independent components (e.g. sections; Figure 1): two smaller ones and one larger. The larger component in Figure 1 represents the network of interest groups active in environmental policy fields (regulatory policy), while the two smaller ones are in financial policy fields (distributive policy).

The first smaller component consists of banking associations (European Banking Federation – EBF, European Association of Public Banks – EAPB, and European Association of Cooperative Banks – FACB). All three actors are categorised as exactly the same type ('economic actors') and level (European). They were active on exactly the same two directives, categorised as a 'finance' directive. The second small component consists of the European Fund and Asset Management Association (EFAMA), Association of Management of Investment Funds (GIZ), and the Investments Management Association (IMA). Three groups worked on the same two Directive Proposals: Investments Schemes and Deposit Schemes. All three actors are categorised as 'finance' actors. While EFAMA is a European-level group, GIZ is Slovenian, and IMA is British. Finally, the largest component consists of a mix of organisations. We have here representatives of environmental European (e.g. WWF, EEB) but also national NGOs (e.g. the Slovenian E-Forum). However, we also find actors classified as finance and business-related (e.g. Dutch Shell, German Bosch, international Alstrom, or European-level – BusinessEurope). There is a clear indication of a cross-country and cross-level structure as well as the cross-organisation type. It is a complex

and dense network with multiple connections (ties) between the actors. In some cases, a tie's value is larger than 2, sustaining the network's stability.

When looking at the details of the biggest component, another conclusion emerges. If we focus just on ties with a value of 2 or more (namely, actors engaging jointly on 2 or more of the same directives), we can identify three central actors that are bridging three sub-sections of that component. The most central (talking about betweenness centrality) is the WWF, the second is BusinessEurope, and then there is Natuur. The sub-sections they are bridging are actually made up of different types of actors and different levels. That adds to our conclusion that the network's dense sub-section is actually constructed from cross-level, different interest group types and interest groups with different countries of origin.

Empirical findings

Our findings support the thesis that it is possible to reveal a policy network centre, even where this centre is not a single actor. Instead, it is the core of a network composed of clusters of actors that appear in policy processes related to various draft directives. Further, it is not one network but a set of components. They differ with regard to policy type. Distributive and redistributive draft directives are represented by two smaller components (Figure 1), with a small number of active actors and ties of the same value. The much more complex component (due to the diverse types and levels of actors as well as the mix of tie values) encompasses actors that are active in relation to regulatory policies (primarily environmental).

Returning to our hypotheses, we can provide a few conclusions. First, we argued that the stability of a network (ties between nodes with a value equal to 2 or higher) improves the network's coordination capacity (reversed H1). While we observed it within the identified components, a worrying sign is the lower values between them. Two smaller components are clearly separated from the rest of the network and even remain strangers between themselves. In conclusion, coordination between the diverse policies in the finance sector (in our case, also identified as distributive and redistributive policies) is less likely to be effective.

In contrast, the larger component including a number of regulatory policies (in our sample chiefly represented by environmental policies, but also protection of rights) does not have that problem, suggesting better coordination takes place between the development processes of different directives within those policy fields. However, another issue arises here. Paraphrasing hypothesis 2, the diversification of actors' types within a component actually works against effective coordination (H2). When it comes to environmental regulations and the protection of rights, namely

the network's biggest component, we noticed several diverse actors across the types. It could consequently be argued that the networks built around those issues are less likely to be coordinated effectively. Our findings suggest that, when it comes to financial regulations, the established components are quite stable, including the same types of organisations, albeit from different levels (however, given H3 on the more effective coordination in networks comprising cross-level and country actors, that is not a problem).

The hope for improving the coordination capacity within the largest component of the network lies in its increased cross-country and cross-level structure (H3). Summing up, while a mix of cross-type actors negatively influences a component's coordination capacity, a cross-level and cross-country mix acts as a mitigating factor. Here, however, a caveat must be noted. We observed a number of EU-level organisations and those coming from Slovenia in that set. Potentially, this therefore allows us to argue that those two sets of actors are in particular responsible for the component's coordination capacity. But, as mentioned, our data are imperfect and there is an issue of the overrepresentation of the Slovenian actors, rendering the argument inconclusive.

Conclusion

Our aim in this article was to identify the potential of EU networks' coordination capacity. The two main points of focus were the search for a decisional centre of the network and the information on network stability. Using inputs from policy analysis, governance literature and network studies, we operationalised our variables and deployed SNA as an analytical tool to help us theorise about coordination capacity. Our argument is that such approach brings added value, especially when applied to the peculiarities of EU policy networks emerging in complex decision-making, which links the national and supranational (EU) levels. Our approach holds considerable potential to further develop the concepts and theories of governance as well as theories of governing in the postmodern era.

Our research findings speak in favour of the thesis that EU governance may be described as a network of networks. While our findings do not directly indicate country as a significant variable, they advocate the need for cross-country and cross-level engagement in order to improve the coordination of a network. Countering the notion that individual policy networks are more or less isolated, our findings show links both among policy networks and within them (especially looking at the full network and 'individual' policy networks as only its components). Yet we need to include the noticeable difference between regulatory policy areas on one hand and distributive and redistributive policy fields on the other.

Based on our analysis, greater attention must also be given to particular interest organisations through which policy networks and their components become connected. Although network analysis is very descriptive, we can make comments about the roles played by the groups (e.g. bridging roles) and their importance for the networks. Additional research is needed in relation to interest organisations. Indeed, in line with expectations, while a huge cloud of actors is involved in the network, not all actors matter equally for it. Given the network's revealed characteristics, the potential to make a difference varies considerably among the actors and a relatively small share of the actors divide it into individual policy components.

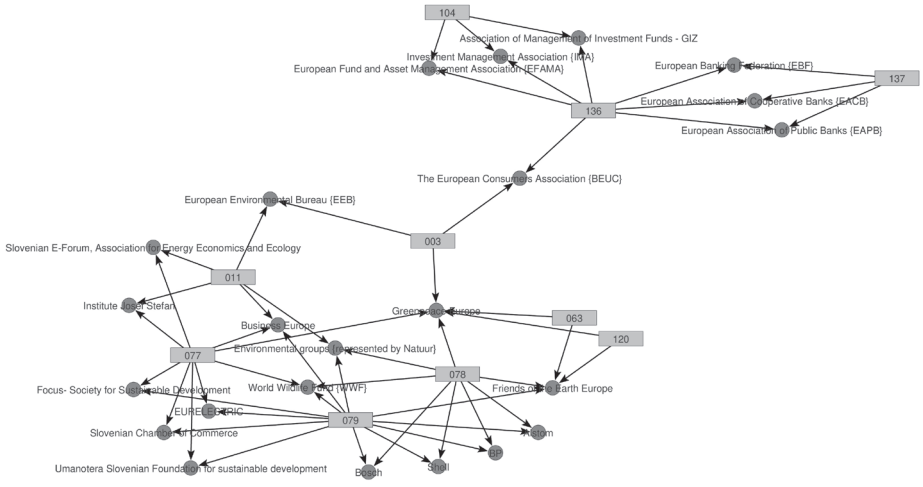
As shown in the empirical section, network components may differ considerably in terms of the size and variety of the actors involved. Among the 'all EU-level policy network', 'all-one-industry EU policy network' and 'overall heterogeneous EU policy network', only the latter (the environmental EU policy network) appears to be in line with the expectations that networks in EU policy processes will generally be internally heterogeneous. Further research is required to examine whether including all 28 EU member states and broadening the analysis to a larger sample and including more directive proposals in the analysis would bring different results or confirm our findings. Future studies should also consider defining the network's stability through the use of temporal data (e.g. interactions measured across time, not only across directives) and by focusing more on the substance of an actor's activity (implementing not only the actor's activity, but also its character, e.g. if groups were pro or against a particular Directive Proposal).

All in all, our contribution supports the position taken by Kenis and Schneider (1989) that it is unrealistic to search for a theory of policy networks but more viable to contribute to the development of network theories in certain academic fields, including governance. However, governance also seems to be more a concept than a theory and the need for theorising governing in the world of today has already been expressed in the need for the 'governance of governance' or 'meta governance' (Sørensen and Torfing, 2005).

While there is quite obvious potential in linking the study of policy networks in EU policy processes and governance studies, it should not be forgotten that policy actors and policy networks operate in an institutional context. This not only relates to the institutional characteristics of the EU political system and its dynamics, but also the national and international intergovernmental institutional contexts which directly link national and supranational policymaking.

Appendix

Figure 1: CAPTION: REDUCED TWO-MODE NETWORK INCLUDING DIRECTIVES AND INTEREST ORGANISATIONS AS NODES, TIES BETWEEN UNITS INDICATE ACTORS' ACTIVITY ON A PARTICULAR DIRECTIVE



Source: Authors' own analysis.

Table A: ANALYSED DIRECTIVES

Directive	No. of issues	Description
001	3	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL laying down the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other transport modes
003	4	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on waste electrical and electronic equipment (WEEE) (Recast)
004	4	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL laying down minimum standards for the reception of asylum seekers
011	5	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the energy performance of buildings (recast)
035	2	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the protection of animals used for scientific purposes
039	3	Proposal for a COUNCIL DIRECTIVE amending Directives 92/79/EEC, 92/80/EEC and 95/59/EC on the structure and rates of excise duty applied on manufactured tobacco

Directive	No. of issues	Description
046	4	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the application of patients' rights in cross-border healthcare
063	2	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directive 2005/35/EC on ship source pollution and on the introduction of penalties for infringements
077	2	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the promotion of the use of energy from renewable sources
078	4	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the geological storage of carbon dioxide and amending Council Directives 85/337/EEC, 96/61/EC, Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC and Regulation (EC) No 1013/2006
079	1	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading system of the Community
080	1	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the safety of toys
104	2	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Alternative Investment Fund Managers and amending Directives 2004/39/EC and 2009/.../EC
108	1	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Council Directive 78/660/EEC on the annual accounts of certain types of companies as regards micro-entities (Text with EEA relevance)
120	1	Proposal for a COUNCIL DIRECTIVE on the management of spent fuel and radioactive waste
136	4	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directive 97/9/EC of the European Parliament and of the Council on investor-compensation schemes
137	3	Proposal for a DIRECTIVE .../.../EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Deposit Guarantee Schemes [recast]
142	4	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on preventing and combating trafficking in human beings, and protecting victims, repealing Framework Decision 2002/629/JHA
143	3	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on combating the sexual abuse, sexual exploitation of children and child pornography, repealing Framework Decision 2004/68/JHA
144	3	Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the right to interpretation and translation in criminal proceedings

Source: Authors' own analysis.

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