

Assessing Individuality in Preference Formulation by Lobbying Organisations: Master Thesis

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Abstract

Preference formulation is one of the most basic and fundamental aspects of lobbying; one can hardly conceive of a form of lobbying in which no preferences are voiced with public officials. Also, lobbying is often regarded and conceptualised as a collective enterprise.

Nonetheless, there has been very little research that looks at the size and robustness of the theorised relationship between interaction among organisations on the one hand and their formulation of preferences on the other hand, with Bunea (2013, 2015) as a notable exception. I find evidence for increased similarity of expressed preferences with institutionally tied organisations in a new case regarding legislation on CO2 emissions by cars, providing further validation for Bunea's findings. I also add to Bunea's model by taking into account network size, and add value by correcting for some serious methodological issues that accompany the data structure of a dyadic data set.

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1 Introduction

Lobbying organisations regularly interact with others through institutionalised entities such as umbrella organisations. In the literature, lobbying is often explained as a collective enterprise, and the effects of interacting lobbying organisations are well theorised (e.g. Baumgartner and Leech, 1998; Carpenter et al., 2003; Carpenter et al., 1998, 2004; Greenwood, 2007; Klüver, 2013).

Nonetheless, the size and robustness of those theorised effects have been far less researched, as have for example resource-centred approaches or contextual variables such as the institutions or the policy fields that are lobbied. In many studies lobbying organisations are implicitly assumed to be independent of each other, while such an assumption finds very little justification in the literature.

In this study I aim to shed more light on the size and robustness of interaction-organisational variables on the formulation of preferences by lobbying organisations in open consultations by the European Commission (EC). I build on and add to a paper by Bunea (2015). In her paper, Bunea argues that organisations that are institutionally tied voice more similar preferences than organisations that are not tied. Institutionalised ties are ties between organisations, formed through umbrella organisations. Umbrella organisations allow lobbying organisations to keep in contact with each other at limited costs, and facilitate interaction and strategic exchange between lobbying organisations. In this paper I add to Bunea's argument by arguing that the strength of this effect is dependent on the number of ties to other (third) organisations. Indeed, organisations that have only few ties will use those ties more intensively than organisations that have more ties.

In general, understanding what factors lead to similarity in voiced preferences can lead us to better understand why organisations take certain positions, and what the possible effects of interaction between lobbying organisations are. Uncovering the effects of interaction on the positions that lobbying organisations take can help us to better understand the way lobbying organisations are embedded in their organisational environment and the effects that environment has on lobbying organisations' behaviour.

The case in this study is a consultation of the European Commission on legislation regarding emissions from road vehicles, and the contributions from lobbying organisations to that consultation. Consultations are an open and widely used way to lobby the Commission (Greenwood, 2007). They are conducted in a limited time frame, are publicly accessible, and concern specific policy issues. Commission consultations offer a suitable opportunity to analyse and compare the positions of lobbying organisations on a policy issue (Bunea, 2014; Quittkat and Kotzian, 2011).

Since I am looking for similarity in expressed preferences, I look at the preferences expressed in the contributions, and compare the preferences in each contribution to the preferences in each possible other contribution. Subsequently, I will analyse whether certain hypothesised variables have a predictive effect on the overlap in preferences in the consultation contributions. The consultation contributions will be coded qualitatively, and the resulting data will be analysed quantitatively. The comparisons will be structured in dyads, which will be the unit of analysis.

Structuring data as dyads stays closest to the objective of comparing each contribution with each other contribution, but comes with some potentially serious methodological issues. I argue that these issues have undermined the reliability of earlier results by Bunea (2015). To resolve these issues I add some

extra methodological steps and stick to a cautious interpretation of the results.

In the following section, I outline the theoretical framework and the hypotheses for this study. Section 3 contains the methods I have employed for the case selection and analysis. The operationalisation is discussed in section 4, and the analysis is described in section 5. Section 6 contains the concluding remarks on this thesis and some discussion.

2 Theoretical framework

This thesis investigates the way ties between organisations influence the opinions that those organisations voice. Voiced opinions can be seen as central to lobbying. Indeed, without voiced opinions there would be no lobbying. Although voicing an opinion is in principle an individual act, I investigate whether it may be partly influenced by other organisations around the organisation in question.

Below, I will shortly introduce the general field of research into lobbying in the EU and US. Afterwards, I will outline specifically how lobbying is regarded in the literature as collective in nature. In the third subsection, I will elaborate on how interaction between lobbying organisations may influence the opinions voiced by those organisations.

2.1 General outline of literature on lobbying

Lobbying in the European Union has been the subject of thorough studying in recent years. A decade ago, lobbying in the EU was often still treated as a *sui generis* (Woll, 2006), was under-developed when compared to the academic field of interest group research in the US (Baumgartner, 2007), and was considered a niche field within political science (Beyers et al., 2008b). Interestingly, a similar critique had been voiced about a decade earlier regarding the American academic field of interest group research (Baumgartner and Leech, 1998). However, both the American and European fields have become more relevant since, employing a more analytical and comparative perspective (Hojnacki et al., 2012, Bunea and Baumgartner, 2014). In Europe specifically, this process has increased in pace since 2007, although descriptive case studies are still the most dominant approach (Bunea and Baumgartner, 2014).

Research into lobbying and interest organisations has been conducted on a variety of subjects and with a variety of approaches. The role of interest groups has been analysed in the literature on Europeanisation (e.g. Ladrech, 2010, Beyers and Kerremans, 2007), multi-level governance (e.g. Princen and Kerremans, 2008, Binderkrantz and Rasmussen, 2015 and Constantelos, 1996), network governance (e.g. Beyers and Braun, 2014, Beyers and Kerremans, 2004), pluralism/corporatism (e.g. Nye and Skjeie, 1991, Eising, 2007, 2008), formalised rational choice theory (Iaryczower et al., 2006, Hall and Deardorff,

2006, Austen-Smith, 1993) and regulatory capture (e.g. Korten and Ortman, 2008, Young, 2012, Deshman, 2011).

Arising from the literature is a complex interplay of input and outcome variables. One group of input variables can be described as individual factors, such as organisational financial and human resources, personal contacts, knowledge of the relevant topics, size of a groups' constituency, and other factors. Another group of input variables can be described as contextual factors, among which are differing competent authorities depending on the policy field, different levels of receptivity of policy maker, the behaviour of other interest groups, alliance-building between different groups, shifting political make-up of lobbied authorities and other influences. Outcome variables are various interest group related variables. Examples are their success, alliances, positions and interactions with other organisations, but many more are researched.

This complex interplay does not lend itself well for a grand theoretical approach. Instead, most research has employed an approach described as 'empirical theory' by Hojnacki et al. (2012)¹, and as 'middle-range theoretical work' by Beyers et al. (2008a). Rather than formulating an all-encompassing theory of how lobbying in general works, most authors focus on specific relations between variables. If done consistently and over longer periods of time, some relations will show to be more robust than others, and one may be able to distil a nuanced view on what factors have greatest influence on lobbying behaviour and outcomes. In this study I try to contribute to the current body of knowledge in a similar fashion. Uncovering the effects of ties as an input variable on preference formulation as an outcome variable is only a step in mapping behaviour and effects of lobbying in the EU.

2.2 Collective lobbying in the literature

Lobbying is often described as a collective endeavour (Baumgartner and Leech, 1998; Carpenter et al., 2003; Carpenter et al., 1998, 2004; Greenwood, 2007; Klüver, 2013). Various actors try to attain their goals and interact and cooperate with others in the process (Barron and Hultén, 2014; Baumgartner and Leech, 2001; Nelson and Yackee, 2012; Pijnenburg, 1998). In various case studies, coalitions of actors are identified that cooperate to attain joined goals (Coen, 2005; Nelson, 1994; Staggenborg, 1986; Yanacopulos, 2005). Interest groups may profit of each others expertise, connections and resources, and may commit to a common strategy. Maintaining ties is a costly endeavour since every tie requires at least some of maintenance (Leifeld and Schneider, 2012; Milbrath Lester, 1963, as cited in Carpenter et al. (2004, p. 230)) and since inter-organisational cooperation is subject to collective action problems (Greenwood, 2007).

¹Although the paper by Hojnacki et al. (2012) regards the American literature on lobbying, their observations are relevant as well for the European literature on lobbying, since the fields employ similar approaches, and increasingly interrelate.

Nonetheless, many quantitative studies do not take the cooperative aspects of lobbying into account, focussing only in individual characteristics such as amount of resources (either money or personnel), having an office in Brussels, being a business or NGO actor, or amounts of expertise present with a lobbying organisation.

Some authors in quantitative research do take organisational interaction into account. For example, Bunea (2014) and Chalmers (2013) argue that organisations with more ties or a higher network centrality voice more opinions, and Bunea (2015) argues that organisations that are institutionally tied also voice more similar opinions. Klüver (2011) and Bunea (2013) argue that organisations with more ties to others have a higher chance of lobbying success², and Beyers and Braun (2014) argue that both having a central position in one's own coalition and having ties to others in other coalitions is valuable to gain access to officials. All these studies show in different ways that certain collective aspects are important, and validate a further interest in interaction between lobbying organisations.

Many of these studies take a medium to high level of aggregation on the effects of interaction between lobbying organisations; they focus on meso- or macro-level effects of interaction between lobbying organisations. Although there are a lot of expected low level effects of interaction between organisations, we still have little idea of the size and robustness of these effects. Bunea (2015) and Beyers and Braun (2014) are already valuable contributions to such lower-aggregation research, with Bunea looking at effects of interaction on pairs of lobbying organisations, and Beyers and Braun distinguishing between different kinds of ties and their effects on policy makers' receptivity. One of these lower level effects that have not been researched extensively concerns the way interaction with other lobbying organisations affects the behaviour of a lobbying organisation. In this study I will further examine those effects.

There are two kinds of collective action that have been the subject of extensive research. The first regards a frequent form of organising at the European level, in which individual organisations are often a member of national and/or European umbrella organisations. The umbrella organisations have several functions, among which is to lobby for the interests of their members on the European level and to inform their members on European affairs (Greenwood, 2007). Another function umbrella organisations fulfil is to facilitate interaction between the umbrella and its members and between members at lower transaction cost (Beyers and Donas, 2014; Sabatier, 1998). Through umbrella organisations, lobbying organisations can maintain more

²Related, Klüver (2012) argues that certain characteristics of the 'side' a lobbying organisation is on are important factors in an organisation's chances of success. In this case, Klüver ranks lobbying organisations' input based on the relative frequency of certain words, and compares that to the relative frequency of the same words in Commission documents. The organisations with a lower relative frequency of certain words form one side, while organisations with a higher relative frequency form the other side.

ties, and make their ties more persistent over time.

The second concerns ad-hoc lobbying coalitions. These coalitions are formed to achieve specific goals on a single or a few policy issues and have various degrees of formality and institutionalisation. The key difference between the two is that ad-hoc coalitions are more narrowly focussed on a specific policy preference (Pijnenburg, 1998), while membership of umbrella organisations is based on general interests, resources and other factors (Carpenter et al., 2004; König and Bräuninger, 1998; Leifeld and Schneider, 2012). In general, membership of an ad-hoc coalition coincides with specific policy preferences, while umbrella organisation membership can be considered as conceptually prior to the articulation of a specific policy preference.³ In this sense, ties through umbrella organisations better identify the regular contacts that lobbying organisations have with their peers, while ad-hoc coalitions only occur on certain specific issues.

2.3 Inter-organisational ties and lobbying input

My primary focus in this study is interaction between different lobbying organisations, and how this affects their formulation of preferences, especially in submissions to Commission consultations. Below, I will elaborate on the main expected effects of inter-organisational ties.

Institutionalised inter-organisational ties may have various impacts on preference formulation and similarity between organisations. One established effect is that inter-organisational ties can offer a lobbying organisation more access to policy-relevant information, either from an umbrella organisation (Greenwood, 2007) or from other actors in the same organisation (Bunea, 2014; Carpenter et al., 2004). Information, or expertise, is considered a valuable resource in European lobbying, where the Commission is often considered understaffed for the amount of legislation it produces (Austen-Smith, 1993; Bouwen, 2002). It should be noted however, that the *amount* of information is often not the problem for lobbying organisations. Rather, filtering the *right* information is often more important for lobbying organisations (Chalmers, 2013). There is indeed evidence that strong ties with other organisations are most important for this (Chalmers, 2013, p. 487 - 489). An institutionalised tie between organisations already indicates a tie of certain strength. When organisations use each other to filter the information they use, they will see their preferences shaped partly by the organisations they regularly interact with (Carpenter et al., 2004, p. 227), and most likely voice more similar preferences.

Apart from exchanging and filtering information, there are more strategic aspects to ties through lobbying organisations. Firstly, umbrella organisations perform a role ‘giving cues’ to their member organisations, mobilising them on certain issues (Berkhout et al., 2015, Baumgartner and Leech, 2001). A ‘cue’ is

³There is an extensive literature on ad-hoc coalitions. See for example Barron and Hultén, 2014; Hula, 1999; König and Bräuninger, 1998; Mahoney, 2007b; Pijnenburg, 1998.

an indication from one actor to another that a particular issue is important and may be worth acting upon. This may be accompanied by an advice on what position to take, but it does not need to be. This process closely relates to the information filter function of ties, but also implicates a process of mobilising other organisations on certain topics. Secondly, when interest organisations interact, they can strategically exchange viewpoints. Suggested by Bunea (2014, 2015), this process implies that organisations strategically voice *each other's* preferences in order to help one another to gain traction with policy makers.

To summarise, through their ties lobbying organisations gain and filter information, tip each other on issues that may be of importance, and strategically exchange opinions to help each other. These processes all indicate that tied organisations will express more similar views.

H1: Institutionally tied lobbying organisations will voice more similar preferences than organisations that are not tied.

This hypothesis is essentially what Bunea (2015) tested in her study. Nonetheless, there is reason to assume that ties between organisations have different effects in different networks. Below, I argue that ties within larger networks are used less intensively, adding a level of depth to Bunea's model.

In networks, actors can maintain both strong and weak ties (Granovetter, 1973). In social science, strong ties are related to ties of friendship or family, while weak ties can be described as ties of acquaintances. In research into lobbying organisations, strong ties are ties between organisations that have regular contact over time, offer services to each other (reciprocal), and have a higher degree of intimacy (Chalmers, 2013). Weak ties on the other hand are ties between organisations who only have occasional contact over time, offer fewer reciprocal services, and have a lower degree of intimacy. Both weak and strong ties have their uses to lobbying organisations. In general, organisations will maintain strong ties to their regular allies, and weak ties to organisations they only occasionally need to cooperate with (Carpenter et al., 2003; Carpenter et al., 1998, 2004). Having many weak ties can offer access to new information that is not available within the smaller circle of 'usual suspects' to cooperate with (Beyers and Braun, 2014). On the other hand, strong ties are associated with a higher level of trust between the actors (Beyers and Braun, 2014; Carpenter et al., 2004; Granovetter, 1973) and will allow for more information to be exchanged between organisations (Chalmers, 2013).

Maintaining ties to other organisations requires time and resources. Strong ties require far more time and resources than weak ties, limiting the number of strong ties an organisation can maintain (Carpenter et al., 2004). Indeed, when tied to multiple other organisations, a lobbying organisation will find it hard to cooperate intensively with all.⁴ When maintaining more ties to other organisations, those ties will on average be weaker, carry less information, and

⁴Related to the expectations on strong and weak ties are Greenwood's expectations that large and diverse umbrella organisations will find it more difficult to coordinate positions (Greenwood, 2007).

accommodate less reciprocal services. As a result, the similarity of preferences between tied organisations will *decrease* if the tied organisations also have ties to third organisations; the effect of sharing a tie on the similarity of preferences will diminish the more ties to other organisations are present.

H2: Institutionally tied lobbying organisations with more ties to third organisations will voice less similar interests than institutionally tied lobbying organisations with fewer ties to third organisations.

This hypothesis links to another theoretically relevant factor, regarding the distinction between ‘broad’ and ‘narrow’ umbrella organisations (Beyers, 2008; Greenwood, 2007). Broad umbrella organisations consist of a great variety of organisations, while narrow organisations have members with a very specific set of characteristics.⁵ Similar to the large and small networks of institutionalised ties, broad and narrow networks are expected to have varying levels of ease in finding common ground on various issues. One could thus expect lower levels of similarity in voiced preferences for organisations that are tied through a broad umbrella organisation. The difficulty of the broadness variable is that it overlaps conceptually with the size variable and that the ‘broadness’ variable is both harder and more subjective to measure than the ‘size’ variable, since you would have to (subjectively) quantify ‘broadness’. While I will not formulate a hypothesis on the broadness variable, part of its effect is captured by the network size variable (H2), and part will be captured by the interest variable explained below.

2.4 Other variables

The main reason for lobbying organisations to voice certain preferences is that this suits the interests they represent and may convince decision makers to act accordingly (Berkhout et al., 2015). Most studies do not quantify this variable since it is nominal; each interest is different, and interests are often hard to quantify. Where this has been tried, authors often try to either place interests on a certain scale (left-right, level of environmental concern, etc.) (e.g. Bernhagen et al., 2015; Beyers and Donas, 2014; Beyers et al., 2015), or try to test whether a specific type of interest (e.g. business, environmental groups, etc.) has a different outcome when compared to the rest (e.g. Binderkrantz, 2008; Bunea, 2013; Dür, 2008). Since the interest of this study is similarity, we can look at the similarity of interests, and how that may affect the level of similarity in voiced preferences (Beyers and Donas, 2014; Bunea, 2015).

H3: Lobbying organisations representing similar interest will voice more similar preferences than organisations not representing similar interests.

⁵An example of a broad organisation could be BUSINESSEUROPE, which is an umbrella organisation for all sorts of European employers. On the other hand, ESCHFOE can be seen as an example of a very narrow organisation, representing only European chimney sweeps. Examples from Greenwood, 2007, p. 69.

Also, organisations representing the same country may voice more similar preferences. This is both because organisations from the same country are more likely to interact, and because certain interests may be more prominently present in certain countries, which may influence the position of lobbying organisations from that country. For example, Beyers and Donas (2014) found such an effect. It should be noted however that their findings regarded sub-national public authorities, while this study concerns a broader set of lobbying organisations.

H4: Lobbying organisations from the same country will voice more similar opinions than organisations from different countries.

Another expectation is one about the great variance of business interests in the EU. The variance of business actors and interests in the EU is very large, which is partly caused by differing impacts of European integration on firms, differing national interests and in general a great variety of interests (Greenwood, 2007, p. 69-107). Indeed, NGO's for example may find it easier to construct coalitions than businesses, who are essentially in competition with each other for certain types of regulation (Long and Lörinczi, 2009). In the end, business actors can be expected to have less of a common outlook than other kinds of organisations, even within single policy domains.

Taking environmental legislation as an example, vast differences in opinion can be expected between companies specialised in renewable energy, companies involved in fossil fuels, service providers and others. It should also be noted that business is by far the largest category of organisations lobbying in Brussels (Berkhout and Lowery, 2008). Although part of this variance within business will be captured by the variation in interests variable, it is worthwhile to check for differences in opinion within the business category.

H5: Business actors will voice less similar opinions when compared to their peers than other organisations will when compared to their peers.

Another theoretically relevant variable regards the amount of resources a lobbying organisation possesses. Often expressed as either the budget of an organisation or as the amount of employees of an organisation, resources are associated with higher success rates of lobbying organisations, more access to policy makers, more voiced opinions, and other factors. Regarding similarity in expressed opinions, well-endowed lobbying organisations may be more influential (Beyers and Braun, 2014; Leifeld and Schneider, 2012), which would possibly lead to a higher level of similarity of preferences with other organisations. In order to fully measure the effects of these processes, we would need data on the resources of organisations. However, public data on lobbying resources is incomplete and often of dubious quality. Collecting reliable data on this matter is very time-consuming, and falls outside of the scope of this thesis. Therefore, I cannot test any hypothesis on this factor, nor can it be used it as a control variable.

Two theoretically relevant contextual variables regard the policy field concerned and the institutions that are lobbied by lobbying organisations. The presence of both different kinds of interest groups and different kinds of policy makers is skewed depending on the policy in question (Kollman, 1997). Different policy issues can for example accompany different levels of salience and conflict (Klüver, 2011, 2013, Mahoney, 2007a) and different levels of complexity (Woll (2007), Klüver, 2013). Regarding the institutional context in which an interest group operates, the Commission, the European Parliament, the Council and other European institutions represent different lobbying venues, sensitive for different strategies (Greenwood, 2011, Schendelen, 2003). Also within for example the Commission or Parliament, interest groups may encounter different institutional environments in different parties, committees, and DG's (see for example Bernhagen et al. (2015) regarding the EC and Marshall (2015) and Binderkrantz (2008) for the Parliament). These factors are constant in this study since only one case is considered, so no hypothesis will be formulated. Nonetheless, they may be very relevant when looking at larger samples of policies and decision makers.

3 Methodology

In this section I will address the methodological aspects of this thesis. In the first subsection I will describe the case selection for this study. In the second subsection I will substantiate the choice for qualitatively collected data on expressed positions in consultation contributions over quantitative data gathering. In the third subsection, I will defend the choice for a dyadic data structure and describe how the dyadic data analysis will be conducted.

3.1 Case selection

In order to compare preferences between lobbying organisations, I need a set of voiced preferences on the same topic, in comparable format, from a limited time frame. Preferably, this is a mix of general and more specific or technical statements with possible political consequences to assure a broad and serious set of preferences. Online consultations of the European Commission offer this possibility. Online consultations are an open and widely used way to lobby the Commission, are conducted in a limited time frame, are publicly accessible, have a low threshold for access and concern specific policy issues (Quittkat and Finke, 2008). Commission consultations offer a suitable opportunity to analyse and compare the positions of lobbying organisations on a policy issue (Bunea, 2014; Quittkat and Kotzian, 2011).

The Commission issues online consultations in various forms, and often allows for various forms in one consultation. These forms range from questionnaires with (mainly) closed multiple choice questions, questionnaires with open questions, and consultations on which organisations can react with self-written position papers. These different forms have different effects on the

responses (Quittkat and Finke, 2008) and thus on data one can harvest from them.

Questionnaires with closed multiple choice questions firstly provide an opportunity to easily and reliably code answers into a database. However, with such questionnaires the Commission probes explicitly which issues an organisation should answer. Subsequently, organisations will probably answer multiple choice questions on issues they may not have mentioned by themselves. On the other end of the spectrum we find the consultations in which actors can provide a self-written position paper. Position papers offer better insight into the preferences of respondents than closed multiple-choice questions. On the downside, position papers often lack a similar structure, which makes them hard to compare.

Best suited for this study are questionnaires that offer contributors the chance to elaborate on their answers. In these questionnaires, the Commission poses (relatively) open questions in addition to the multiple-choice ones. This may offer a comparable level of insight as do the self-written position papers, whilst also offering a greater level of comparability since the contributions have a similar structure.

For this study, I have selected a consultation on European legislation for the reduction of CO₂ emissions from road vehicles.⁶ The Commission has clear competencies in this field, and possible regulations may have significant impact for stakeholders responding. This provides a politically relevant environment in which the contributions are written. The consultation has sufficient contributions to provide for a viable analysis of the data, whilst being able to code all contributions. A glance at the contributions shows that organisations contributing are both diverse and somewhat centred around certain clusters (environmental, transport services, and several other sectors). After filtering anonymous and (almost) unfilled contributions, 63 contributions remain for analysis. It should be noted that this is not one of the cases used in Bunea (2015)

Taking answers to multiple-choice as well as open questions into account can have a distorting effect on the data. Where multiple-choice questions have only a limited and fixed set of options to choose from, open questions have almost unlimited. Overlap on open questions will thus be relatively rare, and if two organisations answer a higher number of open questions, their level of overall overlap will most likely decrease. Since this effect is not of theoretical value, I will not add a hypothesis, but will add a control variable to the analysis counting the total number of open questions answered by either organisation.

3.2 Data collection

In this subsection, I will firstly argue why I did not opt for literal textual comparison or quantitative data gathering. Although both methods have

⁶The source files can be found on the website of the Commission: http://ec.europa.eu/clima/consultations/articles/0012_en.htm

significant upsides, they are not suited for this specific study. Subsequently, I will explain my choice for qualitative data gathering.

3.2.1 Textual comparison and quantitative analysis

In order to compare contributions of lobbying organisations to consultations of the Commission, it is possible to compare the texts of various documents in order to find textual overlap between the documents. Textual overlap would only be expected to occur as a result of quoting or copying parts of the Commission proposal, or from quoting or copying contributions from other organisations. There are both positive and negative sides to literal comparison of document texts. On the positive side, literal overlap between documents gives a strong (but not infallible) indication of exchange of viewpoints.

There is however one major issue with this approach. Comparing documents textually only compare *literal* overlap between documents. Any two organisations that strategically express each others' points of view but do so in a different wording would not show up in the analysis. Subsequently, taking textual overlap between contributions as a proxy for the strategic exchange of viewpoints is problematic.

Quantitative data gathering has been successfully applied in lobbying research (see for example Klüver, 2009 and Klüver, 2013). Although the method allows for the gathering of large amounts of data in a small time frame, it is not suited for the purpose of this study.

Firstly, it should be noted that quantitative methods of text analysis make use of dimensions in policy debates. Quantitative text analysis will score actors on one or more dimensions in a policy debate based on the frequency of certain indicative word counts. Depending on the specific policy area, there may be one or more general dimensions⁷. However, the hypotheses formulated earlier in this thesis do not match this approach. Rather than the proximity of actors on a general scale, we are interested in the proximity of actors on specific policy issues *within* broader policy debates. This is because actors may strategically exchange positions on certain issues, but are less likely to change their overall ideological stance. Since positions on specific policy issues are only a minor part of the documents sent in for consultations, it would be very difficult to predict specific positions on policy issues based on word counts.⁸ Also, since consultations are publicly accessible, they have multiple audiences; the Commission, the public, and stakeholder organisations (Greenwood, 2007). Although this may lead to various formulations on issues, and thus to different word counts, it will have less impact on positions taken.⁹

⁷For example: More or less flexibility on the application of environmental standards for cars, left or right in parliamentary proceedings, or more or less regulation of financial sector actors, etc.

⁸see also footnote 4 in Bunea and Ibenskas (2015).

⁹It should be noted that it is possible for an organisation to *not mention* certain preferences because the consultations are public. In my approach there may thus be false instances of 'missing' or 'no convergence', since no preference was expressed.

3.2.2 Qualitative data gathering

Since the dimensionality issue does not allow for quantitative data collection, we are bound to qualitative data collection. In the qualitative approach, I look at ‘revealed preferences’ by organisations. This means that not the whole document is coded, but only the sentences that indicate concrete policy preferences regarding policy issues. On multiple choice questions, the answering options are clear. With open questions, the coding categories are based on the positions identified in the Commission summary of the consultation. A more detailed account of this coding process can be found in the operationalisation section.

The major downside to quantitative data gathering is that it is very time consuming (Klüver et al., 2015). After all, all consultation contributions must be hand-coded. This restricts me to a relatively small data set and thus sample size. A larger sample would fall outside the scope of this thesis. The small sample has implications for the reliability of the results and the possibility to generalise the findings. Nonetheless, since the research into the relation between interorganisational ties and preference formulation is still rather new, there is sufficient value in results based on a small sample, with a bigger dataset possible as a future development. Furthermore, even single cases may offer valuable insights into processes.

3.3 Analysis of dyadic data

In this subsection, I will firstly introduce the choice for a dyadic data structure. Secondly, I will outline alternative statistical methods that I considered, but which are insufficiently suitable for the specific aim of this study. Afterwards, I will describe an illustrating example of dyadic data, which may be especially useful for those not familiar with dyadic data structures. Lastly, I will outline the formal statistical model used in this study. It should be noted that a dyadic data structure has some caveats, which can partly be overcome. The caveats and solutions are discussed in the next subsection (3.4).

3.3.1 Dyadic data

In this study I try to explain similarity of voiced preferences by lobbying organisations. In order to assess similarity of different documents, I will need to compare them to each other. Note that this is a different approach than most statistical analyses, where cases are compared to a set benchmark (e.g. left-right, low-high, 0-10, etc.), rather than to each other. Dyads can contain information on two cases, as well as information on the distance between those cases.

Dyadic data structures have been developed in psychology (e.g. Folkes, 1982; Kenny et al., 2006; Tversky, 1977), medicine (e.g. Sadler et al., 2011) and international relations (e.g. Erikson et al., 2014; Green et al., 2001; Spiro, 1994). In public policy, it has been used to model policy diffusion (Gilardi and Fuglister, 2008) and similarity in preference formulation (Bunea, 2015).

On the case level, I will code case characteristics and the corresponding submitted documents. In the comparison, the scores for every case (lobbying organisation) are compared to every other case in that group (consultation round). The unit of analysis will thus be the comparison (dyad) constructed from the two cases. For the dependent variable, I will measure a percentage of overlap in positions with every dyad of two cases. Subsequently, I will test whether variation on the independent variables outlined in the theoretical framework correlates with the variance of the scores of this overlap.

3.3.2 Other options

Structuring data in dyads comes with some difficulties that I will outline below. Yet, it stays closest to main expectations and hypotheses I wish to investigate in this study. I will shortly outline two other options that I have considered, but of which I have concluded they do not fit the requirements for this study.

Firstly, one may think of multi-level analysis as an alternative to a dyadic data structure. After all, one could consider the dyad to be a second level on top of the case as first level. However, multi-level modelling usually assumes that each case is in only one higher level group. For example, a pupil is in only one class. When seeing dyads as a second level group however, each case is represented in a multitude of groups (comparisons). After all, there would be a group consisting of actors a and b, a group consisting of actors a and c, and a group consisting of actors a and d. Although there are methods to deal with some of such issues (Fielding and Goldstein, 2006), the amount of level 2 groups would be too large to meaningfully interpret.

Secondly, one could use cluster analysis to account for similarity between clusters of actors. Although possible with matching types (Finch, 2005) and perhaps a very promising solution for other studies that wish to take into account interaction within clusters of actors, it is not suited for this specific study. Partly, this is because one will be forced to choose between a situation where some tied organisations are in different clusters and (more likely) a situation where clusters contain sets of organisations that are only indirectly (through one or more others) linked.¹⁰ This would undermine the accuracy of our independent variable, since we specifically look at direct ties. More problematic however, is the fact that testing for significance is very difficult with cluster analysis. One would be forced to test the significance of a distinction that was constructed on the basis of the data itself.¹¹ Indeed, cluster analysis is a very useful method, but more suitable for use with variables whose robustness is already established than to establish that robustness. In this study I try to do the latter, and thus depend on other methods.

¹⁰For example, when constructing clusters based on data about who people regularly speak to, you may end up in a cluster with a good friend of your neighbour. You may regularly have a chat with your neighbour, and your neighbour with his friend, while you do not know your neighbour's friend at all.

¹¹An example of testing for difference in distributions for groups from the data would be to perform a t-test on the heights of "tall" and "short" people in the data. Such tests will almost always turn out significant.

3.3.3 An illustrating example

Below, I will outline an imaginative example of data when structured in dyads. Although perhaps superfluous for those already familiar with dyadic data, I believe it is a useful illustration for those who are not. Firstly, I will outline some data in regular cases (in table 1) and subsequently of the same data, structured in dyads (table 2).

There are a couple of notes to make on the transformation from the data in table 1 to the dyad structure in table 2. Most importantly, since the variables have been recoded, their names have also changed. The column ‘Case’ has been recoded into a column ‘Dyad’, and the columns X_{1-8} have been recoded into W_{1-8} . It should also be noted that W_9 and Y_O are newly computed. They will be explained below.

Table 1: Random sample of regularly sorted data

| Case | X_1^a | X_2^b | X_3^c | X_4^d | X_5^e | X_6^e | X_7^e | X_8^e | Y^f |
|------|---------|---------|---------|---------|---------|---------|---------|---------|-------|
| 1 | a | 1 | 224 | 4 | 1 | 2 | 0 | 0 | 0.5 |
| 2 | i | 0 | 145 | 2 | 2 | 2 | 0 | 1 | 0.75 |
| 3 | o | 0 | 76 | 3 | 1 | 0 | 0 | 0 | 0.25 |
| 4 | a | 1 | 98 | 2 | 1 | 0 | 2 | 0 | 0.5 |

^a Nominal variable

^b Dichotomous variable (e.g. member of umbrella X? Y/N)

^c Interval / rational variable (e.g. resources)

^d Ordinal variable

^e Nominal variable (e.g. position on policy issue:

0, no answer; 1, in favour; 2, against)

^f Interval / rational variable (e.g. dependent variable: percentage answered)

In table 1 only 1 and 4 have the same value on X_1 , which is a nominal variable. Subsequently, only one dyad in W_1 is coded with a 1. For W_2 , the same is true. W_2 codes whether the members of the dyad are a member of the umbrella organisation described in X_2 ; when both are not a member, W_2 will be 0. W_3 shows the difference between the resources mentioned in X_3 for each dyad. W_4 , being an ordinal variable, again only yields one positive result (for dyad 2-4), based on the data under X_4 .

W_{5-8} subsequently display whether the expressed positions of the members of the dyad converge, taken from their corresponding scores on X_{5-8} . A ‘1’ indicates convergence, a ‘0’ indicates no convergence, while a missing score (a space) indicates that neither of the members took a position on that policy issue. When one member of a dyad expresses a certain opinion, while the other does not mention it, this is coded as ‘no convergence’. This done regardless of the fact that we are unaware of what the opinion of the other organisation is (it has at least not mentioned it). The relevant fact is that one organisation expresses a certain opinion, and the other organisation does not.¹²

¹²This is an important assumption in the research. The issue is apparently not seen as

Table 2: Dyadic structure of data as displayed in table 1

| Dyad | W_1 | W_2 | W_3 | W_4 | W_5 | W_6 | W_7 | W_8 | W_9 | Y_O |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1-2 | 0 | 0 | 79 | 0 | 0 | 1 | | 0 | .75 | .375 |
| 1-3 | 0 | 0 | 148 | 0 | 1 | 0 | 0 | | .5 | .125 |
| 1-4 | 1 | 1 | 126 | 0 | 1 | 0 | 0 | | .75 | .1875 |
| 2-3 | 0 | 0 | 69 | 0 | 0 | 0 | | 0 | .75 | .1875 |
| 2-4 | 0 | 0 | 47 | 1 | 0 | 0 | 0 | 0 | 1 | .25 |
| 3-4 | 0 | 0 | 22 | 0 | 1 | | 0 | | .5 | .125 |

W_9 indicates the portion of the total of issues on which at least one of the members of the dyad gave a response. The outcome variable Y_O refers to the dependent variable of overlap. It measures the number of issues on which both members of the dyad voiced the same preference, as a proportion of the number of issues on which at least one of the organisations voiced a preference (W_9).

The data design described above is known as a round-robin design (Kenny et al., 2006), since all members of a group are linked to all other members of the group. The group in this case consists of all lobbying organisations taking part in the consultation. One can view the groups and dyads therein as a multi-level model, in which group G contains dyads $D_{(1,2)\dots((n-1),n)}$ in which each dyad $D_{(i,j)}$ represents the (dis)similarities between cases C_i and C_j .

3.3.4 The model

The hypotheses in this study will be tested by formalising the expectations from the hypotheses in a statistical model, which is then tested on the collected data. The statistical model in this study estimates the extent in which the outcome Y (amount of overlap between members of the dyad) is explained by various variables (W_1, W_2, \dots, W_u) that correspond with the hypotheses. The formula that would accompany such a model would be $Y_i = \beta_0 + \beta_1 W_{1_i} + \beta_2 W_{2_i} + \dots + \beta_u W_{u_i} + \epsilon_i$ in which Y_i represents the overlap in preferences in dyad i , β_0 represents the constant, the other $\beta_{\#}$'s indicate the expected increase or decrease in Y_i for each unit of increase in their corresponding variable $W_{\#}$, and ϵ_i indicates the unexplained variance for dyad i .

We can analyse the data described above with a regular OLS regression model, since the outcome variable is a between-dyads one (Kenny et al., 2006, p. 22). The model will provide the best fit it can find for the data. Subsequently, this can be interpreted as; 'a greater distance between the values of two actors on variable X_m (on case level), as exemplified by variable W_m (on dyad level),

sufficiently important to respond upon. Nonetheless, the organisation could have responded on the issue, if only to do a favour for a friendly other organisation. Or it may not have seen the issue as especially important otherwise, but may have been alerted to its importance by the umbrella organisation, causing them to respond to it. However, the fact that it didn't express an opinion on an issue which did receive a comment by another organisation is important data, worth analysing.

corresponds with a change in the overlap between the contributions of those two actors of β_m .

To differentiate between the hypotheses in this study, I articulate four distinct models.

- Model 1 only contains the variables on hypothesis 1 and the control variable on the number of open questions.
- Model 2 contains the variables on hypothesis 1, 2, and the control variable on the number of open questions.
- Model 3 contains the variables on hypotheses 1, 2, 3, 4, and the control variable on the number of open questions.
- Model 4 contains the variables on all 5 hypotheses, and the control variable on the number of open questions.

3.4 Dyadic data: Issues and solutions

3.4.1 Issues

A major issue with dyadic data is the fact that the amount of observations (comparisons) is far larger than the amount of cases (consultation contributions) the observations are based upon. Specifically, for n cases there will be $\frac{n(n-1)}{2}$ dyads. This is an exponential function, which means that for any increase in number of cases, there will be exponentially more dyads. Furthermore, any dyad $D_{i,j}$ is related in a complex way to the dyad $D_{i,k}$ (King, 2001). This violates the assumption of nonindependence of observations, which may lead to severe issues with the reliability of the data (Kenny et al., 2006). Specifically, it is likely to lead to severe overconfidence in the effects any analysis would yield (Erikson et al., 2014).

These issues also play up in the study of Bunea (2015). Bunea constructs organisation-organisation dyads, which are subsequently combined with separate policy issues, creating dyad-issues as the unit of observance. The study makes use of a dichotomous dependent variable (either the same or not the same position on issue X) (Bunea, 2015, p. 286). However, since there are multiple issues in each document, the issues are not independent either.¹³ Bunea accounts for this nonindependence by employing a multi-level model in which dyads are nested in issues, and issues in consultations. In this multilevel model, she incorporates random intercepts at issue level and assumed fixed effects for consultations¹⁴. However, this only accounts for the fact that there will be more agreement on some issues than on other, and not for the fact that the issues are nonindependent.

¹³Bunea's paper as an example, it is unlikely that actors consider the target level of CO2 emission as independent from the question of when to reach that target, from the question whether to introduce a marketing code of conduct, or from the question of how much flexibility manufacturers should have regarding CO2 emissions (See Bunea, 2015, p. 292).

¹⁴See endnote 8 in Bunea (2015)

Also, Bunea does not control for the fact that constructing dyads greatly increases the amount of observations under consideration. Bunea constructs 41311 organisation-organisation dyads from 568 contributions, and comes to a total N of 168.698 observations when these are linked with their corresponding issues¹⁵. Although this inflation does not necessarily influence the direction of the results found, it significantly underestimates the margins of error computed. Inflating the number of observations this way may lead to a serious overestimation of the certainty of the found correlations (Erikson et al., 2014¹⁶, King, 2001).¹⁷

Although the dyad $i - j$ is not independent from the dyad $j - k$, the dependency and its effects are complex (King, 2001).¹⁸ Dyads constitute a different kind of observations than do cases, but they are related to and them in a complex manner. Nonetheless, the overconfidence of estimated errors does not correspond directly to the ratio by which the number of observations is increased. Starting out for example from 30 consultation contribution, one could construct 435 dyads. The number of observations is thus increased by a factor of 14,5. However, this does not tell us by how much the certainty of the found correlations is overestimated, since the cases and the dyads are different units of analysis.

3.4.2 Randomisation as a partial solution

In principle, we can treat the dyads as if they were independent of each other in a regular OLS regression. We do however have to control for the overconfidence resulting from the construction of dyadic data (see above). An accessible way to solve this issue is presented by Erikson et al. (2014) in their analysis of the effects of democracy on international trade.

In order to approximate the correct standard errors that accompany the effects found with OLS regression in dyadic data, Erikson et al. (2014) employ randomisation tests. Essentially, the authors reshuffle the values of the cases¹⁹

¹⁵It should be noted that this is less than the theoretical maximum amount of dyads Bunea could construct. Since any dyad in which at least one of the two organisations did not express an opinion removes that dyad from the analysis, only 27% of the possible dyads ends up in the final analysis.

¹⁶The dyad-issue structure is very similar to the dyad-year structure described by Erikson et al., 2014. Note however that since issues do not follow each other in the same logical fashion as years do, some ways for controlling become impossible, such as the logged dependent variable referred to as ‘dynamics’ in Erikson et al. (2014)

¹⁷Also see Green et al. (2001) and Beck and Katz (1995) p. 636 for an analysis of the assumptions violated when running OLS regression in the related case of time-series cross-section constructed data.

¹⁸If one misclassifies a single case, it would distort $(n - 1)$ dyads. However, this distortion does not necessarily have a positive or negative effect on the estimation of any β_m or its effect on Y . If any C_m is misclassified on one variable, that may increase the distance of that case on that variable with some other case, but decrease the distance on that variable with other cases.

¹⁹Note that note that the data is reshuffled on the case (C) level, rather than the dyad (D) level.

on the independent variable of interest among the observations.²⁰ Reshuffling the data on the independent variable of interest breaks any original relation between that independent variable and the dependent variable. This randomisation process creates reference distributions under the condition that there is no *a priori* relation between X and Y. If subsequently sufficient ‘randomised’ regressions are run, we can estimate the likeliness of finding a certain effect while there is none.

This same process can be applied to the proposed research structure. It would mean that after the original analysis, the data (on case level) on who is a member of what umbrella organisation would be reshuffled, the corresponding dyadic variables would be recomputed, and the regression would be repeated. This process will then be repeated 10,000 times. Afterwards, we can see how likely it would be to find the original effect had we scrambled the variable at will.²¹ The analysis will be conducted in R (Team, 2016), a statistical programming language that allows such statistical methods.²²

4 Operationalisation

This section contains the operationalisation of the variables in the analysis. The first subsection contains the operationalisation of the dependent variable. The second subsection contains the operationalisation of the independent variables.

4.1 The dependent variable

The dependent variable is an average of the overlap on each question to which at least one of the members of the dyad voiced an opinion. This can be

²⁰For example: If that variable would have the values 1, 4, 2, 12, 4, and 6 for six cases, those same values would be redistributed randomly among the cases.

²¹For an example of how this would look like, see specifically page 462 of Erikson et al. (2014) for a visualisation, and page 459 for an explanation of the method.

²²Regarding the code used by Erikson et al. (2014), there is a minor issue. The authors construct in their R code three lists; one for all individual cases, one for all individual cases listed as the first member of the dyad, and one for all individual cases listed as the second member of the dyad. The cases listed as the first and second member are one fewer in member than the complete list (69 for the complete list, and 68 for the lists of the first and second members). This is because each dyad is only listed once; case #1 will not appear in the list of second members, and case #69 will not be listed in the list of first members. The authors then take a random sample of the complete list, and link the random numbers to the original numbers. Subsequently, these random numbers are correspondingly linked to the list of first and second members of the dyads. This means however, that there will probably be a "1" among the randomised list of second members, and a "69" among the randomised list of first members. When these case numbers are then linked to the corresponding data that is to be randomised, it cannot be found, resulting in missing values for one of the first members and for one of the second members. This problem can be countered by employing a double entry method of data notation (Kenny et al., 2006). This means that each dyad is noted twice (both dyad 1-2 and dyad 2-1, etc.) Subsequently, the lists for members a and b can be merged with the complete randomised list of id's without the issue above occurring. One should however, after the randomization process and before the regression analysis, drop the ‘double’ entries from the data. This has been done in this study.

summarised as $Y_{overlap} = Q_s/Q_n$ in which Q_s stands for the number of identical opinions voiced, and Q_n stands for the number of questions at least one of the members voiced an opinion on. For the dependent variable of overlap between consultations, there is a difference between multiple choice questions and open questions. For multiple choice questions:

- Answers to yes-or-no questions were coded as 1 (yes), 2 (no), or missing. On the dyad level, a 1 was noted in case of overlap, and a 0 otherwise.²³
- Answers to ordinal questions with a scale of 5 (strongly agree to strongly disagree) were coded with a corresponding value of 1 (for strongly agree) to 5 (to strongly disagree), or missing. On the dyad level, a 1 was noted in case of full overlap, a 0.5 in case of partial overlap (when the difference between two cases was only 1), and a 0 otherwise. In case both values were missing, the value in the dyad would also be missing.
- Answers to question with similar answer categories²⁴ were treated in a similar fashion to the ordinal questions, with on the dyad level a full point coded for full convergence, and half a point coded for similar, but different answers.
- Answers to questions that were by design only answered by part of the respondents²⁵ were treated similarly to other questions, but with the difference that if on case level one value was missing, every dyad in which that case was represented would be coded as missing as well.

Part of the questionnaire consisted of open questions; some addressed at all respondents (e.g. F: additional comments), others only at certain respondents (e.g. E7: 'Please specify why additional targets should not be set' - only asked if answered 'no' to question E5). For open questions:

- The positions that were coded were derived from the Commission summary of the consultation. Positions noted in the Commission summary were assumed to have been mentioned by multiple actors.
- Each position mentioned in the Commission summary was noted as a separate dummy variable. Each actor in the position to reply on the specific question could either mention that position (in which case a 1 was coded) or not mention the position (in which case a 0 was coded).
- Missings were coded for actors that could not have answered the specific question, for example because the question was only posed if a certain

²³It should be noted that if both values for the dyad were missing, a missing would also be coded for the dyad. This is not the case if only one value was missing; then a 0 for 'no convergence' would be noted.

²⁴For example, the answering possibilities for one question included 'yes', 'yes, especially black carbon', 'yes, especially nitrogen oxide', etc. In such a case, partly overlapping answers were coded as 0.5 on the dyad level.

²⁵usually questions that only appeared if a previous question was answered in a specific way.

answer was given on a previous question. A missing from either or both of the cases on that question would also lead to a missing on the dyad level.

- If both members of the dyad were in the position to answer a question, a 1 was coded on a dummy if both expressed that opinion, a 0 was coded if one member did express that opinion, but the other member did not, and a missing was coded if neither member expressed that opinion.

4.2 The independent variables

In this study, we use several explanatory and control variables, all of which are independent variables in the model. For each of them, the operationalisation is described below.

The main independent variable is the variable that indicates the number of institutionalised links between two actors (corresponding to H1). Based on information on the websites of umbrella and member organisations, I have mapped the relevant umbrella organisations, and noted which organisations were connected to them. In total there are 15 umbrella organisations that have at least two organisations linked through them. For each actor and for each of the 15 umbrella organisations, a 0 was coded if the organisation was not related to that umbrella organisation, and a 1 was coded if the actor was either the umbrella organisation itself or a member of that umbrella organisation. On the dyad level, I coded for each of the 15 umbrella organisations a 1 if both members of the dyad scored a 1 in case level for that umbrella organisation, and a 0 otherwise. The main variable was then constructed by counting the number of umbrella organisations both actors were involved in. It should be noted that this operationalisation does not differentiate between being the umbrella organisation itself or being a member of it. Although such an operationalisation could be theoretically relevant, the sample is too small to yield reliable results if it is further divided on this variable.

For the interaction variable on the number of ties to third organisations (H2), two variables are added to the analysis. The first counts the number of ties that each of the organisations in the dyad has to all other organisations in the sample (ties are counted in the same way as in the main variable). The second variable is the actual interaction variable, which multiplies the number of ties between the members of the dyad with the total number of ties to other organisations in the sample.

The third hypothesis concerns whether the members of the dyad represent the same interest (H3). Being from the same sector implies similar interests, and thus similar positions in consultations. In order to closer match the sectors and the implied similar interests, I have opted for a slightly more specific operationalisation than Bunea, 2015²⁶. Based on intuitive clustering, conducted before the consultation coding process, actors were assigned one of

²⁶Bunea, 2015 uses main (directly affected) business, secondary (indirectly affected) business, environmental NGO's, local authorities, national authorities and other as her 'interest types'.

the following categories (in decreasing size): Road transport service organisations, vehicle and parts manufacturers, environmental organisations, general transport organisations, public transport and rail organisations, consumer organisations, ‘other’, electrical vehicle organisations, alternative fuel organisations, public organisations, religious organisations, and trade unions. On the dyad level, the dyad was coded a 1 if both organisations were from the same sector, and a 0 if both organisations were from different sectors. A 0 was also coded if both organisations were from the ‘other’ category.

The third hypothesis concerns whether the two organisations are from the same country. Here, there were 12 options of which nine 9 countries, one ‘other’, one ‘European Union-wide’ and one ‘worldwide’. The ‘other’ category was only used for lobbying organisations that were the only one from their country. On the dyadic level, dyads were coded with a 1 if both members were both from the same category, and a 0 otherwise. If both were from the category ‘other’, ‘EU-wide’ or ‘worldwide’, a 0 was coded.

For the hypothesis on the variance in voiced preferences among business organisations, two dummy variables are constructed. The first codes a 1 if both members of the dyad are a business organisation, based on the Commission system for lobbying organisation types, and a 0 otherwise. The second dummy codes a 1 if both organisations are from the same Commission-based type (NGO, public authority, etc.), but no business organisation. The reference group is then all dyads in which the first member of the dyad is of another Commission-based type than the second member of the dyad.

The last variable in the analysis is a pure control variable. It indicates the number of open questions that at least one of the two members of the dyad voiced a preference on. Each coded position on an open question taken by either or both of the members of they dyad was coded as one open question answered.

5 Analysis

The analysis is divided in several parts. In the first part, I will elaborate on the descriptives of the data. In the second part, I will outline the results of the main hypotheses regarding institutionalised ties and network size, and describe the outcome of the randomisation process. The third part will contain the analysis of the other hypotheses regarding similarity of interests, country of origin and differences between business organisations and other organisations. As outlined in the methodology, the dyadic structure of the data leads to an underestimation of the p-values. One should therefore not draw conclusions from the results tables without reading the further analysis.

5.1 Descriptives

Taking a look at the descriptives of the data already reveals some interesting background information. As can be seen in table 3, the dependent variable

(overlap) is centered around the mean of 0.4 (40%), and is very close to normally distributed (see also figure 1).²⁷ The main independent variable of institutionalised ties between actors has a very low mean, illustrating that sharing an institutionalised tie is somewhat rare when compared to for example representing the same interests or being from the same country. Regarding ties to third organisations there are on average 3 for both organisations in the dyad, ranging up to 15 per dyad.

Table 3: Descriptives of variables

| Statistic | N | Mean | St. Dev. | Min | Max |
|-----------------------------|-------|--------|----------|--------|--------|
| Overlap | 1,953 | 0.406 | 0.140 | 0.052 | 0.938 |
| Nr. of ties | 1,953 | 0.024 | 0.160 | 0 | 2 |
| Nr. of ties with third orgs | 1,953 | 2.936 | 3.072 | 0 | 15 |
| Same interests | 1,953 | 0.100 | 0.300 | 0 | 1 |
| Same country | 1,953 | 0.182 | 0.386 | 0 | 1 |
| Both business | 1,953 | 0.379 | 0.485 | 0 | 1 |
| Both other | 1,953 | 0.070 | 0.255 | 0 | 1 |
| Nr. of open q's answered | 1,953 | 6.782 | 4.741 | 0.010 | 23.010 |
| Overlap on open q's | 1,953 | 0.069 | 0.119 | 0.000 | 0.990 |
| Nr. MC q's answered | 1,953 | 17.731 | 1.607 | 12.010 | 21.010 |
| Overlap on MC q's | 1,953 | 0.511 | 0.154 | 0.059 | 0.999 |

Also, there are many pairs of business actors in the data. Around 38% of the dyads concerns two business organisations. Pairs of two the same other organisations, such as two NGO's or two trade unions, only make up 7% of the dyads. The remaining 55% of the dyads consist of two organisations of different types of organisations.

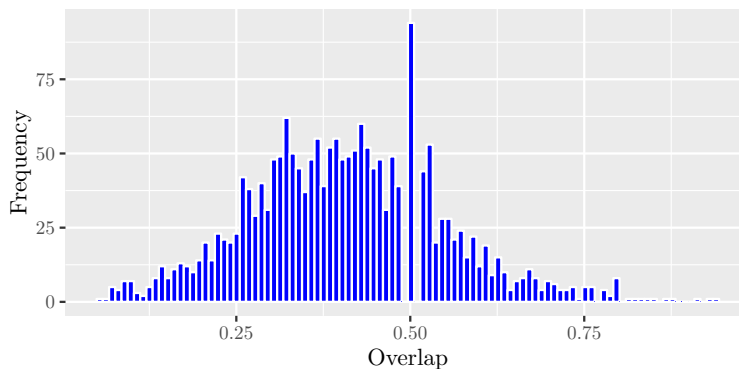
Lastly, the number of answers to open questions shows both a far lower mean and a far higher level of variance than the corresponding values for multiple choice questions. The average level of overlap on open questions is also, as expected, far lower than on multiple choice questions, with a similar standard deviation, but a much lower mean. This validates the decision to take the number of answers to open questions (by either or both organisations) as a control variable since it indicates that organisations that answer more open questions will probably have a lower level of overlap with other organisations.

5.2 Results

Table 4 on page 26 displays the regression results of four models. In the four columns, the different models are displayed, and in the rows, the different variables are displayed. The first model is a basic model in which only the

²⁷Both the descriptives table and the regression results table have been produced with Stargazer (Hlavac, 2015).

Figure 1: Histogram of Y: Overlap



main variable on institutionalised ties and the control variable are incorporated. In the second model, I add the variables of the expected interaction effect regarding the number of ties with third organisations. The third model adds the variables on the country of origin and on the similarity of represented interests. The fourth model is the full model and also includes the variables on the variance of preferences in business and other organisations. The results and especially the significance should be interpreted very carefully due to the underestimated p-values, as explained in the methodology.

5.2.1 Ties and similarity of preferences

Looking at model 1 in table 4, we see that for every tie between two organisations predicts 0.049 (or 4.9%) more overlap in those organisations' consultation contributions. I will return below on the significance of these findings after the randomisation tests. In the other models, the interaction variable regarding network size is also incorporate. In these models, the variable on ties cannot be interpreted independently from the interaction variable.

Interesting to see is that the interaction variable on ties to third organisations has a big predicted impact as well. In model 2, 3 and 4, there is somewhere between a predicted 20.4% (model 4) and a predicted 23.5% (model 2) more overlap between two tied organisations *that have no ties to third organisations*. For every extra tie with a third organisation, there is in between 1.7% (model 4) and 2% (model 2) *less* predicted overlap between two tied organisations. This is also displayed in figure 2, which shows the relationship between ties to thirds and overlap on dyads that with two tied organisations (a subset of the total sample). This result suggests that ties between organisations are less used for interaction as the organisations have more ties to other organisations.²⁸ Since

²⁸Indeed, there may even be a small negative effect of having more ties on the overlap of organisations that are not institutionally tied, as is indicated by the 'number of ties with 3rd

Table 4: Regression results

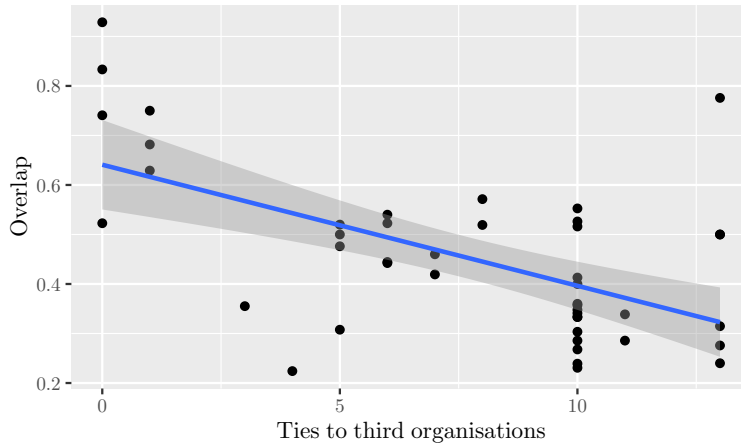
| | <i>Dependent variable:</i> | | | |
|-----------------------------|---------------------------------------|----------------------|----------------------|----------------------|
| | Overlap of consultation contributions | | | |
| | (1) | (2) | (3) | (4) |
| Nr. of ties | 0.058*** (0.017) | 0.235*** (0.038) | 0.218*** (0.038) | 0.204*** (0.037) |
| Nr. of ties with 3rd orgs | | -0.005*** (0.001) | -0.005*** (0.001) | -0.004*** (0.001) |
| Nr. ties * nr. ties w/ 3rds | | -0.020*** (0.005) | -0.019*** (0.005) | -0.017*** (0.004) |
| Same interests | | | 0.030** (0.009) | 0.033*** (0.009) |
| Same country | | | 0.008 (0.007) | 0.010 (0.007) |
| Both business | | | | -0.042*** (0.006) |
| Both other | | | | 0.075*** (0.011) |
| Nr. of open q's answered | -0.014*** (0.001) | -0.014*** (0.001) | -0.014*** (0.001) | -0.015*** (0.001) |
| Constant | 0.500*** (0.005) | 0.513*** (0.005) | 0.509*** (0.005) | 0.520*** (0.006) |
| Observations | 1,953 | 1,953 | 1,953 | 1,953 |
| R ² | 0.229 | 0.252 | 0.257 | 0.304 |
| Adjusted R ² | 0.228 | 0.250 | 0.254 | 0.301 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Significance in this table is overestimated. See methodology

Figure 2: Scatterplot of ties to third parties and overlap among dyads with tied members



Note: This figure displays the effect of the variable of the number of ties to third organisations on a subset of dyads where the organisations share a tie. The slope shows the effect for the interaction variable ‘nr. of ties * nr. of ties to third organisations’.

ties in this study are measured as links through membership organisations, this effect may be due to the size of an organisations network, but also due to the size of the membership organisation (actors in a big organisation may on average interact less with each other actor).²⁹

As indicated in the methodology, the significance scores in the table are misleading when using a dyadic dataset. Although effect sizes are estimated correctly, the corresponding standard errors are too small, resulting in underestimated p-values. We can still interpret results based on effect sizes, but should be very careful before we label an effect ‘significant’. As outlined in the methodology, the randomisation tests that I conducted allow to both illustrate this effect and to provide a better estimate of the significance score for the two main variables on ties between organisations and ties to third organisations.

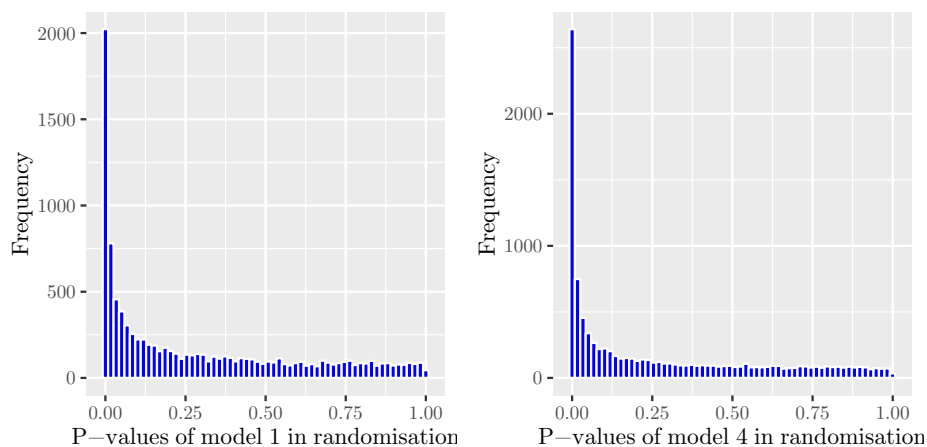
The randomisation tests were conducted on all models, but I will elaborate on those for model 1 and 4, since model 1 excludes the interaction variable, and model 4 is the most extensive. To illustrate the issue with inflated significance figures with dyadic data, I have included histograms of the frequency of p-values for the number of ties variable in the randomisations in figure 3. If there were no distorting effect from the dyadic structure, all p-values between 0 and 1 would

organisations’ variable.

²⁹As outlined in the theoretical framework, the broadness of the membership organisation may also play a role, since this variable overlaps partly with the size of a membership organisation. Nonetheless, part of the broadness is also captured by the variable measuring whether organisations represent similar interests.

have roughly equal representation. However it is clear that in the randomisation tests, very low p-values are vastly over-represented. Indeed, when calculated, the p-values for model 1 fall below the regular alpha of 0.05 around 35% of the time, and the p-values for model 4 fall below 0.05 around 40% of the time.³⁰ To compare, only around 5% of the randomised p-values would fall below 0.05 had there been no distorting effect. This illustrates that the significance figures in table 4 should not be trusted on their own.

Figure 3: Frequency of randomised p-values in models 1 and 4 for ‘nr. of ties’



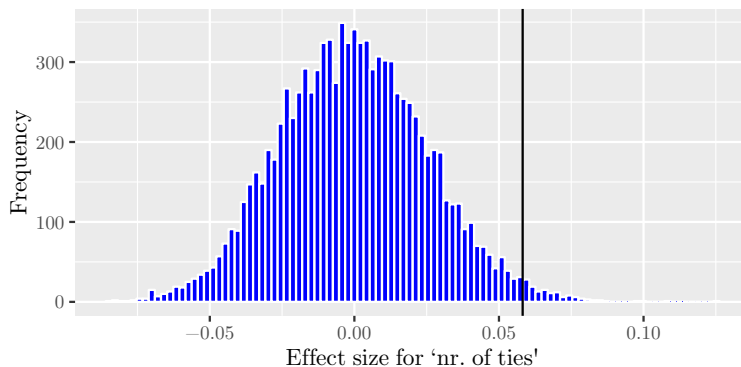
To get a better estimate of the significance of the findings, I will compare the original effect sizes of model 1 and 4 with the 10,000 randomised effect sizes. For model 1, this will provide a reliable corrected estimate of the likelihood of the original effect size. For model 4, this is more difficult, since the effect of the number of ties cannot be interpreted independently from the interaction variable on the number of ties to third organisations. Nonetheless, there are figures that can indicate the significance of the findings in model 4 as well.

For model 1, the estimated effect sizes of the randomisation iterations are displayed in figure 4, along with a vertical line for the original effect size (0.058, as displayed also in table 4). It is clear that when compared with the randomised findings, the original finding is higher than average, even though there are also higher randomised effects. When calculated, it shows that only 236 out of the 10,000 randomisation iterations produced a greater (positive or negative) effect than the original finding of 0.058. With only 2.36% of the randomised findings having a higher effect, this indicates that the original finding of model 1 is indeed significant, albeit only at the 0.05 level.

For model 4, the procedure is more complex. Since the variables of ‘nr of ties’ interacts with the number of ties to third organisations, they cannot be

³⁰We cannot know what percentage it is *exactly* since the randomisation tests consist of a finite sample, with a margin of error.

Figure 4: Frequency of randomised effect sizes for ‘nr. of ties’ in model 1



interpreted separately. Looking at figure 5 and 6 does give an idea of how extraordinary the findings are on themselves. The effect size for the nr. of ties (figure 5) clearly is extraordinary; the vertical line indicating the original finding is completely outside of the distribution of randomised effect sizes. Indeed, none of the 10,000 randomisation iterations produced a stronger effect. The interaction effect however does not provide such a clear answer. Indeed, figure 6 shows that the decrease in overlap resulting from ties to third organisations is not exceptional by itself.

Nonetheless, to interpret and to assess the significance of these variables they need to be looked at in correspondence with each other. A good measure for the combined explanatory value of the variables is the ‘adjusted R^2 ’ value for the full model. A higher R^2 value indicates a higher level of explained variance in the model. The original R^2 value from table 4 can be compared to the corresponding values in the randomisation tests. This comparison is visualised in figure 7. It is clear that the original R^2 is indeed exceptional. From the 10,000 randomisation iterations, only 27 returned a higher value for explained variance, or 0.27%. This is so little, the instances are barely visible in figure 7. To compare, I also calculated the randomised R^2 values for model 1. There, 3% of the randomised R^2 values is higher than the original finding (or 302 out of the 10,000).

This indicates that the combined effect of the number of ties between organisations and interaction effect of the number of ties to third organisations is significant, and indeed more significant than the number of ties variable is by itself. The addition of the interaction variable increases the model’s explained variance, and makes it more robust in the randomisation tests.

Overall, hypothesis 1 on the positive relation between number of ties between organisations and the similarity of voiced preferences finds support in the data. Hypothesis 2, that this effect diminishes when tied organisations have more ties to third organisations, is also supported by the data.

Figure 5: Frequency of randomised effect sizes for 'nr. of ties' in model 4



Figure 6: Frequency of randomised effect sizes for 'nr. of ties * nr of ties to third orgs' in model 4

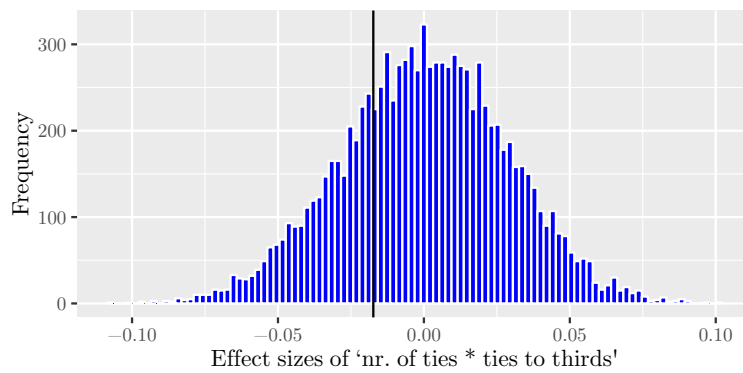
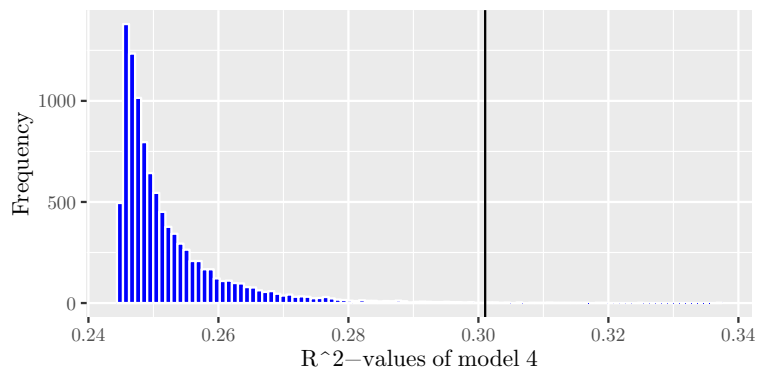


Figure 7: Frequency of randomised R^2 values for model 4



5.2.2 Other hypotheses

Table 4 on page 26 also contains the results on the three other hypotheses. It should be noted that since these variables have not been analysed in the randomisation process, I cannot draw conclusions on them with the same certainty as on the hypotheses regarding inter-organisational ties. Nonetheless, larger predicted effects do indicate more secure effects to an extent, and the data is worth analysing.

Firstly, representing the same interests (H3) predicts a bit over 3% extra overlap in all our models (corresponding to the predicted effect sizes of 0.030 and 0.033 in model 3 and 4 respectively). It is striking that the effect is smaller than the effect of a shared tie in all models. Although the predicted effect is smaller than the predicted effect of sharing an extra tie, representing the same interest is not necessarily to be discarded as a relevant factor. After all, 10% of the dyads contain two organisations that represent a similar interest, while only 2.3% of the dyads contain two tied organisations, as can be seen in table 3. Even though the predicted effect size may be smaller for the interest variable, the effect on the model may be bigger. In the end, I can not give a clear judgement on whether representing the same interests has a significant effect on the similarity of voiced preferences between organisations. The hypothesis can not be discarded, nor can it be confirmed.

H4 on representing the same country finds absolutely no support in the data. Even with the underestimated p-values that accompany the dyadic dataset, it is not marked as significant in table 4. In this case, sharing the country of origin does not seem to imply a greater similarity of voiced preferences.

The hypothesis on increased variance among the preferences of business actors (H5) has brought interesting results. Coded as dummies, dyads with two business organisations turn out to voice less similar preferences (-4.2%) than the comparison group with dyads of different kinds of organisations. This suggests that average variation in preferences among business organisations is greater than average variation in preferences among lobbying organisations in general. Dyads with two of the same *other* types of organisations on the other hand voiced on average 7.5% *more* similar preferences than different types of organisations. The findings are in line with the formulated hypothesis (H5), but there is no way to establish a corrected significance score for these variables. Therefore, the hypothesis is neither discarded, nor confirmed. In any case, this finding may offer food for thought regarding the extent to which ‘business’ is a coherent cluster of actors, or rather a very broad category of actors with very different interests and characteristics.

6 Conclusion and discussion

The aim of this study was to assess the size and robustness of expected effects of ties between lobbying organisation on similarity of voiced preferences between lobbying organisations. This section assesses relevant conclusions of

the theoretical framework, the methodology, and the analysis. It also contains some discussion on the possible implications for future research.

Regarding the literature, the collective nature of lobbying and ties between lobbying organisations have been thoroughly theorised, and are by many regarded as one of the core attributes of lobbying. Ties facilitate interaction, and can be located in ad-hoc coalitions, but also in institutionalised membership organisations. Yet there is still much to learn regarding the size and robustness of the different theorised effects of such ties on lobbying behaviour and outcomes. The effects on outcomes are slightly better understood, but the effects on lobbying behaviour are in a sense more fundamental.

Furthermore, despite the theoretical relevance of ties and interaction (quantitative) studies often implicitly assume lobbying organisations to be independent of each other. If ties and interaction between organisations are indeed a major factor, that assumption is not valid. In this study, I researched whether institutionalised ties between organisations influence the similarity of the preferences they voice.

To look into the effects of institutionalised ties on the similarity of preference formulation, I have employed a dyadic approach. In this approach, comparisons between organisations are structured in dyads, which are the unit of analysis. This method closest represents the effort to investigate similarity between organisations, and is for this study preferable to for example cluster analysis. There are however several methodological issues with such a data structure. The number of comparisons between actors (the dyads) is far greater than the number of underlying cases. This results in underestimated standard errors and thus unreliable p-values. This can be partly corrected by a randomisation process, which is outlined in the methodology section.

The results of the analysis provide a clear answer on some hypotheses, and a less clear one on others.

There is relatively robust support in the data for the hypothesis that ties between organisations account for a greater level of overlap in their voiced preference (H1). Furthermore, there is support for the hypothesis that this effect declines as organisations have more ties to third organisations in the consultation group (H2). Overall, organisations seem to have a lot more overlap in their voiced preferences if they only have a tie to each other (around 20% more overlap) but considerably less overlap if those organisations are also tied to other third organisations; between 1.7 and 2 percentage points less overlap per tie to a third organisation. These findings indicate further validation of Bunea's findings (2015) that ties facilitate similarity, but also indicate that the strength of ties is dependent on the number of ties to other organisations, which was not included in her model. Organisations that have few ties exchange more information over each tie than organisations that have many ties.

These findings have important implications for future research. In quantitative studies, cluster analysis may be a valuable tool to control for such ties between organisations. This allows to cluster cases in a statistical analysis

on the basis of for example links through membership organisations, which can also be corrected for their relative (predicted) strength.³¹ Through qualitative methods, exchange of information and positions between organisations may be assessed more directly, for example through first-hand accounts or an intensive case study.

On the other hypotheses, there are varying results. Firstly, whether there is an effect of representing similar interests on overlap in voiced preferences (H3) could not be established definitively. The effect can neither be disregarded nor be definitively supported because of the unreliability of p-values in the employed dyadic approach. Whether two organisations originated from the same country (H4) however was unequivocally insignificant. It did not have any significant observable effect on the overlap in voiced preferences.

The hypothesis regarding the higher level of variance of preferences with business organisations could also not be assessed with absolute certainty, but nevertheless offered some interesting results. Business organisations seemed not only to voice less similar preferences than other organisations of the same type, they indeed also seemed to voice less similar preferences than organisations of different types. This indicates that in this case, the variance in preferences among business organisations is greater than the average variance in preferences among lobbying organisations in general. This effect may or may not be unique to the consultation analysed. Nevertheless, this finding casts doubt on the often-made assumption that business organisations have similar interests.

For future research, the following observations are most relevant.

- The results offer further validation of the thesis that lobbying organisations are not independent actors. This should be taken into account when designing research into lobbying.
- The results suggest that lobbying organisations utilise institutionalised ties with other organisations to interact with those organisations, which has an effect on the preferences they voice.
- There is evidence that this effect diminishes as organisations have more ties to other organisations.
- Sets of business actors in this case have a greater variance in preferences than sets of organisations of different types. Whether an organisation is a business organisation may thus say very little about its preferences.
- Studies that employ a dyadic approach to look at similarity should control for the underestimation of standard errors in that method. This can be done through the randomisation method outlined in this study.

³¹A very useful guide to most functions of cluster analysis is available from Qualtrix, and can be found at <https://www.qualtrics.com/wp-content/uploads/2012/09/ClusterAnalysis.pdf>

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