Defining and Classifying Interest Groups

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Executive Summary

The interest group concept is defined in many different ways in the existing literature and a range of different classification schemes are employed. This complicates comparisons between different studies and their findings. One of the important tasks faced by interest group scholars engaged in large-n studies is therefore to define the concept of an interest group and to determine which classification scheme to use for different group types. After reviewing the existing literature, this article sets out to compare different approaches to defining and classifying interest groups with a sample of lobbying actors coded according to different coding schemes. We systematically assess the performance of different schemes by comparing how actor types in the different schemes differ with respect to a number of background characteristics. This is done in a two-stage approach where we first cluster actors according to a number of key background characteristics and second assess how the categories of the different interest group typologies relate to these clusters. We demonstrate that background characteristics do align to a certain extent with certain interest group types but also find important differences in the organizational attributes of specific interest group types. As expected, our comparison of coding schemes reveals a closer link between group attributes and group type in narrower classification schemes based on group organizational characteristics than those based on a behavioral definition of lobbying.

Key words: interest group classification; interest group definition; cluster analysis; INTEREURO; European Union

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Consistent with the general field of social science, the study of interest groups suffers from a certain lack of precision with regard to its basic unit of analysis – namely, the interest group concept itself. One central issue is the various competing concepts on offer: interest groups, interest organizations, pressure groups, cause groups, citizen interest groups, social movement organizations, and civil society organizations, to list just a few. There is also no firm or fixed list of the type of groups falling under these categories, with researchers variously including the usual suspects, like trade unions, NGOs, and business associations, as well as less common types like think tanks, hospitals, universities, public authorities and even religious groups.

Importantly, scholars tend to choose one definition of interest groups over another. A key distinction can be made between scholars who use a behavioral definition (e.g., Truman, 1951; Berry, 1977; Lindblom, 1980; Salisbury, 1984; Wilson, 1990; Baumgartner *et al*, 2009) and define groups based on their observable, policy-related activities versus those that define interest groups more narrowly based on their organizational characteristics and reserve the interest group term for membership associations (e.g., Thomas and Hrebenar, 1990; Jordan *et al*, 2004; Halpin, 2010; Jordan and Greenan, 2012; Binderkrantz *et al*, 2014). Moreover, scholars also work with different classifications schemes when it comes to distinguishing between different types of interest groups (e.g., Schlozman and Tierney, 1986; Gray and Lowery, 1996; Bouwen, 2004; Beyers and Kerremans, 2007; Baumgartner *et al*, 2009; Binderkrantz and Krøyer, 2012; Dür and Mateo, 2012). While such different approaches to conceptualization may be motivated by differences in research focus, they often make it difficult to draw comparisons between the findings generated from different large-n studies of interest representation across issues and venues. The result, according to Baumgartner and Leech (1998, p. 22), is nothing less than a barrier to the accumulation of knowledge in interest

group research. The inability to pin-down the interest group concept has also been implicated in 'the marginalization of interest group studies within the political science discipline' (Jordan *et al*, 2004, p. 196) as well as a balkanization within the research area that has led scholars to speak at cross purposes (Beyers *et al*, 2008, p. 1108). Ultimately, without a clear understanding of what an interest group is (or is not) and how we can distinguish between different types of interest groups, research is hard pressed to adequately gather data, make comparisons and draw out any positive conclusions.

The aim of this article is to provide a more solid empirical foundation for defining and classifying interest groups in large-n research on the politics of interest representation. To this end we compare different approaches to defining and classifying interest groups with a sample coded according to different coding schemes. Our goal is not to provide a new interest group definition, nor is it to propose a new classification scheme. Instead, we assess how existing classification schemes differ with respect to how close a link there is between their coding of different group types and essential, constitutive background characteristics. To compare how actor types in the different schemes differ with respect to a number of essential background characteristics we conduct a cluster analysis of interest groups identified by the Intereuro project (Beyers *et al*, 2014). In a first step, we cluster actors according to a number of key background characteristics – namely, membership structure, level of mobilization, staff, and financial resources. In a second step, we assess how the categories of the different interest group typologies relate to these clusters. In this way, cluster analysis provides insight into how well our long-held assumptions about how groups differ hold up to empirical scrutiny. For instance, to what extent can we speak of membership interest groups as being distinct from other types of actors active in interest representation, or of different interest group types as being inherently different? The approach offered here helps us assess the degree to which actor attributes can explain the different classifications schemes prevalent in

the extant literature. We present several key findings. First, we find evidence for differences in essential background characteristics of membership interest groups and the remaining set. Second, although we find that similar group types may share certain background characteristics, we also find important and considerable differences in the organizational attributes of specific interest group types in all the schemes examined. In this way, our findings qualify scholarship which assumes a link between interest group type and differences in organizational background characteristics, such as group resources, whether related to finances, staff or information (e.g., Bouwen, 2002; Bouwen, 2004; Mahoney, 2004; Dür and De Bièvre, 2007). The resource advantages of business are commonly referred to in the literature of business influence (for a recent review, see Dür *et al*, 2013) and of bias in the system of interest representation (e.g. Schlozman, 1984; Baumgartner and Leech, 2001), even if we find substantial variation in the resources of business groups in practice. Finally, we see that there is a closer link between group attributes and group type in narrower classification schemes based on groups' organizational characteristics than in more inclusive schemes based on a behavioral/functional definition of lobbying.

Defining and Classifying Interest Groups

While concepts are the building blocks for social scientific theories and hypotheses, the task of concept formation has received relatively little attention from scholars over the years (for exceptions, see Sartori, 1970; Collier, 1995; Goertz, 2006). The study of interest groups is no exception. Indeed, interest group scholars often use different and sometimes competing concepts to refer to the same thing, and concept choice is often driven by the issue area or lobbying venue under examination as well as a given author's normative focus.

When it comes to defining the interest group concept, we can speak broadly of a central distinction between a purely behavioral definition of interest groups and a definition

focused on a group's organizational characteristics. A behavioral approach defines interest groups on the basis of their observable policy-related activities, in particular, activities related to influencing policy outcomes (Jordan *et al*, 2004). This approach has a long history in the interest group literature. An interest group is thus variously defined as any group 'acting, or tending toward action' (Bentley, 1908, p. 211); that 'makes certain claims upon other groups in society' (Truman, 1951, p. 37); any organization 'actively trying to influence the distribution of political goods' (Berry, 1977, p. 10); that 'seek[s] to influence policy' (Lindblom, 1977, p. 85), or 'the formulation and implementation of public policy' (Grant, 1989, p. 9) more broadly speaking. We observe similar behavioral definitions in the work of Salisbury (1984), Wilson (1990), Baumgartner et al. (2009) and Wonka et al. (2010). Scholars advocating such a behavioral definition note that member-based organizations only account for a relatively small portion of the diverse array of interest representatives (e.g., Berry, 1977; Salisbury, 1984; Wilson, 1990; Walker, 1991; Gray and Lowery, 1996; Baumgartner *et al*, 2009). What is more, the central challenge facing this approach is delimiting the boundaries of the interest group concept. After all, focusing on the influence function can obscure differences between groups whose core function is to influence policy and those whose political activities are 'more sporadic and ephemeral' (Beyers *et al*, 2008, p. 1107). Moreover, as stated by Wilson a key question for scholars using such a definition is, '[H]ow much political activity is required before an organization which exists for some other purpose may be regarded as an interest group?' (1990, p. 7) (see also Schlozman and Tierney, 1986; Jordan and Greenan, 2012). Without a clear answer to this question, empirical analyses risk excluding important and influential groups from consideration (or, alternatively, including unimportant groups and giving a skewed impression of influence).

A central alternative to defining interest groups based on their lobbying function is to focus instead on a narrower definition that sees organizational characteristics as key defining

features and reserves the interest group term for membership-based organizations (e.g., Thomas and Hrebenar, 1990; Jordan *et al*, 2004; Halpin, 2006; Halpin, 2010; Christiansen, 2012; Jordan and Greenan, 2012; Binderkrantz *et al*, 2014)[6]. Some of the studies within this approach derive from a theoretical interest in the dynamics of group membership and mobilization – namely, when and how certain interests are mobilized into groups capable of politically relevant action (e.g., Schlozman and Tierney, 1986; Walker, 1991; Jordan and Greenan, 2012). However, there are also plenty of studies employing an organizational definition of groups, which focus on actual lobbying strategies and their outcomes (e.g., Binderkrantz and Krøyer, 2012; Helboe Pedersen, 2013; Binderkrantz *et al*, 2014).

. Importantly, this approach often rests on the so-called 'voluntary stereotype': such groups are generally presented as voluntary, democratically accountable and individual-based organizations (Jordan *et al*, 2004, p. 198). Accordingly, a subset of studies employing such an organizational definition of interest groups emphasize an interest group's potential contribution to democratic participation, representation, and ability to foster social capital (e.g., Jordan *et al*, 2004, p. 199; Jordan and Maloney, 2007). It is little wonder, then, that some (but not all) scholars adopting this approach have a normative bias about the associational and democratic benefits of group activity and eschew loaded labels like special interests in favor of less pejorative terms like civil society organization or social movement organization (Beyers *et al*, 2008).

In addition to the demarcations set out in the behavioral and organizational approaches to defining the concept of an interest group, a broad distinction is often made regarding the nature of the interest being represented in different interest group classification schemes. A series of basic dichotomies turning on the distinction between representing narrow, self-interest and broad, collective interests are used to define interest group types. For instance,

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[6] Some of the authors within this category require that membership organizations also seek to influence policy in order to be classified as interest groups.

Beyers (2004) makes a distinction between specific groups representing the narrow interests of a well-circumscribed constituency and diffuse groups representing the interests of broad segments of society. Similarly, Klüver (2013) speaks of narrow 'sectional groups' and broad 'cause groups'; Walker (1991) distinguishes between groups with specific members and those open to all citizens, and Halpin (2006) speaks of groups pursuing solidarity versus groups pursuing representation. Moreover, using a different rationale for classifying groups, Schneider and Baltz (2003) classify interest groups according to the scope of their activity, distinguishing between general interest groups and those specialized in a limited number of issues. Finally, rather than presenting the distinction between groups representing specialist and diffuse interests as a matter of classifying interest groups, some scholars define interest groups in such a way that they only encompass the former and contrast these with other actor types such as NGOs. As an example, Grant (1986, pp. 9-10) distinguishes between interest groups and promotional groups. The former are 'primarily self-interested' and defend the interests of their own members, while the latter seek to promote a cause which benefits society as a whole.

Despite the parsimony of these basic dichotomies, existing empirical studies of interest groups have failed to settle on a set list of the specific types of groups that fall under these broader categories. Schlozman and Tierney's (1986) now seminal work adopts a broad scheme that includes a list of ten group types: peak business associations, trade associations, labor unions, farm groups, professional associations, voluntary membership groups, civil rights and social welfare organizations, corporations, law firms, and the 'intergovernmental lobby' (composed of foreign and sub-national governments). More recent empirical work has followed suit, making amendments to this list in a rather ad hoc fashion. Most notably, Baumgartner et al (2009) add coalitions, think tanks, and governmental associations to the list. Binderkrantz and Krøyer (2012) include hobby groups, occupational associations and

religious groups.[7] The problem with such an approach is not just a lack of theoretical justification for the inclusion or exclusion of specific group types, but that efforts to generate a comprehensive list of group types lead to further conceptual confusion. There is a fundamental trade-off between the inclusiveness of the interest group concept (including as many 'like' groups as possible) with a rigorous litmus test for similarity of 'kind', and not degree, between cases. As Sartori (1970) argues, as we move up the ladder of abstraction to include more groups, the likelihood of degreeism, parochialism and concept stretching radically increases.

Scrutinizing Interest Group Classifications

Our purpose in this analysis is to test some of the central assumptions underlying existing interest group classification schemes with an eye on how this impacts large-n research. To this end, we put the fundamental constitutive elements or background characteristics of interest groups to the test. There has often been a tendency in existing research to link interest group type and differences in background characteristics, such as financial and informational resources (Bouwen, 2002; Bouwen, 2004; Mahoney, 2004; Dür and De Bièvre, 2007). As an example, Mahoney explains how: "Information on EU interest group budgets is not available, but some types of groups are generally better endowed financially (i.e. the business groups) than others. Therefore, trade, professional and cross-sectoral business groups should be expected to have more income at their disposal than citizen or culture groups and thus be likely to have a higher probability of being included in the committee system" (Mahoney, 2004, p. 452). As a result of lacking information about resources she therefore uses group type in her analysis.

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[7] For alternative classification schemes used in recent research, see also Dür and Mateo (2012), Beyers and Kerremans (2007), Gray and Lowery (1996), Bouwen (2004).

Moreover, a common argument why some groups are influential and well represented has often been that they possess a superior level of resources compared to other group types, such as those representing public and identity interests. This argument has for example been made with reference to business groups as well as institutions. In a review, Dür *et al* (2013, p. 4) explain how, "Much of the existing literature suggests that business interests are frequently more influential than other actors, for a number of reasons: Firstly,business actors command a host of politically useful resources such as time, money and expertise, that can be traded for access to political decison-makers and favorable decisions...." Moreover, even if Schlozman emphasizes the difficulties in comparing resources across interest groups as a result of their different character, their overall conclusion is that "the pressure system is tilted heavily in favor of the well-off, especially business, at the expense of the representation of broad public interests and the interests of those with few political resources" (1984, pp. 1028-1029). She reports that in a survey of 175 Washington representatives a lack of financial resources was listed as the greatest source of frustration by 5 per cent of corporate representatives, 11 per cent of the trade association representatives, none of the union representatives, and 47 percent of the public interest group representatives (1984, p. 1027). Along the same lines, Gerber (1999, p. 70) argues that economic groups possess "a comparative advantage in amassing monetary resources" whereas citizen groups have "a comparative advantage in mobilizing personnel resources". Also Grant explains how "cause groups often have fewer resources at their disposal than sectional groups in terms of income and paid staff" (1989, p. 13) (see also Kohler-Koch, 1994, p. 169; Baumgartner and Leech, 2001, p. 1196). With regard to institutions, Salisbury states how institutions "typically command substantial and diverse resources and within limits a meaningful fraction may be allocated to policy-relevant tasks..." (1984, p. 68).

Specifically, our aim is to systematically examine whether actor types differ with respect to such key background characteristics and to assess the performance of three different interest group classification schemes when it comes to classifying groups based on these background attributes. We compare the Intereuro classification scheme which uses a behavioral definition of interest groups with two alternative schemes: first, the scheme used by the Interarena project which uses an organizational definition of groups, and second, the European Union Transparency Register scheme which permits groups to self-identify in terms of group type.

We start from one common sample of interest groups drawn from a Europe-wide interest group project on EU lobbying titled Intereuro (www.intereuro.eu). From Intereuro's broader sample of external actors active on 125 proposals adopted by the European Commission between 2008 and 2010, we select the 'active actors' on these proposals – those that had appeared in a number of selected media outlets[8] and/or been identified by Commission officials as having played a leading role. This resulted in a sample of 991 actors, of which 138 actors appeared in the media and played a leading role according to the Commission.[9] In order to compare the three classification schemes on an equal footing, we exclude actors that were not coded for either Interarena or Intereuro. Actors not appearing in the Transparency Register are included, however, and belong to a residual category. Thus, in total we have 938 actors that are classified in all three schemes.

For each actor in this sample, we have coded four crucial background characteristics: group membership structure (no members, individual members, organizational members and mixed membership), geographical level of mobilization ((sub)national, European and

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[8]European Voice, Agence Europe, Euractiv, *Frankfurter AlgemeineZeitung*, *Le Monde* and the *Financial Times.*
[9] The project also mapped which actors participated in Commission consultations, in instances where a consultation took place. A large share of these actors are national and we therefore exclude them from the current sample. Such national actors are difficult to find in the Transparency Register. Including a large share of actors missing from the Register would be problematic because we are specifically interested in making comparisons with the Transparency Register group classification scheme and we also rely on this register for obtaining some of the crucial group background characteristics.

international level), staff size and lobbying budget. Tables A and B in the online appendix provide descriptive information about these four independent variables.

Our sample is coded according to three different interest group classification schemes. The first is the scheme used by the Intereuro project itself (see table C in the online appendix for the distribution of actors according to this classification), which uses a behavioral concept of an interest group. The interesting point is therefore to see how the different actors are distributed between the different categories of the Intereuro coding classification. The two largest categories of interest groups in our sample according to this classification are firms and business associations (36 per cent and 25 per cent of actors, respectively). The second coding scheme comes from the Interarena project (www.interarena.dk) (see online appendix, table D). In contrast to Intereuro, this project uses an organizational definition of interest groups, which are defined as 'membership organizations working to obtain political influence' (Binderkrantz *et al*, 2014, p. 5). As displayed in Table D, more than half of the actors lobbying on the proposals (52 per cent) are not classified as interest groups according to the Interarena coding scheme. A substantial share of these actors are classified as firms in the Intereuro coding scheme (69 per cent), whereas the five largest remaining Intereuro actor types not classified by Interarena are: institutions (11 per cent), European institutions (5 per cent), national institutions of EU countries (4 per cent) and research institutes (4 per cent). Ignoring the non-classified actors in the Interarena scheme we find a strong relationship between the Interarena and Intereuro schemes. To measure the strength of association between the two schemes, we calculate the Goodman-Kruskall λ, a proportional reduction in error measure, on those 454 actors appearing in both schemes (e.g., excluding actors that are not classified as interest groups in Interarena). Knowing which category each actor belongs to in the Interarena scheme reduces our errors in predicting that actor's Intereuro category by 51 per cent relative to relying on the marginal probability of each Intereuro category alone ($p < 0.01$). The third

scheme we consider comes from the Transparency Register. Unlike Intereuro and Interarena, the Transparency Register does not allocate groups to certain categories, but rather allows interest groups to 'self identify' using a set list of group types upon registering. Importantly, data in Table E suggest that 57 per cent of the interest groups considered here have in fact not registered in the Transparency Register. Of these actors the five biggest categories of non-registered actors are firms (41 per cent), business associations (16 per cent), institutions (13 per cent), national institutions of EU countries (8 per cent) and citizen groups (7 per cent). Excluding actors that have not registered in the Transparency Register, we also find a relationship between the Intereuro and Transparency classification in the 404 remaining actors. Knowing an actor's Transparency Register category reduces prediction errors by 54 per cent with respect to the Intereuro scheme ($p < 0.01$).

Our assessment of these three coding schemes follows a two-stage approach. First we cluster actors according to a number of key background characteristics without any attention to the *substantive type of interests* they represent in the different coding schemes. By grouping actors according to background characteristics (resources, membership type etc.), we obtain a classification of actors that is independent of the classification schemes that we evaluate. The advantage of using cluster analysis is that we avoid having to describe the relationship between the group types in the three evaluated coding schemes and each of the background characteristics examined. Instead, the analysis accounts for all background characteristics simultaneously and summarizes their intersection by creating cluster of actors. We use AutoClass, an unsupervised Bayesian cluster analysis technique capable of handling both nominal- and interval-level variables (Cheeseman and Stutz, 1996). The online appendix explains the motivation for using this particular cluster analysis technique.

Second, we assess how the categories of the different schemes relate to these clusters. Ultimately this allows us to address two questions. First, we are able to see whether the

narrower list of interest groups in Interarena shares a number of key background characteristics that distinguish these actors from the remaining share of actors in the broader definition. This should be the case, since the whole idea of an organizational definition is that these actors share certain key organizational characteristics. Second, we are able to explore whether groups with similar background characteristics represent the same type of substantive interests. When interest group scholars distinguish between different group types they often make such an assumption implicitly. The image that business groups are better staffed and funded than groups representing public interests is widespread (Lowery and Brasher, 2004). A key rationale provided for the dominance of business groups in the interest group community is often their possession of financial resources (e.g., Schattschneider, 1960; Lindblom, 1977; Schlozman and Tierney, 1986; Mahoney, 2004). It is important to state that even if we discover that such a link does not exist or is weaker than expected, we will ultimately never be able to falsify a given interest group classification. Regardless of how similar different group types are with respect to different background characteristics, they will still be different in terms of the type of substantive interest they represent. However, our results will still be very important for interpreting findings with regard to group types in existing research. Often, the reason scholars and commentators raise concern for the unequal representation and the undue influence of different group types is because they assume there are some systematic differences in the organizational characteristics of these categories of groups.

Step 1: Cluster Analysis

The cluster analysis proceeds in two steps. In the first stage, only the categorical variables (membership structure and level of mobilization) are included. The analysis uses all observations in the sample that have non-missing values for either membership structure or level of mobilization (n = 917). The resulting classification includes two clusters of 564 (64

percent) and 353 (36 per cent) actors, respectively. In the second stage, budget and staff size are added to the categorical variables used in the first stage. The resulting classification contains five clusters with the two largest clusters including 325 (35 per cent) and 253 (28 per cent) of the actors.

Step 2: Clustering and Classification schemes

The key in assessing the 'performance' of the different classification schemes is to examine the relationship between the derived clusters and each scheme. In order to do so, we report for each cluster analysis how actors within a given group are distributed across different clusters and the average probability that an actor belongs to each cluster (Tables 1 to 3). Moreover, for the second cluster analysis, we calculate the so-called Herfindahl-Hirschmann Index (HHI) for each actor type in a given classification. It is calculated as the sum of the squared proportions of interest groups belonging to each of the five clusters. The index ranges from 1/number of clusters (in our case: 5) to one with values closer to 1, indicating that a high share of the actors of a given type are concentrated in one or few clusters. The higher the concentration, the easier it is to predict an actor's classification based on its background characteristics.

[Tables 1-3 about here]

The first relevant comparison to make is that between an organizational and behavioral definition of an interest group. As already mentioned, the Interarena scheme distinguishes itself from the other two by using an organizational definition. As a result, we can compare the results of our cluster analysis for Interarena interest groups ('Total interest groups' in table

3) with those for non-interest groups. As expected, we see some differences between these actor types. In cluster analysis 1, 'interest groups' are somewhat more likely to fall in cluster two than one whereas the relationship is the exact opposite for 'non-interest groups'. There are also some differences regarding which clusters (non-)interest group actors belong to in cluster analysis 2. This should not surprise us since the whole rationale for distinguishing between interest groups and the remaining share of actors in the Interarena scheme is that interest groups have certain organizational characteristics that distinguish them from other actors. Interestingly, this also means that, not only do interest groups differ from non-interest groups, they also have more organizational attributes in common than the pool of non-interest group actors. In table 3, the HHI scores show that the concentration across clusters in cluster analysis 2 is higher for Interarena interest groups (0.41) than non-interest groups (0.3).

It is also interesting to examine whether actors within a given interest group type are likely to fall within the same cluster. Regardless of which classification scheme we examine or whether we look at cluster analysis 1 or 2, we see that there is quite some dispersion. There is far from a perfect match between organizational background characteristics and group types. This is further illustrated in our calculation of the HHI scores for cluster analysis 2, which are quite a lot below 1 in most cases meaning that actors belonging to a certain group type are not concentrated in one cluster only. A prominent example is the largest actor category in the Intereuro scheme, i.e. firms. We see that they are relatively dispersed among a number of different clusters and have a HHI score as low as 0.33, which is not much higher than the minimum value of 0.2 where all actors are equally distributed between all clusters. Only in rare cases with one or very few actors in a given actor category do we reach a high concentration score in the different classification schemes.

When it comes to comparing the clustering of different actor types in the different schemes based on the organizational background characteristics, there is a considerable

amount of overlap between the Intereuro and Interarena coding schemes. Looking at the results of cluster analysis 2, we see that business associations/business groups and professional associations/occupational associations have the highest probability of falling into cluster two in both coding schemes. Further, citizen groups, individuals, research institutes, trade unions, as well as European institutions, foreign public authorities, institutions, intergovernmental organizations, and national institutions of EU countries are more likely to fall into cluster one. A similar but shorter list of actors from the Interarena data includes those with the highest probability of falling into cluster one: hobby/leisure groups, identity groups, institutional associations, public interest groups, and unions. Firms and religious groups are the only actor types that do not appear to follow a clear pattern from the Intereuro and Interarena data. A greater range of HHI scores on those actors in cluster one make it more difficult to predict their concentration based on background characteristics. The clearest case of similar clustering across the two classification schemes comes from hobby/leisure groups, identity groups and citizen groups. Hobby/leisure groups as well as identity groups in Interarena roughly score 0.5 on the HHI. Citizen groups in Intereuro score a similar 0.49 on the HHI.

The Transparency Register classification scheme, by contrast, shows only marginally similar clustering to the other two schemes. Both trade unions as well as trade, business and professional associations are most likely to fall into cluster two. Think tanks and other public or mixed entities fall into cluster one. Finally, companies and law firms are most likely to fall into clusters three and four respectively, while local, regional and municipal authorities as well as professional consultancies fall primarily into cluster five.

How can we explain the overlap between the Intereuro and Interarena coding schemes? Descriptive statistics provided in the appendix offer some insight into these clustering patterns. First, business groups and professional/occupational groups appear to be

very similar in terms of both membership structure and level of mobilization. Indeed, in both coding schemes the majority of business groups and professional/occupational groups have 'organizational membership' *and* mobilize at the EU level. These similarities, however, diminish with regard to budget and staff size (for both coding schemes, business groups have much higher budgets and far more staff members than professional/occupational groups). The results for the larger range of actors which are most likely to fall into cluster one provide a more equivocal picture. In these clusters, membership structure seems to be dominated by groups with either no members or those with organizational membership for both Intereuro and Interarena. In contrast, there are no clear patterns with regard to level of membership for these actors' categories, which consists of EU, global, and national level lobbyists. Actors that fall primarily into cluster one in both coding schemes also have somewhat smaller staff sizes, especially in comparison with business associations. However, a lack of Interarena data on actors' budgets makes further comparison across coding schemes difficult.

In addition to looking at whether actors of a given type tend to cluster together, we have also calculated a score for the *overall concentration* of all subcategories of a given classification scheme between clusters. It is calculated for the results of cluster analysis 2 as an average of the HHI of all the subcategories of a scheme weighted by the number of observations in these subcategories.[10] The results give us an impression of the overall performance of the three classification schemes. It is clear that actor types in none of the schemes can be fully explained by the organizational background characteristics of the groups. The respective HHI scores for the three schemes are: Intereuro = 0.44; Interarena = 0.50; Transparency Register = 0.53, which is considerably lower than the maximum HHI concentration score of 1, where all actors of a given actor type fall within the same cluster.[11]

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[10] We exclude actor categories with only one actor from these calculations since they will also be perfectly 'concentrated'.
[11] These scores are calculated excluding the category of non-registered actors in the Transparency classification scheme and the non-classified actors in the Interarena scheme (i.e. the Interarena non-interest groups).

These figures indicate that the degree of concentration in the Intereuro scheme is somewhat lower than in the two other classification schemes. However, it must be stressed that differences in these HHI scores are marginal and represent small differences in the concentration of the actor types examined here. Moreover, as noted above, Interarena was expected to out-perform the Intereuro scheme in the kind of analysis conducted here if only because it approaches the task of classification from a group's organizational characteristics.

Conclusions

The central aim of this article was to provide an empirically derived footing for defining and classifying interest organizations. Current scholarship tends to speak at cross purposes, not only employing a broad range of sometimes competing concepts for what is essentially the same thing, but also using different classification schemes. For large-n analysis, this lack of a common approach and a common vocabulary may create challenges for the accumulation of knowledge, and, according to some scholars, has even led to the marginalization of interest group scholarship more broadly speaking.

Rather than proposing a new classification scheme or definition of interest groups, this analysis examined how various interest group actors differ with respect to four essential background characteristics – membership structure, level of mobilization, number of staff, and financial resources. Our analysis centered on a comparison of three different classification schemes: Intereuro, Interarena and the Transparency Register. Proceeding in two stages, we first examined how actors cluster based on four background characteristics, and second we assessed clustering across the different classification schemes. A central finding presented above was a considerable degree of similarity in clustering between Intereuro and Interarena schemes especially with regard to business associations and professional/occupational associations. Differences with regard to the Transparency Register support concerns about its

lack of reliability, highlighting not only its incompleteness but also issues arising from groups wrongly classifying themselves in terms of type (ALTER-EU, 2009). On balance, our findings suggest that the link between organizational background characteristics and actor type is similar in all three classification schemes. The overall HHI values for the three schemes do not differ substantially, and the smaller differences between schemes are likely to be a function of the different rationales underlying the classification of actors in the schemes. For instance, the degree of coherence between group type and organizational background characteristics was higher in Interarena, which uses an organizational concept of interest groups, than in Intereuro, which uses a behavioral definition of interest groups.

The most important result here is unquestionably the substantial amount of variation identified in the organizational background characteristics of actors of the same actor type. Such variation is quite substantial for a high number of actor types regardless of which classification scheme we examine. As already mentioned, this does not *falsify* a given classification scheme as group type depends on the nature of the substantive interests represented (i.e., an employee union represents employees). However, what our analysis underlines is that some of the long-held assumptions about interest group types that are dominant in the literature may not hold. Our findings casts doubt on research that assumes that there is a link between interest group type and certain background characteristics such as resources. Business dominance is for example often explained with the assumption that such groups possess superior resources even if our study documents that there is high divergence in the background characteristics of business groups. We see that even if there are some overall differences between some of these group types as far as background characteristics are concerned in line with what one might expect there is substantial variation within them in these background characteristics as well. Moreover, we find interesting differences in how homogeneous different group types are with respect to key background characteristics. Some

group types have considerable more organizational features in common than others, which are much more diverse.

Overall, our cluster analysis and descriptive statistics make clear that such assumptions obfuscate real world differences within similar actor types. This also means that concerns about unequal representation and undue influence should not be based on studies of group types only. Biased access or influence is not merely a reflection of the lack diversity of actors mobilizing on certain issues. Instead, it might also be a function of similarly resourced but substantively different types of groups. This opens up new questions for scholars addressing these issues and the substantial amount of variation in crucial background characteristics *within* a given group type requires that additional actor characteristics are taken into account in order to evaluate the normative implications of such findings.

References

ALTER-EU. 2009. How to make a transparent registration in the European Commission Register of Interest Representatives, version 2. Available from http://www.alter-eu.org/sites/default/files/documents/registerguidelines.pdf, accessed 26 February 2014.

Baumgartner, F. R., Berry, J. M., Hojnacki, M., Kimball, D. C. & Leech, B. L. (2009) *Lobbying and Policy Change: Who Wins, Who Loses, and Why*. Chicago: University of Chicago Press.

Baumgartner, F. R. & Leech, B. L. (1998) *Basic Interests: The Importance of Groups in Politics and in Political Research*. Princeton, NJ: Princeton University Press.

Baumgartner, F. R. & Leech, B. L. (2001) Interest Niches and Policy Bandwagons: Patterns of Interest Group Involvement in National Politics. *The Journal of Politics* 63(4)**:** 1191-1213.

Bentley, A. F. (1908) *The Process of Government: A Study of Social Pressures*. Chicago: University of Chicago Press.

Berry, J. M. (1977) *Lobbying for the People: The Political Behavior of Public Interests Groups*. Princeton, NJ: Princeton University Press.

Beyers, J. (2004) Voice and Access: Political Practices of European Interest Associations. *European Union Politics* 5(2)**:** 211-240.

Beyers, J., Bonafont, L. C., Dür, A., Eising, R., Fink-Hafner, D., Lowery, D., Mahoney, C., Maloney, W. & Naurin, D. (2014) The INTEREURO Project: Logic and Structure. *Interest Groups & Advocacy***:** Forthcoming.

Beyers, J., Eising, R. & Maloney, W. (2008) Researching Interest Group Politics in Europe and Elsewhere: Much We Study, Little We Know? *West European Politics* 31(6)**:** 1103-1128.

Beyers, J. & Kerremans, B. (2007) Critical resource dependencies and the Europeanization of domestic interest groups. *Journal of European Public Policy* 14(3)**:** 460-481.

Binderkrantz, A. S., Christiansen, P. M. & Pedersen, H. H. (2014) Interest Group Access to the Bureaucracy, Parliament and the Media. *Governance***:** Forthcoming.

Binderkrantz, A. S. & Krøyer, S. (2012) Customizing strategy: Policy goals and interest group strategies. *Interest Groups & Advocacy* 1(1)**:** 115-138.

Bouwen, P. (2002) Corporate lobbying in the European Union: the logic of access. *Journal of European Public Policy* 9(3)**:** 365-390.

Bouwen, P. (2004) Exchanging access goods for access: A comparative study of business lobbying in the European Union institutions. *European Journal of Political Research* 43(3)**:** 337-369.

Cheeseman, P. & Stutz, J. (1996) Bayesian classification (AutoClass): theory and results. In Fayyad, U. M., Piatetsky-Shapiro, G., Smyth, P. & Uthurusamy, R. (Eds.) *Advances in Knowledge Discovery and Data Mining.* Cambridge, MA: MIT Press.

Christiansen, P. M. (2012) The Usual Suspects: Interest Group Dynamics and Representation in Denmark. In Halpin, D. & Jordan, G. (Eds.) *The Scale of Interest Organization in Democratic Politics: Data and Research Methods.* Houndmills, UK: Palgrave Macmillan.

Collier, D. (1995) Trajectory of a concept: 'corporatism' in the study of Latin American politics. In Smith, P. H. (Ed.) *Latin America in Comparative Perspective: New Approaches to Methods and Analysis.* Boulder, CO: Westview Press.

Dür, A., Bernhagen, P. & Marshall, D. 2013. Interest group success in the European Union: When (and why) does business lose? Available from https://sites.google.com/site/andduer/pubs, accessed 26 February 2014.

Dür, A. & De Bièvre, D. (2007) Inclusion without Influence? NGOs in European Trade Policy. *Journal of Public Policy* 27(1)**:** 79-101.

Dür, A. & Mateo, G. (2012) Who lobbies the European Union? National interest groups in a multilevel polity. *Journal of European Public Policy* 19(7)**:** 969-987.

Gerber, E. R. (1999) *The Populist Paradox: Interest Group Influence and the Promise of Direct Legislation*. Princeton, NJ: Princeton University Press.

Goertz, G. (2006) *Social science concepts: a user's guide*. Princeton, NJ: Princeton University Press.

Grant, A. R. (1986) *The American Political Process*. 3rd ed. Aldershot, UK: Gower Publishing.

Grant, W. (1989) *Pressure Groups, Politics and Democracy in Britain*. Banbury, UK: Philip Allan.

Gray, V. & Lowery, D. (1996) *The Population Ecology of Interest Representation: Lobbying Communities in the American States*. Ann Arbor, MI: University of Michigan Press.

Halpin, D. (2010) *Groups, Representation and Democracy: Between Promise and Practice*. Manchester: Manchester University Press.

Halpin, D. R. (2006) The participatory and democratic potential and practice of interest groups: between solidarity and representation. *Public Administration* 84(4)**:** 919-940.

Helboe Pedersen, H. (2013) Is measuring interest group influence a mission impossible[quest] The case of interest group influence in the Danish parliament. *IGA* 2(1)**:** 27-47.

Jordan, G. & Greenan, J. (2012) The Chaning Counters of British Representation: Pluralism in Practice. In Halpin, D. & Jordan, G. (Eds.) *The Scale of Interest Organization in Democratic Politics: Data and Research Methods.* Houndmills, UK: Palgrave Macmillan.

Jordan, G., Halpin, D. & Maloney, W. (2004) Defining Interests: Disambiguation and the Need for New Distinctions? *The British Journal of Politics & International Relations* 6(2)**:** 195-212.

Jordan, G. & Maloney, W. (2007) *Democracy and Interest Groups: Enhancing Participation?* Basingstroke, UK: Palgrave Macmillan.

Klüver, H. (2013) *Lobbying in the European Union: Interest groups, lobbying coalitions and policy change*. Oxford: Oxford University Press.

Kohler-Koch, B. (1994) Changing Patterns of Interest Intermediation in the European Union. *Government and Opposition* 29(2)**:** 166-180.

Lindblom, C. E. (1977) *Politics and Markets: The World's Political Economic Systems*. New York: Basic Books.

Lindblom, C. E. (1980) *The Policy-Making Process*. Englewood Cliffs, NJ: Prentice-Hall.

Lowery, D. & Brasher, H. (2004) *Organized Interests and American Government*. New York: McGraw-Hill.

Mahoney, C. (2004) The Power of Institutions: State and Interest Group Activity in the European Union. *European Union Politics* 5(4)**:** 441-466.

Salisbury, R. H. (1984) Interest Representation: The Dominance of Institutions. *The American Political Science Review* 78(1)**:** 64-76.

Sartori, G. (1970) Concept Misformation in Comparative Politics. *The American Political Science Review* 64(4)**:** 1033-1053.

Schattschneider, E. E. (1960) *The semisovereign people: a realist's view of democracy in America*. New York: Holt, Rinehart and Winston.

Schlozman, K. L. (1984) What Accent the Heavenly Chorus? Political Equality and the American Pressure System. *The Journal of Politics* 46(4)**:** 1006-1032.

Schlozman, K. L. & Tierney, J. T. (1986) *Organized Interests and American Democracy*. New York: Harper and Row.

Schneider, G. & Baltz, K. (2003) The Power of Specialization: How Interest Groups Influence EU Legislation. *Rivista di Politica Economica* 93(1-2)**:** 253-283.

Thomas, C. S. & Hrebenar, R. J. (1990) Interest Groups in the States. In Gray, V., Jacob, H. & Albritton, R. (Eds.) *Politics in the American States.* 5th ed. Glenview, IL: Scott Foresman.

Truman, D. B. (1951) *The Governmental Process: Political Interests and Public Opinion*. New York: Alfred A. Knopf.

Walker, J. L., Jr. (1991) *Mobilizing Interest Groups in America: Patrons, Professions, and Social Movements*. Ann Arbor, MI: University of Michigan Press.

Wilson, G. K. (1990) *Interest Groups*. Cambridge: Basil Blackwell.

Wonka, A., Baumgartner, F. R., Mahoney, C. & Berkhout, J. (2010) Measuring the size and scope of the EU interest group population. *European Union Politics* 11(3)**:** 463-476.

Table 1. Results of cluster analysis by Intereuro classification

	Cluster Analysis 1					Cluster Analysis 2										
	N	C=1	C=2	P(C=1)	P(C=2)	C=1	C=2	C=3	C=4	C=5	P(C=1)	P(C=2)	P(C=3)	P(C=4)	P(C=5)	Herf.
Business associations	237	62	175	0.34	0.66	43	170	2	2	20	0.24	0.65	0.01	0.01	0.09	0.55
Citizen groups	91	54	37	0.57	0.43	60	18	1	1	11	0.6	0.24	0.01	0.02	0.14	0.49
European institutions	21	1	20	0.08	0.92	10	4	0	5	2	0.46	0.18	0	0.24	0.11	0.33
Firms	337	310	27	0.89	0.11	98	0	138	91	10	0.28	0.01	0.42	0.26	0.03	0.33
Foreign public authority	9	9	0	0.93	0.07	6	0	1	2	0	0.66	0	0.12	0.22	0	0.51
Individuals	1	1	0	0.96	0.04	1	0	0	0	0	0.99	0.01	0	0	0	1
Institutions	105	57	48	0.53	0.47	46	31	2	18	8	0.45	0.27	0.03	0.16	0.08	0.31
Intergovernmental organizations	11	10	1	0.85	0.15	10	1	0	0	0	0.64	0.35	0	0	0	0.83
National institutions of EU countries	44	30	14	0.68	0.32	24	10	0	4	6	0.58	0.18	0	0.11	0.13	0.38
Professional associations	25	8	17	0.31	0.69	8	14	1	0	2	0.37	0.52	0.04	0	0.06	0.42
Research institutes	26	16	10	0.58	0.42	14	2	2	4	4	0.5	0.1	0.06	0.18	0.15	0.35
Trade unions	10	6	4	0.57	0.43	5	3	0	1	1	0.47	0.32	0	0.1	0.1	0.36
TOTAL	917	564	353	0.64	0.36	325	253	147	128	64	0.36	0.26	0.17	0.14	0.07	0.25

Table 2. Results of cluster analysis by Transparency Register classification

	Cluster Analysis 1					Cluster Analysis 2										
	N	C=1	C=2	P(C=1)	P(C=2)	C=1	C=2	C=3	C=4	C=5	P(C=1)	P(C=2)	P(C=3)	P(C=4)	P(C=5)	Herf.
Companies and groups	119	103	16	0.87	0.13	21	5	86	4	3	0.17	0.05	0.73	0.03	0.03	0.56
Law firms	1	1	0	0.99	0.01	0	0	0	1	0	0	0	0.33	0.67	0	1
Local, regional and municipal authorities	4	0	4	0.12	0.88	1	1	0	1	1	0.24	0.24	0	0.25	0.27	0.25
Non-governmental organisations	85	29	56	0.34	0.66	35	37	1	2	10	0.41	0.42	0.01	0.03	0.12	0.37
Other public or mixed entities, etc.	3	2	1	0.56	0.44	2	1	0	0	0	0.68	0.32	0	0	0	0.56
Other similar organisations	13	4	9	0.29	0.71	1	10	0	1	1	0.14	0.68	0	0.08	0.1	0.61
Professional consultancies	2	2	0	0.99	0.01	0	0	1	0	1	0	0	0.4	0.25	0.35	0.5
Think tanks and research institutions	11	5	6	0.45	0.55	5	2	0	3	1	0.39	0.2	0	0.28	0.13	0.32
Trade unions	9	3	6	0.44	0.56	3	3	0	1	2	0.27	0.41	0	0.11	0.21	0.28
Trade, business & professional associations	156	30	126	0.26	0.74	16	122	4	1	13	0.13	0.75	0.03	0.01	0.08	0.63
TOTAL IN REGISTER	403	179	224	0.54	0.46	84	181	92	14	32	0.22	0.43	0.23	0.04	0.08	0.30
Not in Transparency Register	514	385	129	0.74	0.26	241	72	55	114	32	0.47	0.13	0.12	0.22	0.06	0.3
TOTAL ALL ACTORS	917	564	353	0.64	0.36	325	253	147	128	64	0.36	0.26	0.17	0.14	0.07	0.25

Table 3. Results of cluster analysis by Interarena classification

	Cluster Analysis 1					Cluster Analysis 2										
	N	C=1	C=2	P(C=1)	P(C=2)	C=1	C=2	C=3	C=4	C=5	P(C=1)	P(C=2)	P(C=3)	P(C=4)	P(C=5)	Herf.
Business groups	237	57	180	0.32	0.68	39	173	3	2	20	0.22	0.67	0.01	0.01	0.09	0.57
Hobby/leisure groups	4	2	2	0.57	0.43	2	2	0	0	0	0.49	0.44	0	0	0.08	0.5
Identity groups	3	3	0	0.89	0.11	3	0	0	0	0	0.95	0.03	0	0	0.01	1
Institutional associations	47	23	24	0.51	0.49	24	16	0	2	5	0.55	0.29	0	0.05	0.11	0.39
Occupational associations	35	15	20	0.42	0.58	13	17	1	1	3	0.42	0.45	0.03	0.03	0.07	0.38
Public interest groups	114	61	53	0.51	0.49	65	31	1	2	15	0.55	0.28	0.01	0.03	0.13	0.42
Religious groups	1	1	0	0.99	0.01	0	0	0	0	1	0.15	0	0	0.02	0.83	1
Unions	8	7	1	0.75	0.25	7	1	0	0	0	0.73	0.26	0	0	0.01	0.78
TOTAL INTEREST GROUPS	449	169	280	0.41	0.59	153	240	5	7	44	0.37	0.5	0.01	0.02	0.1	0.41
Non-interest groups	468	395	73	0.82	0.18	172	13	142	121	20	0.35	0.04	0.32	0.25	0.04	0.3
TOTAL ALL ACTORS	917	564	353	0.64	0.36	325	253	147	128	64	0.36	0.26	0.17	0.14	0.07	0.25

Cluster Analysis Methodology

In the first step of the analysis, we use the AutoClass, a Bayesian unsupervised approach to cluster analysis. Compared to conventional (supervised) partitioning methods (e.g., k-means or k-medoids cluster analysis), the unsupervised nature of AutoClass means that the number of clusters is determined inductively rather than supplied by the analyst. Relative to (unsupervised) hierarchical methods (e.g., agglomerative nesting or divisive cluster analysis), the technique handles mixed data types and supplies in its results not only the most appropriate cluster for each observation but also the probability that each observation belongs to each of the resulting clusters. Relative to non-Bayesian approaches to cluster analysis, the use of prior expectations introduces an "automatic form of Occam's razor" (Cheeseman & Stutz, 1996, p. 62) that finds the most probable classification while avoiding near-extreme or extreme classifications that result in a large number of classes each containing a small number of observations (Achcar, Camadro, & Mestivier, 2009; Cheeseman & Stutz, 1996).

AutoClass follows the basic logic of Bayesian inference and is described briefly here (for a more detailed account, see Cheeseman and Stuz, 1996). Given the data and prior expectations, AutoClass finds the most probable classification after applying Bayes' rule. The underlying probability model for AutoClass is the classic finite mixture distribution comprised of an interclass mixture probability distribution function (a Bernoulli distribution describing the probability that an observation belongs to a class) and a class probability density function. The latter is the product of probability density or distribution functions describing the independent variables (AutoClass assumes a Bernoulli distribution for nominal-level variables and a Gaussian density for interval-level variables, though different assumptions can be made). Observations may be included that are missing values for one or more variables (but not those missing values

for all variables), and this "missingness" is modeled as a unique value for each variable. By default, uniform priors are assumed for the constituent distribution and density functions. The posterior distribution (describing the parameters that define the most probable classification) is generated by sampling over pseudo-random points in the parameter space, applying Bayes' rule, converging to local maxima, and repeating. We implement AutoClass using a web interface developed at the Institute Jacques Monod for classification applications in biology (Achcar, et al., 2009).[12]

Achcar, F., Camadro, J.-M., & Mestivier, D. (2009). AutoClass@IJM: a powerful tool for Bayesian classification of heterogeneous data in biology. *Nucleic Acids Research, 37*(suppl 2), W63-W67.
Cheeseman, P., & Stutz, J. (1996). Bayesian classification (AutoClass): theory and results. In U. M. Fayyad, G. Piatetsky-Shapiro, P. Smyth & R. Uthurusamy (Eds.), *Advances in Knowledge Discovery and Data Mining* (pp. 61-83). Cambridge, MA: MIT Press.

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[12] Available at http://ytat2.ijm.univ-paris-diderot.fr//AutoclassAtIJM.html

Table A. Descriptives categorical variables

	Category	Percent
Membership structure (n=916)	No members	0.52
	Organizational members	0.36
	Human members	0.05
	Mixed membership	0.05
	Other	0.02
Level of mobilization (n =907)	Global/non-EU international	0.38
	European Union	0.31
	National	0.27
	Subnational	0.04

Table B. Descriptives interval level variables

	n	Mean	S.D.	Min.	Max.
Budget	255	714900	1139672	0	8375000
Staff size	552	31520	198111	0	4430000

Table C. Intereuro classification scheme

	Frequency	Percent
Business associations	238	25.37
Citizen groups	91	9.70
European institutions	29	3.09
Firms	337	35.93
Foreign public authorities	10	1.07
Individuals	1	0.11
Institutions	105	11.19
Intergovernmental organizations	15	1.60
National institutions of EU countries	51	5.44
Professional associations	25	2.67
Research institutes	26	2.77
Trade unions	10	1.07
TOTAL	938	

Table D. Interarena classification scheme

	Frequency	Percent
Business groups	238	25.37
Hobby/leisure groups	4	0.43
Identity groups	3	0.32
Institutional associations	50	5.33
Occupational associations	36	3.84
Public interest groups	114	12.15
Religious groups	1	0.11
Unions	8	0.85
TOTAL INTEREST GROUPS	454	48.40
Non-interest groups	484	51.60
TOTAL ALL ACTORS	938	100.00

Table E. Transparency register classification scheme

	Frequency	Percent
Companies and groups	119	12.69
Law firms	1	0.11
Local, regional and municipal authorities	4	0.43
Non-governmental organisations	85	9.06
Other public or mixed entities, etc.	3	0.32
Other similar organisations	13	1.39
Professional consultancies	2	0.21
Think tanks and research institutions	11	1.17
Trade unions	9	0.96
Trade, business & professional associations	157	16.74
TOTAL IN TRANSPARENCY REGISTER	404	43.07
Not in Transparency Register	534	56.93
TOTAL ALL ACTORS	938	100.00

Table F. Crosstabs of membership structure and level of mobilization by Intereuro classification

	Membership structure						Level of mobilization				
	Human members	Mixed membership	No members	Organizational membership	Other	N	EU	Global/non-EU international	National	Subnational	N
Business associations	0.84%	8.44%	2.11%	87.76%	0.84%	237	50.00%	17.09%	29.49%	3.42%	234
Citizen groups	31.87%	14.29%	13.19%	30.77%	9.89%	91	39.56%	38.46%	20.88%	1.10%	91
European institutions	0.00%	0.00%	71.43%	19.05%	9.52%	21	95.24%	4.76%	0.00%	0.00%	21
Firms	0.30%	0.00%	97.63%	1.19%	0.89%	337	7.78%	70.06%	22.16%	0.00%	334
Foreign public authority	0.00%	0.00%	100.00%	0.00%	0.00%	9	0.00%	0.00%	44.44%	55.56%	9
Individuals	0.00%	0.00%	0.00%	0.00%	0.00%	0	0.00%	0.00%	0.00%	100.00%	1
Institutions	5.71%	1.90%	50.48%	39.05%	2.86%	105	39.60%	17.82%	38.61%	3.96%	101
Intergovernmental organizations	0.00%	0.00%	9.09%	72.73%	18.18%	11	9.09%	90.91%	0.00%	0.00%	11
National institutions of EU countries	0.00%	0.00%	63.64%	34.09%	2.27%	44	18.18%	0.00%	43.18%	38.64%	44
Professional associations	20.00%	20.00%	8.00%	52.00%	0.00%	25	64.00%	12.00%	24.00%	0.00%	25
Research institutes	3.85%	7.69%	69.23%	11.54%	7.69%	26	38.46%	19.23%	42.31%	0.00%	26
Trade unions	30.00%	20.00%	0.00%	50.00%	0.00%	10	30.00%	10.00%	50.00%	10.00%	10
TOTAL	5.13%	4.80%	51.53%	35.92%	2.62%	916	30.54%	38.26%	27.12%	4.08%	907

Table G. Crosstabs of membership structure and level of mobilization by Transparency Register classification

	Membership structure						Level of mobilization				
	Human members	Mixed membership	No members	Organizational membership	Other	N	EU	Global/non-EU international	National	Subnational	N
Companies and groups	0.00%	0.00%	93.28%	5.88%	0.84%	119	10.92%	77.31%	11.76%	0.00%	119
Law firms	0.00%	0.00%	100.00%	0.00%	0.00%	1	0.00%	100.00%	0.00%	0.00%	1
Local, regional and municipal authorities	0.00%	0.00%	0.00%	75.00%	25.00%	4	75.00%	0.00%	25.00%	0.00%	4
Non-governmental organisations	16.47%	4.71%	11.76%	58.82%	8.24%	85	62.65%	27.71%	9.64%	0.00%	83
Other public or mixed entities, etc.	0.00%	33.33%	33.33%	33.33%	0.00%	3	33.33%	0.00%	66.67%	0.00%	3
Other similar organisations	0.00%	7.69%	15.38%	76.92%	0.00%	13	69.23%	23.08%	7.69%	0.00%	13
Professional consultancies	0.00%	0.00%	100.00%	0.00%	0.00%	2	0.00%	100.00%	0.00%	0.00%	2
Think tanks and research institutions	0.00%	9.09%	63.64%	18.18%	9.09%	11	54.55%	27.27%	18.18%	0.00%	11
Trade unions	0.00%	11.11%	0.00%	88.89%	0.00%	9	33.33%	22.22%	44.44%	0.00%	9
Trade, business & professional associations	3.21%	6.41%	1.28%	89.10%	0.00%	156	62.58%	14.19%	21.29%	1.94%	155
TOTAL IN REGISTER	4.71%	4.47%	33.75%	54.59%	2.48%	403	46.00%	37.00%	16.25%	0.75%	400
Not in Transparency Register	5.46%	5.07%	65.50%	21.25%	2.73%	513	18.34%	39.25%	35.70%	6.71%	507
TOTAL ALL ACTORS	5.13%	4.80%	51.53%	35.92%	2.62%	916	30.54%	38.26%	27.12%	4.08%	907

Table H. Crosstabs of membership structure and level of mobilization by Interarena classification

	Membership structure						Level of mobilization				
	Human members	Mixed membership	No members	Organizational membership	Other	N	EU	Global/non-EU international	National	Subnational	N
Business groups	2.53%	6.75%	0.84%	89.87%	0.00%	237	51.71%	16.24%	29.49%	2.56%	234
Hobby/leisure groups	25.00%	0.00%	0.00%	75.00%	0.00%	4	25.00%	25.00%	50.00%	0.00%	4
Identity groups	0.00%	33.33%	33.33%	0.00%	33.33%	3	0.00%	33.33%	66.67%	0.00%	3
Institutional associations	0.00%	0.00%	51.06%	42.55%	6.38%	47	40.43%	4.26%	14.89%	40.43%	47
Occupational associations	11.43%	31.43%	5.71%	51.43%	0.00%	35	48.57%	20.00%	25.71%	5.71%	35
Public interest groups	23.68%	7.89%	21.93%	38.60%	7.89%	114	44.64%	33.04%	22.32%	0.00%	112
Religious groups	100.00%	0.00%	0.00%	0.00%	0.00%	1	0.00%	100.00%	0.00%	0.00%	1
Unions	37.50%	12.50%	0.00%	50.00%	0.00%	8	12.50%	25.00%	37.50%	25.00%	8
TOTAL INTEREST GROUPS	9.35%	8.46%	12.03%	67.26%	2.90%	449	47.07%	20.05%	26.35%	6.53%	444
Non-interest groups	1.07%	1.28%	89.51%	5.78%	2.36%	467	14.69%	55.72%	27.86%	1.73%	463
TOTAL ALL ACTORS	5.13%	4.80%	51.53%	35.92%	2.62%	916	30.54%	38.26%	27.12%	4.08%	907

Table I. Descriptive statistics (budget and staff size) for Intereuro classification

	Budget					Staff size				
	Mean	S.D.	Min.	Max.	N	Mean	S.D.	Min.	Max.	N
Business associations	756907	1136369	8570	6000000	122	1423	15507	1	172000	123
Citizen groups	181500	114940	7500	275000	5	213	1312	1	9299	50
European institutions	325000		325000	325000	1	211	440	1	1607	13
Firms	788970	1256457	14670	8375000	106	50283	86778	5	519671	251
Foreign public authority					0	1477985	2556521	155	4430000	3
Individuals					0					0
Institutions	230000	146202	50000	375000	5	1796	4346	3	25000	58
Intergovernmental organizations	375000		375000	375000	1	8	6	0	12	4
National institutions of EU countries	425000		425000	425000	1	232	480	3	1763	15
Professional associations	233333	238207	0	850000	12	56	167	2	657	15
Research institutes						2990	7564	2	26000	15
Trade unions	175000	141421	75000	275000	2	173	351	2	800	5
TOTAL	714900	1139672	0	8375000	255	31520	198111	0	4430000	552

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Table J. Descriptive statistics (budget and staff size) for Transparency Register classification

	Budget					Staff size				
	Mean	S.D.	Min.	Max.	N	Mean	S.D.	Min.	Max.	N
Companies and groups	778173	1243202	14670	8375000	109	85237	98592	1	426751	98
Law firms					0	5000		5000	5000	1
Local, regional and municipal authorities					0	122	155	20	300	3
Non-governmental organisations					0	206	1287	2	9299	52
Other public or mixed entities, etc.					0	37	67	3	232	11
Other similar organisations	248878	147505	48000	571900	9	7025	9864	50	14000	2
Professional consultancies					0	97	116	5	316	8
Think tanks and research institutions					0	99	136	2	300	4
Trade unions	237500	196320	75000	500000	4	4596	31311	1	248137	92
Trade, business & professional associations	708987	1098870	0	6000000	133	37	67	3	232	11
TOTAL IN REGISTER	714900	1139672	0	8375000	255	32380	73428	1	426751	272
Not in Transparency Register						30678	268836	0	4430000	280
TOTAL ALL ACTORS	714900	1139672	0	8375000	255	31520	198111	0	4430000	552

Table K. Descriptive statistics (budget and staff size) for Interarena classification

	Budget					Staff size				
	Mean	S.D.	Min.	Max.	N	Mean	S.D.	Min.	Max.	N
Business groups	722645	1100910	7500	6000000	131	3260	26381	1	248137	130
Hobby/leisure groups					0	25		25	25	1
Identity groups					0	21		21	21	1
Institutional associations	216667	162660	50000	375000	3	96	217	1	892	17
Occupational associations	215385	232410	0	850000	13	61	155	2	657	20
Public interest groups	125000		125000	125000	1	172	1160	2	9299	64
Religious groups					0	34		34	34	1
Unions	8570		8570	8570	1	14		14	14	1
TOTAL INTEREST GROUPS	659397	1048311	0	6000000	149	1863	19658	1	248137	235
Non-interest groups	792980	1257956	14670	8375000	106	53501	258864	0	4430000	317
TOTAL ALL ACTORS	714900	1139672	0	8375000	255	31520	198111	0	4430000	552