

Cooptation of ENGOs or Treadmill of Production? Advocacy Coalitions and Climate Change Policy in Finland¹

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Abstract

Corporatist Nordic welfare states are largely thought to have exemplary environmental policies. Finland, however, was labeled “a failing ecostate” by a recent study owing to its weak climate change policy. Why is Finland different? We use data from a survey of organizations

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belonging to the Finnish climate change policy network to investigate two alternative explanations related to policy networks. According to the Cooptation Thesis, inclusive corporatist polities, where environmental NGOs (ENGOS) have support from and access to the state, formulate less ambitious policies because environmentalists moderate their views to secure state funding and political access. Second, according to the Treadmill of Production Theory, the decisive feature of Nordic corporatism with regard to environmental policy is the tripartite system linking business interests, labor unions, and the state in a coalition that prioritizes economic over ecological values. The results indicate that the ENGO Coalition is the least influential, least resourceful, smallest, least linked to the others, and not particularly moderate. The Treadmill Coalition is the most influential, most resourceful, second largest, well linked to the state, and least ecological in its beliefs. Thus, of the two policy network explanations, the dominance of the Treadmill Coalition rather than cooptation of ENGOS gets support.

Keywords: Advocacy Coalition Framework, corporatism, climate change

Introduction: Why is Finland Different?

Finland is the land of a thousand lakes and countless hectares of open wilderness. Travel brochures and websites are filled with images of beautiful empty landscapes and texts about escaping the hustle and bustle of city life to embrace the silent beauty of nature (Visit Finland 2015). “Clean” was chosen as the number one strategic theme of communication about Finland by the Country Brand Working Group set up by the government in a report filled with words and phrases such as “pristine,” “organic,” “green technologies,” and “each Finn has a close relationship with nature” (Team Finland 2014). Along with the other Nordic countries, Finland

generally boasts an image of a progressive, environmentally friendly, high-tech country, rather than a big polluter.

In climate change policy, however, Finland is different. As shown in figure 1, based on the latest available World Bank data, at 10.2 tons per capita, Finland's Co2 emissions are the highest of all Nordic countries, compared to Norway (9.2), Denmark (7.2), Iceland (5.9), and Sweden (5.5) (World Bank 2015a). Furthermore, Finland's emissions (along with Norway) have followed a rising trajectory since 1990 (the reference year for the Kyoto Protocol), whereas the other Nordic countries have managed to reduce their emissions.²

[Figure 1 about here]

Looking at things beyond simple emission levels, Finland does not fare any better. In 2015, the Germanwatch Climate Change Performance Index places Finland at 32nd position in a list of 64 countries, in the company of Belarus (33rd), Indonesia (34th), and Ukraine (35th) (Germanwatch 2015). Denmark tops the entire ranking, Sweden and Iceland are included in the top 10, and even oil-rich Norway is placed above Finland at 24th. Furthermore, Finland was recently labeled “a failing ecostate” owing to its climate change policy performance (Koch & Fritz 2014).

Finland has committed to a national Energy and Climate Strategy that includes plans on how to meet the EU-imposed target of reducing emissions 20 per cent by the year 2020. The

² The global economic recession since 2008 has hit Finland harder than most other European countries. The decline in emissions since that year is more due to falling economic output than changes in climate policy. Owing to the recession, Finland did meet its commitments to the Kyoto protocol in 2012 by lowering emissions to below 1990 levels. Being the worst of the Nordic countries, then, is still far from being the worst in the world—some countries, of course, either never ratified the Kyoto protocol or just did not meet their targets and opted out later.

principal projected means to achieve this goal are the increasing energy use of wood chips, increased energy efficiency and increase in wind power (currently 1% of the energy supply) (Ministry of Economy and Employment 2013). However, when this policy was being negotiated in EU, Finland strongly opposed ambitious targets, in stark contrast to forerunner countries like Sweden and Denmark (Teräväinen 2012). There are also some national policies that ostensibly look ambitious, but have nevertheless failed to reduce emissions to a considerable extent. A case in point is the carbon tax. Finland was the first country to act such a tax, in 1990. However, energy intensive industries were exempted, rendering the tax rather ineffective (Vourc'h and Jimenez 2000).

Popular explanations for Finnish climate performance often reference things such as low population density (18 inhabitants per square kilometer) and the resulting long transport distances or the cold weather that leads to increased energy use. However, Sweden is nearly as sparsely populated (24/ sq. km)³ and Iceland is hardly a tropical paradise either. Yet, these countries have fared much better than Finland in responding to climate change. Hence, in addition to simple geographic and demographic factors, other factors must be at play.

The point of departure of this paper, guided by the Advocacy Coalition Framework (ACF), is that a key determinant of policy output is the constellation of organized actors in a given policy domain and the power relationships between the different coalitions involved in that domain (Sabatier 1998; Kriesi and Jegen 2003; Broadbent forthcoming). Simply put, we investigated which properties of the climate change policy network, comprising governmental

³For reference, Germany has 232 inhabitants per sq. km, South Korea 518, and Bangladesh 1218 (World Bank 2015b).

and non-governmental organizations, business groups, and research institutions, could explain the relative underperformance of Finland in climate change policy.

The relationships among these organizations are structured in different ways in different polity types. In various classifications of polity types, Finland is included in the category of Nordic Corporatist polities (Jepperson 2002; Lijphart 2012). Two characteristics of this polity model are particularly relevant to our argument in this paper. One is the close relationship between nongovernmental organizations and the state. The other is the strong role of the tripartite bargaining system comprising trade unions, business peak organizations, and state organizations. The influence of this system extends far beyond collective bargaining, to policymaking in areas such as environmental policy.

Most literature on environmental policymaking has claimed that the corporatist polity model is conducive to progressive environmental policy (Jacob and Volkery 2006; Jänicke 2005; Liefferink et al. 2009). The case of Finnish climate change policy speaks against this argument. What could be the factors hindering successful climate change policy in a corporatist polity?

We investigate two alternative explanations. First, Dryzek et al. (2002) argued that not all types of corporatism are, in fact, conducive to progressive environmental policy. The particular Nordic variant of *actively inclusive* corporatism, they claim, integrates environmental NGOs (ENGOS) so closely with the State that they become toothless in their efforts to push for ambitious environmental policies. Thus, ENGOS are coopted.

Second, according to the Treadmill of Production Theory (Schnaiberg and Gould, 1994; Schnaiberg 1997), in advanced capitalist societies, trade unions, business peak organizations, and state actors tend to form a constellation privileging economic growth over environmental concerns. Because the tripartite structure consisting of these three types of organizations is

particularly strong in Nordic corporatist polities such as Finland, we should expect the treadmill effect to be of particular importance in this context: the lack of ambitious climate change policy could be explained by the coalition of unions, businesses, and the State.

We test these alternative explanations using data from a survey of 96 organizations involved in the Finnish climate change policy network. We use variables pertaining to both inter-organizational collaboration and policy beliefs to discern advocacy coalitions, going beyond most existing research that tends to operationalize the coalitions based on beliefs only and assumes that collaboration follows automatically (Sabatier 1998, 115; see also Fischer 2014; Grossman 2014; Leifeld 2013). We discerned three advocacy coalitions: the ecologically minded ENGO Coalition, economically minded Treadmill Coalition, and the Government and Research Coalition.

Our results support the Treadmill but not the Cooptation explanation. The ENGO Coalition is the least influential, least resourceful, smallest, least linked to the others, and not particularly moderate. The Treadmill Coalition is the most influential, most resourceful, second largest, well linked to the state, and least ecological in its core beliefs. In addition to business and labor organizations, this coalition includes the Ministry of the Economy and Employment and the three largest political parties. The results suggest that the weak policy outcomes are related to the dominance of the Treadmill Coalition and its penetration into the state rather than the cooptation of ENGOs. The implications of this finding are discussed in the last section of the paper.

Advocacy Coalition Framework

The ACF posits that organizations with similar policy beliefs cluster in networks of collaboration to further their shared political objectives. The institutional or sectoral affiliation of

organizations is not necessarily the defining feature in the policies they advocate. Rather, the advocacy coalition that they belong to is more important. Policy domains (such as the climate change policy domain) usually consist of two to three coalitions with diverging, and often opposing, objectives. Competing coalitions have different capabilities to implement their views on desirable policy based on their resources such as finances and access to official political decision making. Hence, policy outcomes depend on how the actors involved in a particular policy domain are clustered into coalitions and the coalitions that happen to have better resources. Sometimes, for example, a dominant coalition may block policy change even though all other actors see it as desirable. In other situations, changes in the resources or beliefs of competing coalitions or successful efforts at mediation between competing coalitions may lead to rapid policy change.

The ACF holds that “the principal glue holding a coalition together is agreement over *policy core* beliefs” (Sabatier 1998, 105). Policy core beliefs refer to basic value priorities and ideas about the basic causes of the problem in question. Sharing policy core beliefs is seen as a source of in-group cohesion and as a factor producing mistrust of other coalitions. Although the ACF is designed to explain policy changes, it can be used to explain existing policy—or even the lack of policy change—because “certain coalition structures are more prone to policy change, while others favor a status quo output” (Fischer 2014, 345). For example, if a coalition has dense internal ties and similar beliefs in addition to having political and financial resources, it is often an indication of a dominant coalition that has policy monopoly. Such situations are not likely to lead to policy change.

A well-known problem in most studies using the ACF is that while advocacy coalitions are defined by the dual condition of both collaboration and similarity of beliefs, collaboration is

usually assumed to follow automatically from belief homophily (Grossmann 2014). Thus, it is often presumed that “actors who hold similar policy core beliefs will *act* in concert – [...] the first condition of coalition formation is sufficient for the second” (Sabatier 1998, 115).

Operationalizing just one aspect of coalitions—either beliefs or coordinated activity—is usually for the sake of convenience because it is difficult to obtain data pertaining to both beliefs and cooperation. However, even the main protagonists behind the ACF, Hank C. Jenkins-Smith and Paul Sabatier, have argued that the precise role of beliefs in coalition formation needs to be refined theoretically because the evidence is mixed (Jenkins-Smith et al. 2014).

We endeavor to overcome this limitation of most existing research by using a social network approach and outlining the advocacy coalitions using a measure of their actual (self-reported and dyadic) collaboration. We then empirically examined the extent of similarity of beliefs within and across coalitions acting in collaboration rather than assuming that collaboration and belief homophily are necessarily linked.

Corporatism and weak environmental policy outcomes: Cooptation of ENGOs or Treadmill of Production?

Finland is a corporatist country. For example, according to Lijphart’s (2012) ranking of countries based on their interest group pluralism versus corporatism, Finland is the fifth most corporatist of the 36 countries compared. The particular variety of corporatism in Finland is similar to that in the other Nordic countries and is thus labeled Nordic corporatism in many classifications. This polity type is characterized by tripartite agreements, strong peak organizations, and multi-party polities (Lane and Ersson 2002).

The literature comparing environmental policy outcomes in different polity types usually holds that corporatism has a positive effect on environmental policy. Jacob and Volkery (2006)

found corporatism to be important for explaining the pioneering environmental behaviors of countries. They argued that this has to do with the “integrative capacity of a country, i.e., a style of governance that does not restrict participation to general elections but organizes it in a broad and consensual way” (ibid., 84). Jänicke (2005) arrived at similar conclusions in his framework of trendsetters in environmental policy. According to him, a policy style centered on dialogue and consensus is one of the conditions for successful environmental policy. Liefferink et al. (2009) found that corporatist countries are more likely to implement environmental policies than pluralist or statist ones.

The case of weak climate change policy in Finland challenges these arguments. At the very least, it shows that not all environmental policy in all corporatist countries is strong and that the issue warrants further investigation. Is it, then, the particular type of corporatism in Finland that produces weak climate change policy outcomes? And if so, how is corporatism linked with advocacy coalitions in this case? Gupta (2014) has argued that coalitions face different opportunity structures based on the enabling and constraining aspects of institutions that characterize the political system that coalitions operate in. She postulates that “when decision-making authority is concentrated and access to decision-making is restricted, coalitions will adopt confrontational strategies such as public protest” (Gupta 2014, 359). Nordic corporatism is consensual and open to access and should thus be prone to produce what Gupta calls assimilative strategies (such as reliance on appeals and petitions).

Dryzek et al. (2002) have argued that the inclusive opportunity structure of Nordic corporatist states and the resulting lack of confrontation can actually be bad for the environment. Comparing Germany and Norway, Dryzek and colleagues argued that only passively exclusive corporatism—the German version—tends to produce ambitious environmental policy, unlike

actively inclusive corporatism, found in Norway. The reason is that an active state takes measures to ensure that civil society is included in decision-making processes. These measures include granting political access and funding to NGOs. In exchange, the ENGOs need to moderate their views to the extent that they are coopted by the State. As a result, they may be well funded and have access to decision-making, but they are toothless in their efforts to push for policy change. To the extent that the coalition opportunity structure in Finland is actively inclusive like in Norway, this argument could also explain Finnish policy outcomes. In terms of the two coalition variables suggested by the ACF—collaboration ties and policy beliefs—this would mean that ENGOs are strongly connected to a dominant policymaking coalition but are very moderate in their beliefs. Thus, the Cooptation Thesis states:

The weak climate change policy outcome in Finland is the result of the actively inclusive corporatist state coopting ENGOs. In terms of the policy network, the ENGOs are well-connected to a dominant advocacy coalition but are very moderate in their beliefs concerning climate change mitigation.

A competing explanation is derived from the Treadmill of Production Theory (Schnaiberg and Gould 1994; Schnaiberg 1997). As far as we are aware, this theory has not been considered thus far in the literature discussing what sort of news corporatism spells for the environment. The Treadmill of Production Theory was originally conceived in the US context and it was assumed that as “owners and managers focus on productivity and profits, firms ignore concerns such as workers’ rights and environmental protection” (Rudel et al. 2011, 224). However, there are reasons to expect that factors identified by the Treadmill Theory as nearly

universal in hindering environmental policy progress play an especially large role in corporatist polities, particularly those of the Nordic type. The theory argues that economic growth has become institutionalized as the most important objective of the political-economic system that currently prevails worldwide. The economic component of this political-economic system has the publicly stated goal of expanding industrial production and economic development, as well as concomitantly increasing consumption. The political component of this system has a public confluence of interests among private capital, labor, and governments in promoting industrial and economic expansion (Schnaiberg 1997).

In the Nordic context, the political component of the Treadmill of Production can be expected to be particularly strong. Not only are the interests of capital, labor and government confluent, but in this context, the tripartite ties of collaboration are exceptionally close. In the particular case of Finnish climate change policymaking, we may expect this tripartite collaboration to extend to this domain. In ACF terminology, we would then expect to find a dominant coalition of industry, labor, and government based on close collaboration ties and shared policy core beliefs that stress economic growth at the expense of ecological goals. Therefore, the Treadmill Thesis states:

The weak climate change policy outcome in Finland is the result of the existence of a dominant policy coalition that includes business, labor and government organizations and which is strong in its resources and prioritizes economic growth over ecological objectives.

Data and Methods

The data was obtained from an online survey done in 2014 on Finnish climate change policy. The respondents were representatives of the major national organizations with a stake in climate change policy in Finland. A preliminary list of respondents was compiled based on previous research on Finnish climate change policy by the other author of this paper. This list was presented to four experts on climate change policy representing different types of organizations. These experts suggested a few changes. In addition, the list was compared with a computer-assisted analysis of media data on climate change, also collected for a previous research project, consisting of 729 newspaper articles on climate change published between 1997 and 2013 in Finland's most widely circulated newspaper *Helsingin Sanomat*. We ran an algorithm that listed all proper nouns in this media data to see if we had missed any important organizations having to do with climate change in Finland. A comparison of our original list and the computer-generated list did not lead to any new additions. Our final list included 96 organizations. The list of respondents was identical to a roster used in the questionnaire to list potentially influential organizations and partners with whom respondents had long-term, mutual relationships of collaboration. The respondents we targeted were either in charge of climate related issues or environmental policy in general (in case the organization in question did not have anyone specializing in climate policy). To maximize the response rate, the survey was carefully designed, made short and easy to follow. The respondents were first contacted by phone by a research assistant who then sent out links to the online survey, and followed up several times by email and phone to get the maximum number of responses. The response rate was 83%.

The network of collaboration originally consists of directed (i.e. not necessarily reciprocal) ties. For our analyses, all ties were made reciprocal by symmetrizing them with the maximum criterion in UCINET. In other words, if organization A reports having a collaboration relationship with organization B, we consider a collaboration tie to exist even if B has not reported collaboration with A. This often-used procedure ensures that different reporting criteria that may be used by different respondents do not influence the results.⁴ Moreover, using this criterion allows one to include non-respondent nodes in the network.

The *density* of a network refers to the relation between actual versus potential connections. In the collaboration network in our case, density is relatively high at .27, meaning that 27 per cent of all possible ties between the organizations in the network are actualized. The *clustering coefficient* indicates whether there are densely populated neighborhoods, or in other words, subgroups in the network. The overall clustering coefficient of our collaboration network is .53. This is about twice as high as the overall density, which indicates that subgroups are likely to be found.

The network of collaboration was split into subgroups using the factions routine in UCINET. This algorithm identifies subgroups with dense internal ties. In other words, it attempts to fit nodes into groups with high within-group density. A coalition, thus defined, is a group of organizations that have many collaboration ties among each other, but relatively few with those outside the group. Using the factions algorithm, the analyst has to decide the number of factions the algorithm tries to fit the nodes into. In practice, several solutions (typically with 2,3,4 and 5, sometimes more factions) are tested, and the best one chosen using the twin criteria of theoretical

⁴ Two organizations reported having collaborations with almost all of the 96 organizations. These responses deviated so much from the other responses that the ties of these organizations were symmetrized using the minimum criterion, which includes reciprocal ties only.

interpretability and statistical fit of the solution. The measure of the latter is called *proportion of correctness*. It is a measure of the total number of "errors" which refers to absent within-faction and present between-faction ties. Ansell, Reckhow, and Kelly (2011), too, used the factions algorithm to find coalitions. Their research strategy is similar to ours, in that they start with collaboration and then see the extent to which the factions fulfill the criteria of belief similarity (see also Matti & Sandström 2013). However, we paint a more nuanced picture of coalitions by looking at several variables measuring coalition resources as well: reputational power, and political and financial resources.

The policy core beliefs were analyzed using a composite variable that indicates the relative importance given by respondents to economic development versus the environment in combating climate change. This level of beliefs should correspond with the idea of policy core beliefs because “economic development versus environment protection” is one of the fundamental value priorities that Sabatier and Jenkins-Smith (1999, 122) used as an example of policy core beliefs.

To measure policy core beliefs concerning the importance of climate change mitigation (henceforth pro-mitigation beliefs), we created a composite variable consisting of six items measuring these beliefs in our survey. Based on inter-item correlation tables and a series of exploratory factor analyses of 21 belief variables, we identified six strongly correlated items that constituted the final scale. The items ranged from the validity of climate science to prioritization of mitigation over economic competitiveness and desirability of governmental mitigation efforts. All items were measured on a five-point Likert scale. We calculated the simple sum of all items (as opposed to summing by factor scores) to maximize transparency of interpretation and scaled the final composite variable so that values ranged from 0 to 1 to maximize readability.

Cronbach's Alpha for the composite variable is .875. Appendix 1 lists the six items and the results of the principal component analysis performed for constructing the composite variable.

To measure reputational power, we asked the respondents whom they find influential in Finnish climate change policy. The standard measure for reputational power is indegree centrality, i.e. the number of ties a node has in the reputational matrix. In practice, this equals the number of survey respondents that have identified a particular organization as influential. In addition, the respondents were asked to report their political (participation in official political activities) and financial resources (annual budgets).

Results

The Finnish climate change policy network is clustered into three coalitions: The Treadmill Coalition, the ENGO coalition, and the Government and Research Coalition. This section presents our evidence for this clustering, looks at the leading organizations of each coalition, connections among them, and, finally, the policy core beliefs and resources of each coalition.

Three Coalitions

We began by clustering the network data into groups using the factions algorithm. A solution of four factions finds three advocacy coalitions plus a heterogeneous group of outsiders. The proportion of correctness of this solution is high at .74. We performed several reruns to ensure that the composition of the factions was not accidental.⁵ Increasing the number of factions

⁵ The reruns placed one or two nodes into different factions, but for all practical purposes, this makes no difference. We also compared the results of the factions routine to results given by other clustering methods such as Louvain community detection and CONCOR block modeling. The results were fairly similar in all instances, but the factions routine produced the most solid model in terms of its proportion of correctness.

to five and six returns a slightly better proportion of correctness, but the differences are relatively minor. Moreover, adding more than four factions produces subgroups with low internal density (i.e. low degree of collaboration among group members), which can hardly be interpreted as collaborating coalitions. Reducing the number of factions to three, in turn, reduces the proportion of correctness to 0.69. This is because the three-faction solution forces outsider nodes (i.e. organizations that collaborate with hardly anyone) to one of the three factions, lowering the fit of the solution. These outsider nodes are indeed at the periphery of the network, as one would expect, and they lack direct ties with each other. All in all, splitting the network into three advocacy coalitions plus outsiders seems justified. A figure of the collaboration network is shown in Appendix 2.

In our three-coalition grouping, the within-densities of the subgroups are .59 (Government and Research Coalition), .51 (Treadmill Coalition), and .54 (ENGO coalition). All these values are considerably higher than the average density of the network (.27). This finding indicates that these subgroups can indeed be thought of as coalitions since their members are in contact with each other more than with others in the network. Within the coalitions, 59, 51 and 54 per cent of possible ties are actualized, respectively, compared to just 27 per cent in the whole network. The outsider group's density is very low (.04), which is, again, a sign that it is not a coalition, because it consists mostly of disconnected nodes. Thus, this group will be excluded from further analysis.

Composition of the Coalitions

We named the coalitions based on an assessment of their composition, emphasizing the organizations considered the most influential by other organizations. Table 1 presents the top fifteen organizations in each coalition ranked by their reputational power. Reputational power is

a measure of influence, as perceived by other organizations within the network. Each respondent was asked to indicate the organizations they considered influential in Finnish climate change policymaking from the aforementioned roster of 96 organizations. This resulted in a network matrix where reputational power of an organization was defined as its indegree centrality. Thus, the figure for each organization can be read as the proportion of actors in the network that consider the organization influential.

[Table 1 about here]

The Treadmill Coalition is led by the Ministry of Employment and the Economy. It is perhaps telling of the Finnish institutional framework that such a ministry, linking issues of employment (represented by trade unions) and the economy (represented by business peak organizations), exists. Indeed, an alternative English translation for the Finnish name of the ministry, *Työ- ja elinkeinoministeriö*, would be the Ministry of Work and Business, but we have used the official English translation. Finland's energy policy falls under the mandate of this ministry, which explains why it is perceived as the most influential organization in the entire network (reputational power .77). Perhaps not surprisingly, the coalition led by this ministry includes the main business peak organizations and labor unions. The business organizations are perceived as more influential than labor, with the umbrella organization Confederation of Finnish Industries at .75 and its member organizations the Energy Industries Federation at .68, Forest Industries Federation at .55, and Federation of Technology Industries at .47. The largest trade union umbrella organization, Central Organization of Trade Unions, rated at .36, and the Central Union of Agricultural Producers and Forest Owners, rated at .39, belong to this coalition

as well. Furthermore, all of the three largest political parties from the right wing National Coalition (.64), to the Social Democrats (.46) in the left, and the Center Party (traditionally representing rural Finland) (.54), too, belong to this coalition. In sum, the Treadmill Coalition groups unions and business interests under the leadership of a ministry dedicated to mediating between these two in a system of collective bargaining, in addition to the large political parties representing both sides of this system.

The ENGO coalition is, overall, much less influential. It consists of the main international and national ENGOs such as the WWF (.58), Greenpeace (.44), The Finnish League for Nature Conservation (.49), and two smaller political parties: the Greens (.49) and the Left Alliance (.18).

The Government and Research Coalition lies between the other two coalitions in terms of its overall perceived influence. This coalition groups four ministries whose mandates are related to climate change policy: the Ministry of Environment (.75), Finance (.60), Agriculture and Forestry (.55), and Transport and Communications (.52). The second important group in this coalition includes research institutions, with Sitra (.53), the Finnish Environmental Institute (.51), and the Finnish Meteorological Institute (.45) being the three most influential ones. In addition, two government-owned energy corporations, Fortum (.60) and Neste Oil (.46), belong to this coalition.

In sum, as argued by the Treadmill Thesis, we find an influential coalition of business interests, labor unions, and the state, the latter being present both through a key ministry and through the three major political parties. Within the coalition, business organizations are clearly more influential than the unions. Thus far, we do not find support for the Cooptation Thesis. While some key ENGOs are relatively influential, they belong to a coalition of their own instead of being integrated into an influential dominant coalition.

Connections among the Coalitions

As pointed out above, all coalitions are internally dense. What about the connections between the coalitions? Are the coalitions highly distinct and competitive, or is there collaboration across coalition lines? Figure 2 shows the inter-coalition densities in the collaboration network.

[Figure 2 about here]

The Treadmill Coalition is well connected to the Government and Research coalition: the network density between the two is .27. This means that 27% of all possible collaboration ties between individual member organizations of the two coalitions are actualized. The ENGO coalition is on its own to a greater extent. Its connectedness to the Government and Research Coalition is only slightly higher (.19) than its connectedness to the Treadmill Coalition (.18). These results further support the Treadmill Thesis instead of the Cooptation Thesis. For the ENGOs to be coopted, they would need to be more tightly connected to state actors.

Policy Core Beliefs and Resources

An analysis of the policy core beliefs of the collaborating groups we have identified confirms our interpretation that they are, indeed, competing advocacy coalitions. On our composite scale measuring pro-mitigation beliefs (scale 0–1, see the methods section for details), none of the standard deviations within the three coalitions exceeds the standard deviation in the beliefs of the entire network. We suggest this as an additional criterion for the existence of advocacy coalitions. In other words, coalitions exist if they exhibit a high degree of internal collaboration and at the same time, are relatively homogeneous in their beliefs and clearly

differentiated from the other coalitions in this respect. Both of these criteria are filled in our case; the coalitions we find are based on collaboration ties (as shown above) and shared policy core beliefs. Table 2 lists the differences in the beliefs and resources of the coalitions. It also shows the percentage of organizations in each coalition that belongs to the core of the whole network.

[Table 2 about here]

The Treadmill coalition is the least supportive of climate change mitigation policies (mean .65) and the ENGO coalition the most supportive (.90). The Government and Research Coalition lies in between these two (.75). All of these values are above the midpoint of the scale (.50), showing that outright anti-mitigation beliefs are rare anywhere in the network. The differences among coalitions, however, are clear and statistically significant (One-way ANOVA (3,78) = 5,09, $p = 0.003$). Moreover, the score of the ENGO faction is relatively close to the upper extreme of the scale, suggesting that this coalition is not particularly moderate in its beliefs, which is contrary to the Cooptation Thesis. The ENGO coalition is also the most homogeneous in its beliefs (standard deviation .13 compared to .21 in the entire network).

Turning to coalition resources, the Treadmill Coalition has the highest (.37) reputational power (or influence as perceived by the other network members), whereas the ENGO coalition (.19) has the lowest. Analysis of variance shows that these differences are statistically significant $F(3,92) = 7,91, p = .000$.

In terms of political resources, as measured by self-reported participation in policymaking via hearings, governmental advisory committees, and drafting legislation, there are no statistically significant differences among the coalitions, $F(3,75)=1,75, p=.165$. It seems that

the ENGO coalition seems to think they have as much access to official policymaking as the other two coalitions, but their influence as perceived by others does not confirm this self-image. This finding could also indicate that ENGOs do have formal political access but no informal recognition that is needed to actually influence policy. Their reputational power is lower, and they are in a more peripheral position in the collaboration network than the other two coalitions, as shown above.

In terms of financial resources, the ENGO coalition also looks the weakest (mean .51), behind the Treadmill (.67) and the Government and Research Coalitions (.83). These results, however, slightly miss the mark of being statistically significant $F(3,53) = 2,63$, $p = .060$, so they must be interpreted with care. Ministries and large corporations tend to be the organizations with the highest budgets in the network, and the absence of both from the ENGO coalition explains its financial weakness. Of the ENGOs themselves, none report budgets in our highest category (50M€ and over).

Finally, occupying a position in the core of a policy network can also be considered a resource for an organization. In a core-periphery structure, actors in the core have high within-density and those in the periphery low within-density. This makes it possible for those in the core to coordinate their actions more easily than for those in the periphery; thus, nodes in the core are at a structural advantage (Hanneman & Riddle 2005). We performed a core-periphery analysis of the collaboration network and calculated the percentage of organizations in each coalition belonging to the core. By this measure, the ENGO coalition is the least advantaged: less than a third of its member organizations belong to the core of the collaboration network, whereas in the case of the other two coalitions, the share is around half.

These results on the beliefs and resources lend support to the Treadmill but not the Cooptation Thesis. The Treadmill Coalition is the least supportive of climate change mitigation and the most influential, while the reverse is true for the ENGO Coalition. The pro-mitigation beliefs of the ENGOs are fairly close to the extreme of the scale and deviation within the coalition is small, thus negating the hypothesis that inclusive corporatism would necessarily lead to cooptation of ENGOs.

Guided by the two alternative network explanations derived from previous literature, our analysis so far has focused mainly on the Treadmill and ENGO coalitions. But the role of the Government and Research coalition does also merits some attention. It does not seem to be a broker coalition between the other two, at least in the sense of being an impartial spectator. The role is, thus, different from the role played by the government coalition in the case studied by Jenkins-Smith et al. (1991), for instance. The beliefs of the Government and Research Coalition (.75), while in between the two others, fall somewhat closer to those of the Treadmill Coalition (.65) than the ENGO coalition (.90; see Table 2). Moreover, in the collaboration network the Government and Research Coalition is much more closely connected with the Treadmill (between-coalition density .27) than the ENGO Coalition (.19; see Figure 2). In fact, the ENGO coalition has almost as little connections to the Government and Research Coalition (.19) as it has to its “opponent,” the Treadmill Coalition (.18). The Government and Research Coalition, thus, is clearly closer to the Treadmill Coalition both in terms of beliefs and collaboration.

Discussion

Many previous studies in the ACF tradition assume that collaboration of organizations automatically follows from belief similarity. While it has been shown that belief correspondence – or perceived belief correspondence (Matti & Sandström 2013) – does predict coordination

between organizations, we argued that one should not assume that this is always the case. Our analysis has thus contributed into ACF literature by proposing an approach that uses data both on collaboration ties and beliefs, as well as organizational resources. We first detected coalitions using network analysis of collaboration ties, then proceeding to analyze belief similarity and the distribution of resources between and within these coalitions. We have also suggested that an analysis of the share of organizations in the core of the network per coalition can shed light into power relations in a policy network. Furthermore, most ACF literature takes the US pluralist polity model as given and does not discuss its applicability in the context of other polity types. The ACF approach and network analysis, we have argued, can also be useful in understanding corporatist polities such as Finland, and contributing to debates such as the one on the relationship of corporatism and environmental policy outcomes (for applications of ACF beyond pluralist polities, see Ingold 2011; Fischer 2014).

The empirical starting point of our article was the somewhat surprising finding that Finland has fared the worst of all the Nordic Countries in terms of its climate change policymaking. In this study, we tested two competing explanations for this state of affairs. The Cooptation Thesis predicted that the actively inclusive corporatist state has coopted ENGOs, which play a central role in the climate policy network but have moderated their beliefs in exchange for access to and funding from the state, thus becoming toothless in their efforts to push for ambitious climate change policy. The Treadmill Thesis predicted that in the context of a Nordic corporatist polity, businesses, trade unions, and state organizations form a powerful advocacy coalition that prioritizes economic growth over ecological objectives.

Our results support the Treadmill but not the Cooptation Hypothesis. The Treadmill Coalition is the most influential, most resourceful, second largest, well linked to the state, and

least pro-mitigation in its policy core beliefs. It is led by the most influential actor in the entire network, the Ministry of Employment and Economy (MEE), which brings together business interest groups (which also score very high on reputational power) and labor unions. This coalition is strongly linked to the state through the MEE, as measured by inter-coalition network densities, and through the three largest political parties (right, center and left), all of which belong to this coalition. The ENGO Coalition is the least influential, least resourceful, smallest, least linked to the others, and not particularly moderate in its beliefs – unlike the cooptation argument would lead us to believe.

It must be emphasized our analysis has not addressed all the relevant factors in explaining Finnish climate change policy. We have approached the issue from a policy network perspective and thus, have mainly been interested in seeing which one of two competing policy network related theories found in the earlier literature fits the evidence best. However, advocacy coalitions in policy networks influence policies only insofar as they are supported by favorable coalition opportunity structures (COS, Gupta 2014), or, are at least not too severely hindered by unfavorable ones. COS refers to institutional and macro-structural factors such as economic institutions and their political power, respective mandates and power positions of government institutions such as ministries, and voter preferences and the structure of the party political field.

To begin briefly considering the influence of such factors on the coalition structure and policy outcomes, it is interesting to note that our results run contrary to the picture of the inclusive Finnish polity painted by most literature in political science and sociology. There is a widespread consensus in the literature that in general, the Finnish opportunity structure is very open. Specifically, it has been argued that civil society and the state are particularly close in the Finnish polity model, and civil society organizations have open access to and much influence

over state institutions (Luhtakallio 2012; Ylä-Anttila 2010; Alapuro 2005; Alapuro and Stenius 1987). Why does this not seem to be the case when it comes to climate policy, as the position of the ENGO Coalition in our data shows?

To be precise, what is at stake is not so much the lack access but rather the lack of influence. As we have shown, ENGOs do seem to have access to the policymaking process (at least according to their own estimate). However, according to the estimate of all organizations in the network, their level of influence is low. There are at least three probable reasons for this state of affairs.

First, the Finnish economy is exceptionally export oriented (Vartia and Ylä-Anttila 2003, 102) and concerns over national economic competitiveness have directed policymaking on several issues more than in the other Nordic countries since the 1970's (Lounasmeri and Ylä-Anttila 2015, 66-69; Kosonen 1987, 183–186). The leading sectors of the export industry happen to be very energy-intensive (IEA 2013). Pulp and paper as well as steel and machinery industries require much electricity, and the economic weight of these industries has – as the rhetoric of national competitiveness shows – been translated into political power that can be seen in our measures of network connectedness and influence (cf. Teräväinen 2010; 2012; Ruostetsaari 2010).

Second, and related to the first point, climate policymaking has been subsumed under energy policy (witness the title *National Strategy for Energy and Climate*) and national policymaking on energy issues falls under the mandate of the Ministry of Employment and Economy. The Ministry of Environment only bears the administrative responsibility of the international climate negotiations. This division of mandates, it has been argued, is related to the political influence of the export industries that are well-connected to the MEE, which has

hindered ambitious climate policymaking (Teräväinen 2012). In other words, while the general political opportunity structure may be relatively open, the coalition opportunity structure in the specific policy domain of climate change is more open to the industry lobby, through the MEE, than to ENGOs.

Third, as we have shown, Finnish climate policy is not only influenced by the industry lobby, the Conservative Party and an opportunity structure that is favorable towards these actors. The Treadmill Coalition also includes the Confederation of Labor Unions, the Social Democratic Party, as well as the Union of Agricultural Producers and the Center Party (representing rural Finland). Thus, there seems to be a degree of consensus across the principal political cleavages (left-right and rural-urban) on prioritizing economic competitiveness over ecological goals. These three parties have ruled in a relatively stable manner in varying coalitions since the early 1990's (despite a recent populist challenge represented by the True Finns) (Ylä-Anttila and Ylä-Anttila 2015). Thus, the opportunity structure has not been favorable to environmental coalitions as far as voter preferences and party politics are concerned either.

Conclusion

To conclude, we briefly consider the implications that our results have for the possibility of policy change in the future. The kind of change required goes beyond simply implementing legislation that would stop energy-intensive industries in Finland. While such change would improve the standing of Finland in international emission comparisons, it would not necessarily be a good thing for the environment; if the same industries were moved to a country with less developed technology and even less strict environmental legislation, such as China, the same products would still be made and probably cause much more emissions. Rather, the challenge would be to find policy instruments that would make the industry not to stop but to clean itself

up by using less energy, producing it in a less carbon-intensive way, and innovating products that replace energy-intensive ones.

What are the prospects for such policy learning in the Finnish climate change policy network? The tripartite power structure in the Finnish corporatist policy may have led to a type of path dependency, where the long-standing economic dominance of energy-intensive export industries has shaped the power structure of the policy network and has, in turn, blocked radical changes in climate change policy. If one problem is the informal exclusion of ENGOs, as our results suggest, widening the scope of participation to grant them more influence would be an obvious part of the solution. One possible step towards that direction would be changing the mandates of the ministries in the climate change policy domain, strengthening the role of the Ministry of Environment and its connections to the ENGOs, at the expense of the Ministry of Economy and Employment that provides access mainly to the Treadmill Coalition actors.

Despite the existence of competing coalitions, the Finnish climate change policy network is dense overall: collaboration across coalitions does take place – as one would expect in a corporatist polity. Network theorists have pointed out that in dense networks, once change is initiated, it is likely to spread across the entire network. Centola and Macy (2007) argued that complex contagion in networks, such as changes in social norms, requires a relatively dense network structure. Unlike the spreading of a virus that may occur through a single network link, complex contagions occur only if nodes receive the same “message” from more than one contact. The ACF has highlighted the importance of policy learning as a prerequisite for policy change. Changes in policy core beliefs are similar to changes in social norms because both are relatively resistant to change. Thus, policy learning as a change in an actor’s policy core beliefs is an example of a complex contagion. The relatively high overall density of the Finnish climate

change policy network may, thus, provide relatively favorable structural conditions for policy change. Policy change might be difficult to initiate, but once an impulse in that direction is initiated, it may occur quickly across the entire network due to its density. This is because density provides the structural preconditions for complex contagions.

Thus, density of the policy network can act as a precondition for such large-scale departures from past policies that, for example, punctuated equilibrium theory envisages (Baumgartner et al. 2014). For example, increasing public attention, changes in electoral politics, or interstate accords can act as external shocks to the policy subsystem in question and this can act as an initiator of radical changes (cf. Jenkins et al. 2014).

Regarding Finnish climate policy, an external shock may have been delivered by a process that began from the results of the parliamentary elections in 2011. The landslide victory of the populist Finns Party led to a situation where forming a government was extremely difficult, and the Green Party finally emerged as a savior by accepting to serve as part of a coalition government on the condition that legislation setting national limits to GHG emissions would be put in place. The climate change act, modeled on the one passed in the UK in 2008, entered into force in 2015. The law was formulated through a process that widened the scope of participation in the climate change policy domain by giving ENGOs more say than they have previously had (Lietonen 2014). This process and the resulting legislation, together with the Paris Agreement of 2015 under the UNFCCC, may provide just enough of a push for policy change to begin—even in the sometimes slowly moving corporatist policy networks of Finland.

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Table 1. Fifteen most influential organizations in each coalition.

	Government and Research Coalition	Degr. centr.	Treadmill Coalition	Degr. centr.	NGO Coalition	Degr. centr.
1.	Ministry of Environment	.75	Ministry of Employment and the Economy	.77	WWF	.58
2.	Fortum Corporation	.60	Confederation of Finnish Industries	.75	Green Party	.57
3.	Ministry of Finance	.60	Energy Industries Federation	.68	Finnish Association for Nature Conservation	.49
4.	Ministry of Agriculture and Forestry	.55	National Coalition Party	.64	Greenpeace	.44
5.	Sitra	.53	Forest Industries Federation	.55	Confederation of Unions for Professional and Managerial Staff	.24
6.	Ministry of Transport and Communications	.52	Center Party	.54	Finnish Nature League	.21
7.	Finnish Environmental Institute	.51	Federation of Technology Industries	.47	KEPA	.20
8.	Prime Minister's Office	.48	Social Democratic Party	.46	Left Alliance Party	.18
9.	VTT Technical Research Centre	.47	UPM-Kymmene Corporation	.44	Friends of the Earth	.16
10.	Neste Oil	.46	TVO Energy Corporation	.43	Centre for Economic Development, Transport and the Environment (Pirkanmaa)	.13
11.	Meteorological Institute	.45	Central Union of Agricultural Producers and Forest Owners	.39	Centre for Economic Development, Transport and the Environment (Varsinais-Suomi)	.09
12.	Stora Enso	.44	Energy Authority	.38	Finnish UN Association	.08
13.	Climate Panel	.42	Metsä Group	.36	Finn Church Aid	.06
14.	Aalto University	.41	Central Organization of Trade Unions	.36	Dodo	.05
15.	Tekes Funding Agency for Innovation	.41	Outokumpu Corporation	.34	Finnish NGO Platform to the EU	.05

Table 2. Coalition properties, means: beliefs, influence, resources, and core percentages (std. deviations in parentheses)

	Pro-mitigation beliefs ^a	Influence ^b	Political resources ^c	Financial resources ^d	Percentage of organizations belonging to core
Government & Research	.75 (.16)	.35 (.18)	.80 (.28)	.83 (.25)	56 %
Treadmill	.65 (.21)	.37 (.19)	.81 (.32)	.67 (.37)	48 %
NGO	.90 (.13)	.19 (.19)	.72(.36)	.51 (.28)	32 %
Total	.75 (.21)	.30 (.19)	.76 (.32)	.68 (.34)	40 %

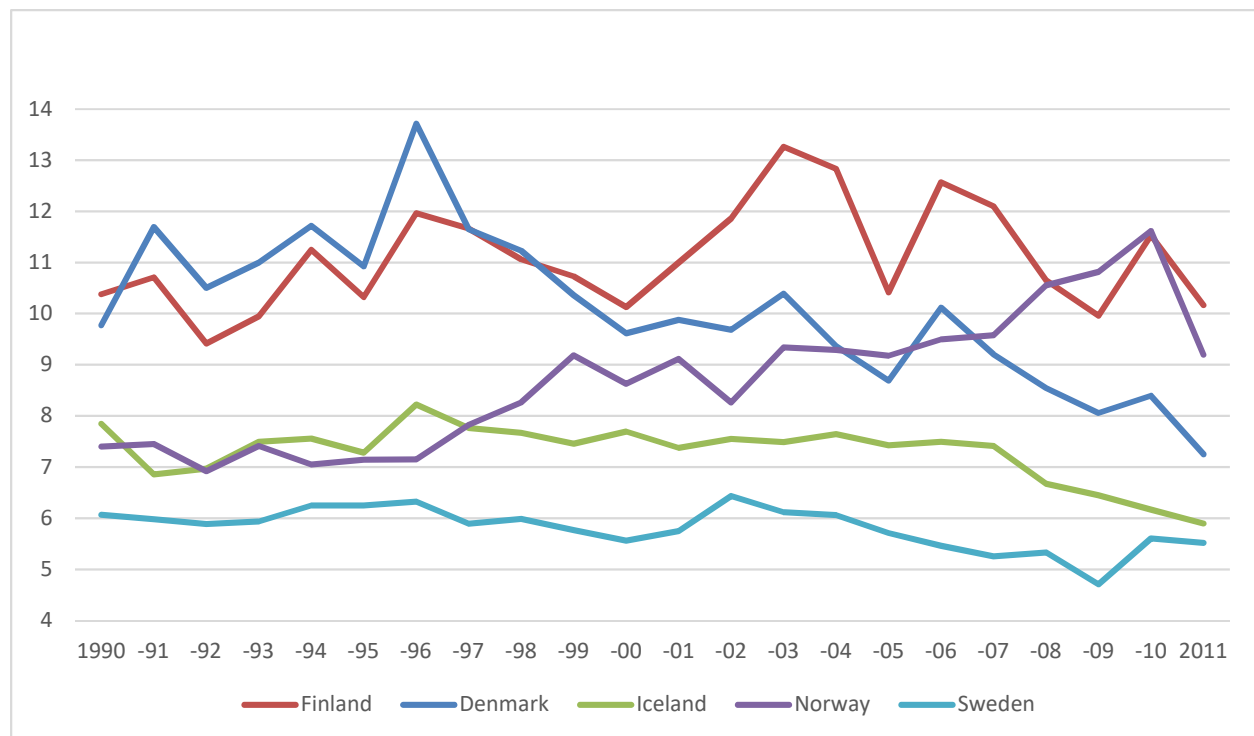
^aScale normalized between 0 and 1. For details of this composite variable, see the methods section and Appendix 1. One-way ANOVA (3,78) = 5,09, p = 0.003.

^bNormalized in degree centrality. One-way ANOVA F(3,92) = 7,91, p = .000.

^cSelf-reported, answering the question “How often does your organization participate policymaking through activities such as formal testimony at hearings, participation in government advisory committee, and drafting legislation proposals or text?” (never/sometimes/often). Scale normalized between 0 and 1. One-way ANOVA F (3,75) = 1,75, p = .165.

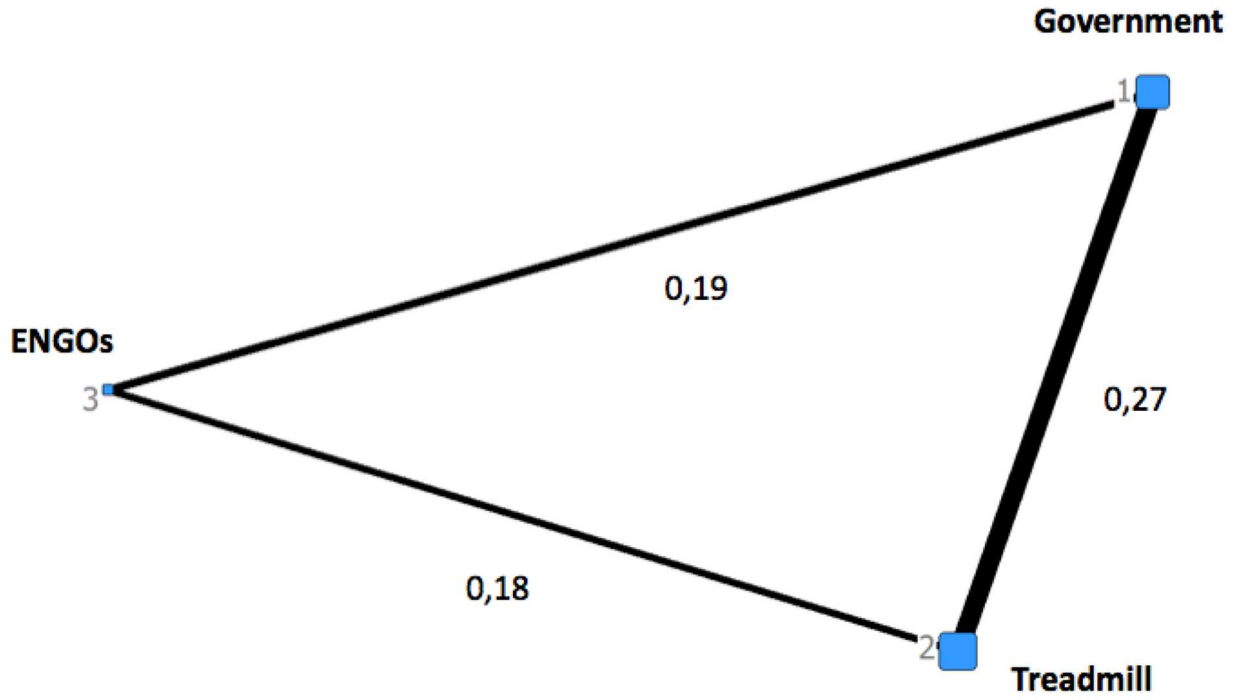
^dThe higher the value, the higher is the annual budget. Measured on an 8-point scale, normalized between 0 and 1. One-way ANOVA F(3,53) = 2,63, p = .060.

Figure 1. CO2 emissions per capita in Nordic Countries, 1990–2011.^a



^aData source: World Bank (2015a).

Figure 2. Collaboration network connections between coalitions^{a, b}



^aLine weight reflects strength of collaboration ties between coalitions.

^bNode size reflects the reputational power (perceived influence) of each coalition.

Appendix 1. Composite variable measuring pro-mitigation beliefs^{a,b, c}

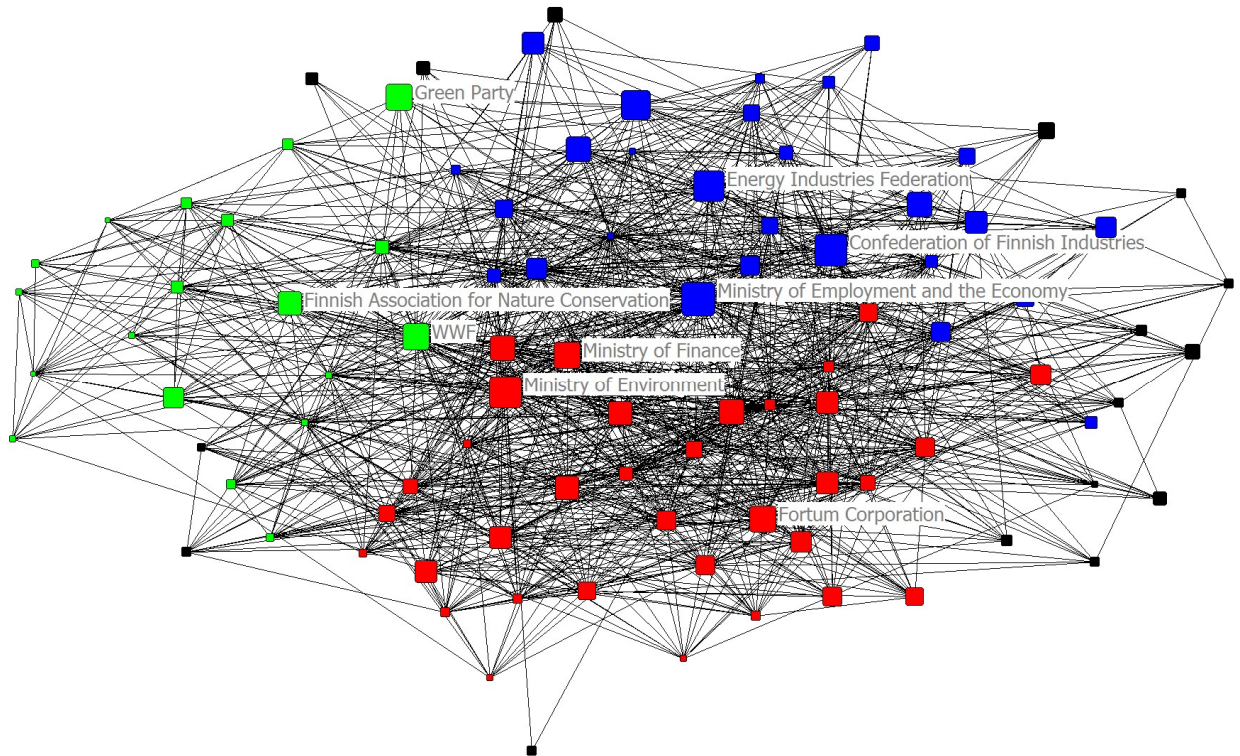
Survey item	Loading	Communality
Climate change is not caused by human activities	.742	.551
Climate science is too uncertain to be a basis for policymaking	.736	.542
National economic competitiveness is more important than taking care of climate change	.822	.676
Securing national energy supply is more important than taking care of climate change	.825	.681
Government puts too much effort into reducing Co2 emissions	.843	.710
Finland should not try to take a leading international role in international negotiations on climate change	.789	.623

^aExtraction method: principal component analysis.

^bAll items load onto one component explaining 63,06 % of total variance.

^cCronbach's Alpha for composite variable consisting of these items is .875.

Appendix 2. The coalition structure of the climate policy network based on collaboration^{a,b, c}



^aThe coalitions are color coded as follows: Blue=The Treadmill Coalition, Red=Government and Research Coalition, Green=The Ecology Coalition.

^bBlack nodes are outsiders and do not belong to any of the coalitions.

^cNode size indicates influence (reputational power), three most influential organizations in each coalition are named.