ISSN: 2366-7109

WORKING PAPERS OF AGRICULTURAL POLICY

AGRICULTURAL POLICY
WORKING PAPER SERIES
WP 2019-06

Social Embeddedness in Stakeholder Networks and Legislators' Policy Preferences: The Case of German Livestock Policy

Michael Grunenberg
Christian H.C.A. Henning

Insitute for Agriculture Economics
Kiel University

The Agricultural Working Paper Series is published by the Chair of Agricultural Policy at the University of Kiel.
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Kiel, 2019
WP 2019-06
http://www.agrarpol.uni-kiel.de/de/publikationen/working-papers-of-agricultural-policy

About the authors:
Michael Grunenberg is research assistant and doctoral candidate at the departement for agricultural policy at Insitute for Agricultural Economics of Kiel.
Christian H.C.A. Henning is professor and chair of the departement for agricultural policy at Insitute for Agricultural Economics of Kiel.
Corresponding author: mgrunenberg@ae.uni-kiel.de

Abstract

In a world of increasing complexity, politicians have only limited information about the relationship of policies and the outcomes. They often make use of simplified heuristics, i.e. policy beliefs. Hence, an influence opportunity for interest groups occurs: informational lobbying. It complements classic lobbying strategies, e.g. vote buying or campaign spending. Providing expert knowledge allows interest groups to influence legislators towards the preferred policy position. Aside from so-called "approved votes", German parliamentarians generally follow parliamentary group's discipline. Thus, experts' role within parliamentary groups is crucial. They deal with key issues and represent the parliamentary group in the committees. Furthermore, they work out the group's positions on these specific issues. They are the starting point for interest groups to disseminate their information and hence influence the legislators' positions.

An exemplary field of complexity is the agricultural sector. In particular, livestock production is challenged by questions of sustainability, i.e. public expectations towards animal welfare, producers and consumers' welfare as well as ecological consequences. Importance of animal welfare is demonstrated by the ongoing debate about piglet castration or husbandry system standards. This raises two questions: First, to what extend are stakeholders able to gain direct access to politicians? Second, how can they use this structure to influence policy decisions? Using a social network approach, we first investigate the structure of three networks: exchange of expert knowledge, political support and informal social ties. In particular, we put emphasis on the connection between parliamentary actors and other stakeholders from society, i.e. interest groups. This refers to the first question. Second, we apply a model of political exchange using information and lobbying networks. Following Henning et al. (2019), this model not only includes political exchange, but also belief updating. Moreover, it considers direct as well as indirect ties. This analysis step serves to answer the second question.

1 Introduction

In a world of increasing complexity, politicians have only limited information about the relationship of policies and the outcomes. Hence, they use simple mental models about the outcomes of certain policies. These heuristics are named as policy beliefs[1] (Henning and Hedtrich, 2018).

[1] If beliefs are biased (Akerlof, 1989) and thus differ from the correct political technology, they might cause political failure (Caplan, 2001, 2007).

As argued by Henning et al. (2019), this offers an influence opportunity for interest groups which is labelled as informational lobbying: While classical lobbying mechanisms refer to vote buying or campaign spending, expert knowledge provision influences legislators' policy beliefs. Accordingly, in general stakeholder organizations more and more serve in political advisory committees in Germany (Hustedt et al., 2010). Beside this advisory committees, the important role of (informal) policy networks can not be neglected for several policy domains like for example labour and social policy (Pappi et al., 1995), European CAP (Pappi and Henning, 1999; Henning, 2009), development policies (Stark, 2017; Henning and Krampe, 2018; Henning et al., 2019) or wind energy policy (Ratinen, 2019). Hence, interest groups are able to move legislators towards the preferred policy position indirectly. Since they provide this knowledge and use it as influence resource (see also Grossman and Helpman, 1996), governments benefit from it.

In general, German members of parliament follow parliamentary group's discipline[2]. Thus, the role of parliamentary group experts, i.e. specialist political spokesman, is crucial. They deal with key issues and represent the parliamentary group in the committees. Furthermore, they work out the group's positions on these specific issues. Since the specialization in one policy field is the starting point of a politician's contact networks (Schöne, 2014), he is the door opener for interest groups to disseminate their information and hence influence the legislators' positions.

Agricultural policy is a complex policy field. In particular, animal welfare plays a key role (Cornish et al., 2016; European Court of Auditors, 2018; WBA, 2015) due to a negative perception of current husbandry level (Kayser et al., 2011; Salamon et al., 2014). This is especially true for pig husbandry (Zander et al., 2013; Rovers et al., 2017, 2018, 2019). At a conceptual level, animal welfare consists of three dimensions addressing not only health and the opportunity for natural behaviour, but also the emotional state of an animal (Fraser, 2008).

We see an increasing importance of stakeholder participation in livestock politics. The national strategy for farm animal husbandry (BMEL, 2017) includes stakeholder participation and hence follows recommendations of WBA (2015). Hence, it is no surprise that for example food retailers are not only empowered to act as regulators (Maciel and Bock, 2013), but state actors partly retire from steering (Vogeler, 2019). On the other hand, civil society organizations (CSO) use campaigns to draw attention to the topic, to increase the pressure and hence to promote increasing standards. This is not limited to animal protection groups, which partly cooperate with the agribusiness sector to develop standards for labels like Deutscher Tierschutzbund (o.J.). For example, Greenpeace (2017) states that pig husbandry standards in Germany are violating the German constitution as well as the animal protection law. Accordingly, the organizations conducts campaigns and protest actions (WELT.de, 2018) against current practice. Hence, two questions occur:

[2]Exception are so-called "approved votes".

1. To what extend are (which) stakeholders able to gain direct access to politicians?

2. How can they use this structure to influence policy decisions?

To answer these questions, we follow the approach provided by Henning et al. (2019) and quantify classical lobbying effects as well communicational lobbying structures in German livestock policy. The following section briefly summarises a framework of both, classical and communicational lobbying. Subsequently, we describe the data used for analysis. Note that since we are interested in mapping the whole political landscape of livestock policy, we include a network of social relation[3]. Section 4 presents the empirical results. We end with an conclusion in section 5.

2 A Framework of Classical and Communicational Lobbying

In order to quantify the influence of stakeholders, we apply a framework that a) combines *classical* with *informational* lobbying and b) models the access structure between interest groups and political actors as social networks (Henning et al., 2019). Here, classical lobbying refers to established approaches of lobbying where an interest group tries to exchange resources of influence against votes for preferred positions (Grossman and Helpman, 1996). This exchange takes place in political exchange networks (Pappi and Henning, 1998; Henning, 2000, 2009). Let M^S denote the $n \times n$ adjacency matrix and it's element $m_{ij}^S = 1$ the provision of political support by i to agent j. Given the corresponding column stochastic adjacency matrix $\bar{M}^S$ and political agents' interest in support X_{diag}, we get

$$\hat{M}^S = [I - (s_k)_{diag}[I - (1 - s_k)_{diag}\bar{M}^S]^{-1}\bar{M}^S X_{diag}]^{-1} \tag{1}$$

as network multiplier matrix. Here $\hat{m}_{ij}^s$ corresponds the power outflow from j to i. The broker share s_k integrates direct and indirect power flows, i.e. takes indirect connections into account (Henning, 2009; Henning et al., 2019).

Following (Henning et al., 2019), communicational (or informational) lobbying refers to the provision of expert knowledge as influence mechanism. In particular, even expert politicians seldom have all or sufficient information regarding their policy field. Accordingly, legislators need additional information. Interest groups have sufficient knowledge and seek to gain influence by strategically revealing it. Hence, they try to sway legislators toward the preferred policy[4]. Communicational lobbying influences the policy beliefs

[3]Of course, "social relation" normally refers to every kind of relation between social actors. For the purpose of the paper, we use this term referring to informal social ties beside communication and lobbying.

[4]Note, that this information not necessarily serve only self-interest. It may also be objective expert knowledge serving the welfare of whole society (Ball, 1995).

determining actors' policy positions. Policy beliefs are mental models regarding the political technology $T(x, z,)$, i.e. the relation between policy x and outcome z. In general, a real political technology is complex. In order to reduce this complexity, laymen as well as interest groups and political agents make use of their beliefs $\tilde{A}$. $\tilde{A}$ is the result of communication learning process and the initial belief $\tilde{A}^0$:

$$\tilde{A} = \Upsilon(\tilde{A}^0) \tag{2}$$

with Υ denoting the communication mechanism (Henning and Hedtrich, 2018). This mechanism corresponds to communicational learning (Acemoglu and Ozdaglar, 2010). M^C is the $n \times n$ adjacency matrix of this communication network where element $m^c_{ij} > 0$ corresponds to a communication tie, i.e. i sends information to j. Let $\bar{M^C}$ denote the row stochastic transpose of M^C. Given own-control, i.e. the extent that an actors own knowledge determines his beliefs, network multiplier matrix can be calculated:

$$\hat{M^C} = [I - (1 - m^C_{diag}\bar{M^C})]^{-1} \times m^C_{diag} \tag{3}$$

where m^C_{diag} denotes own control and $\hat{m}_{ij}$ is the effect of j's initial on i's final belief. Please note that this update procedure corresponds to the model of Friedkin and Johnsen (1990). This model takes indirect influence into account.

All in all, policy positions depend on classical and communicational lobbying. The next section describes the data used for model application.

3 Data

We use the data of an survey among German livestock policy stakeholder organizations. In particular, we interviewed expert politicians from the six parliamentary groups of the German national parliament as well as representatives of interest groups and public administration. Before the interviews started, we stated that we were not interested in the personal, but in the parliamentary group position. This also applies for the interest groups and other actors that have been interviewed. Based on desk research we identified more than 100 relevant stakeholder organizations. Because of time and resource limits it was not possible to interview all of them. So after the first rounds of interviews, the intermediate results of a reputation network have been used to filter out the unimportant actors. Finally 37 interviews have been carried out. Note that since one organization did not completed the interview, we have a data set of 36 actors. Average interview duration was 1.5 hours.

Beside questions regarding animal welfare and husbandry policies, the questionnaire used contains elite networks, where the representatives had to mark all organizations they

perceive as important to livestock politics. This reputation network was used to set up the network boundaries. Our networks of interest are the expert communication network as well as the political support network and a network of social contacts. Please note that we asked communication and political support network from two perspectives. Hence, we got confirmed networks (see Pappi et al., 1995). For the communication Network M^C, the interviewed representatives had to answer three questions:

QE1: "From whom do you receive expert information regarding livestock?"

QE2: "To whom do you send expert information regarding livestock?"

QE3: "Information of which organization are especially valuable?"

QE1 refers to the perspective as knowledge receiver from other actors. For whom the organization serves as knowledge provider was content of QE2. Finally, the organization's representatives had to evaluate the marked organizations in QE1 with respect to the value of information (QE3). This leads to a valued network. Thus, elements of M^C can be one of three values: If $m_{ij}^C = 0$, there is no communication tie between actors i and j where $m_{ij}^C = 1$ indicates that i sends information to j. If $m_{ij}^C = 2$, j perceives knowledge provided by i as especially valuable.

Subsequently, we asked for the political support network from two perspectives:

QS1 "Which political actors do you support?"

QS2 "From which organizations do you receive political support?"

Since we take indirect support into account (equation 1), we allowed the interest groups to mark other interest groups. Moreover, we allowed political agents to support other political agents. Finally, if $m_{ij}^S = 1$ i supports actor j.

In contrast to the communication and lobbying network, the network of social relations is an undirected network. In particular, we asked interviewees to mark all organizations to which they have relations beyond professional distance. We emphasized that usually these ties establish over a long time period.

Results are given in the next section.

4 Results

The confirmed communication network has a density of 0.266, i.e. 26.6 percent of possible ties are realised (figure 1). Parliamentary group of CDU and CSU as well as the federal ministry of agriculture are the center of this network. Especially groups of the agribusiness sector, i.e. food retailers, meat industry as well as agriculture and animal production, put emphasis on ties to this core. As figure 1 indicates, animal and environment protection

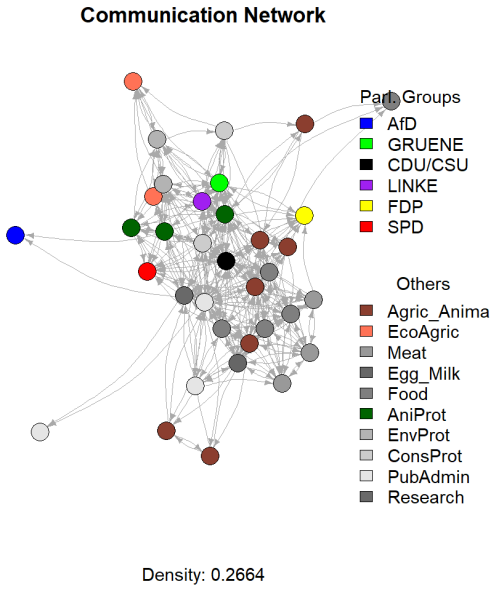

Figure 1: Communication Network

as well as ecological agriculture are knowledge provider to green and left party. Please note also, that the AfD only receives information from two organizations. As indicated by figure 2, agriculture and animal production organizations have the strongest effect on FDP's belief updating. Moreover, one can clearly see that meat sector's influence on this parliamentary group is the biggest when compared to influence on other groups. For the CDU/CSU group the effect of all producer organizations equals a share of 0.252. Interestingly, this is close to the producers influence on LINKE (0.251, figure 2). Belief updating of the parliamentary group SPD is mostly driven by animal protection groups. This also applies for the AfD group, where animal protection has a share of 0.359 (figure 2). Additionally, their influence on the LINKE group corresponds 0.214. Hence, the effect of animal protection organizations on AfD, SPD and LINKE is higher than for the green parliamentary group (figure 2). When looking at the influence of parliamentary groups on each other, one can easily see in figure 2 that the effect of CDU/CSU, LINKE and FDP on the green beliefs is roughly the same.

With a value of 0.085, the density of the political support network is lower when compared to communication. In particular, there are established support ties from agribusiness towards CDU/CSU and FDP. On the other hand, green and left parliamentary groups are supported by animal and environment protection organizations. Interestingly, AfD group and two federal agencies are not part of the political support network. As figure 4 shows, due to the isolated position of AfD there is zero outflow from the parliamentary group. Measurements of support multipliers also shows that animal and environment protection groups mostly benefit from power outflow from the green group. Consumer protection groups also gain a high share of power through supporting the green parlia-

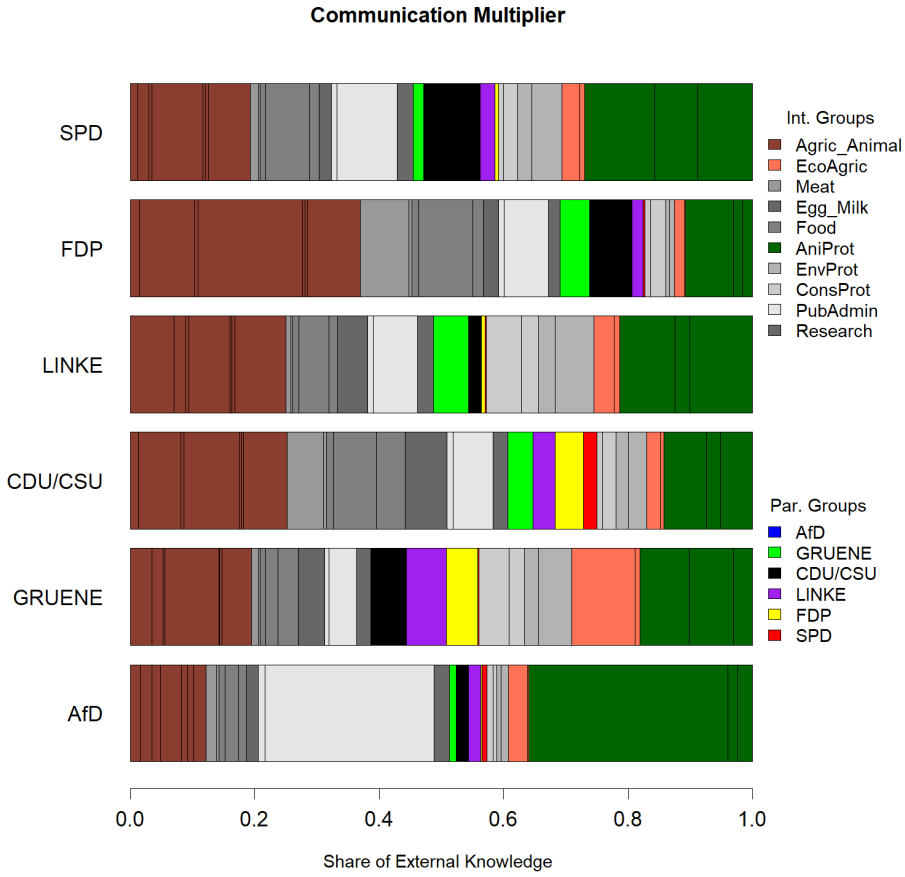

Figure 2: Communication Effect on Parliamentary Groups

mentary group (figure 4). Highest share of power outflow from CDU/CSU is assigned to agribusiness, i.e. producers, meat sector, egg and milk production as well as food retailers. Please note, that this parliamentary group is the main source of power for meat (to an extend of 0.041, figure 4). Please note, that almost every power from the FDP flows out to agriculture/animal production and food retailers.

With regard to the social relations beside political support and expert exchange, we identify a density of 0.333 (figure 5). Again, we see a clear picture of "coalitions": The agribusiness sector established informal contacts to CDU/CSU and FDP. Moreover, there are informal ties between green party and animal protection as well as environment protection and the left parliamentary group. The block model analysis identified four blocks. Note that actors are assigned to the same block if they have similar social relation pattern. Block 1 is a mixture of public agencies, agribusiness and consumer as well as animal protection. Moreover, FDP is a member of this block (figure 6). The outsiders of the network are assigned to this block. Hence this block is labelled as "mixed block". As figure 6 shows, block 2 consists of only four organizations. Beside the retailers animal welfare initiative, agriculture and animal production form this block. In particular, the national farmers association is part of this block. Hence we can label this block as the

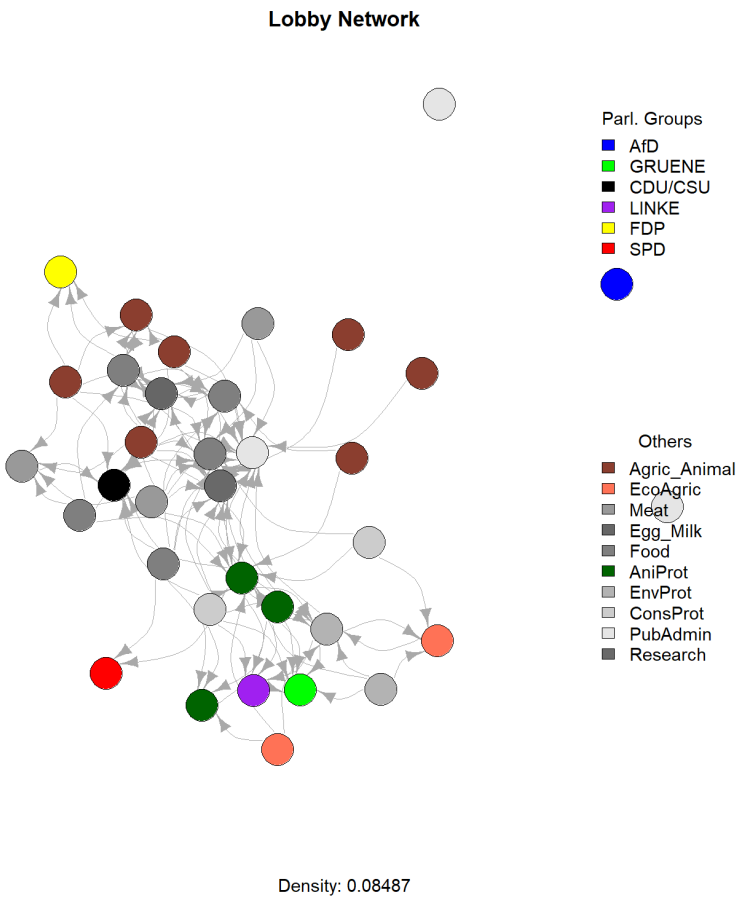

Figure 3: Political Support Network

"producing block". Members of Block 3 are green and left parliamentary group as well as several civic social organizations. Accordingly, "green block" is the appropriate label for this block. The fourth block consists of CDU/CSU as well as food retail, meat, agriculture and animal production actors. Hence, we name it "political agribusiness block". If looking at the block level, one can easily see, that there is a strong relation between block 2 and block 4. Here, the density between both blocks is 0.59 (figure 7). This is not a surprise if we look at the blocks contents: as mentioned above, block 2 is the producing block while block 4 was labelled as political agribusiness block. The connection between producing and the mixed block half that strong, since density between the blocks only corresponds 0.28 (figure 7). Furthermore, all actors of block 2 are connected with each other, i.e. the block has a density value of 1. In block 4, almost 65 percent of possible relations between block members are realised.

5 Conclusion

Results of the applied model show that the agricultural sector as well as animal protection groups have the highest influence on beliefs within the stakeholder network. Strongest

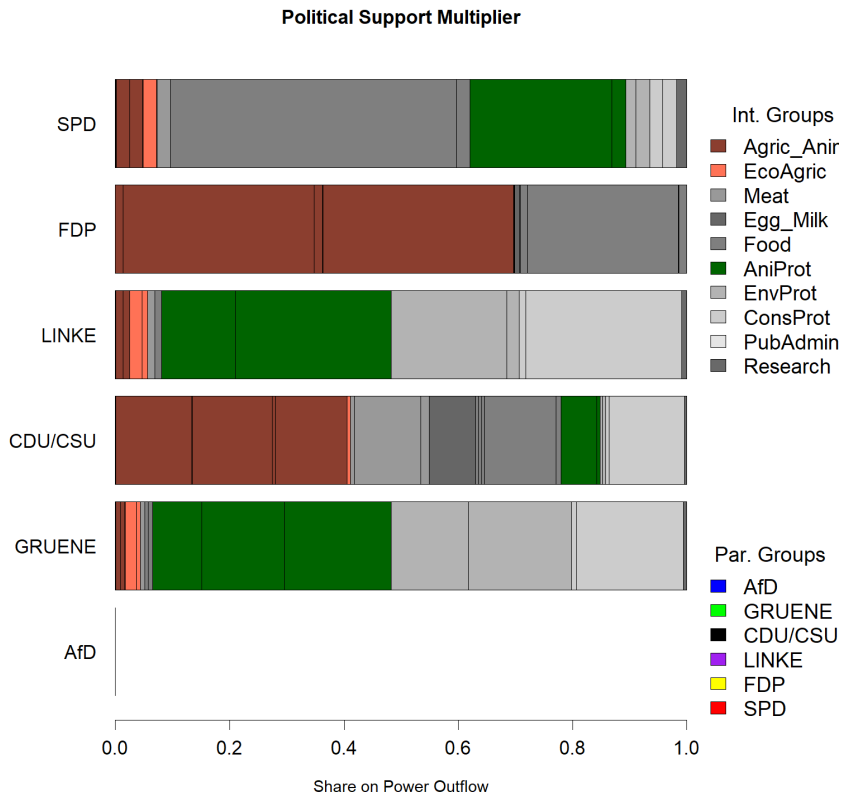

Figure 4: Power Outflows from Parliamentary Groups

influence of agriculture and animal production is the effect on FDP's belief updating, while the highest relative share of animal protection is assigned to the AfD parliamentary group. The AfD parliamentary group is not part of the confirmed political support network and hence relying to 100 percent on the own position. Most power outflows are observed for social democrats, where especially food retailers and animal protection organizations benefit from. Results for CDU/CSU and greens are not surprising. The mentioned coalitions - CDU/CSU and agribusiness as well as green party and environment/animal protection - are also confirmed in terms of informal social relations. At the same time, one third of possible ties in this network are realised. The according block model identified four blocks based on established ties. Interestingly, beside a political agribusiness block including CDU/CSU, a small second producer block exists. The latter contains Germany's farmers association.

All in all, these results show that the parliamentary groups of CDU/CSU, but also FDP, are mostly influenced by agribusiness. Stakeholder from this field not only dominate the belief formation process, but also benefit the most from classical lobbying. Moreover, these professional relations are extended in the informal social relation area. On the other hand, animal and environment protection groups have the biggest influence on the green parliamentary group. Accordingly, the informal contact patterns are almost the same. If relating these findings to political science literature, the former fits to recent

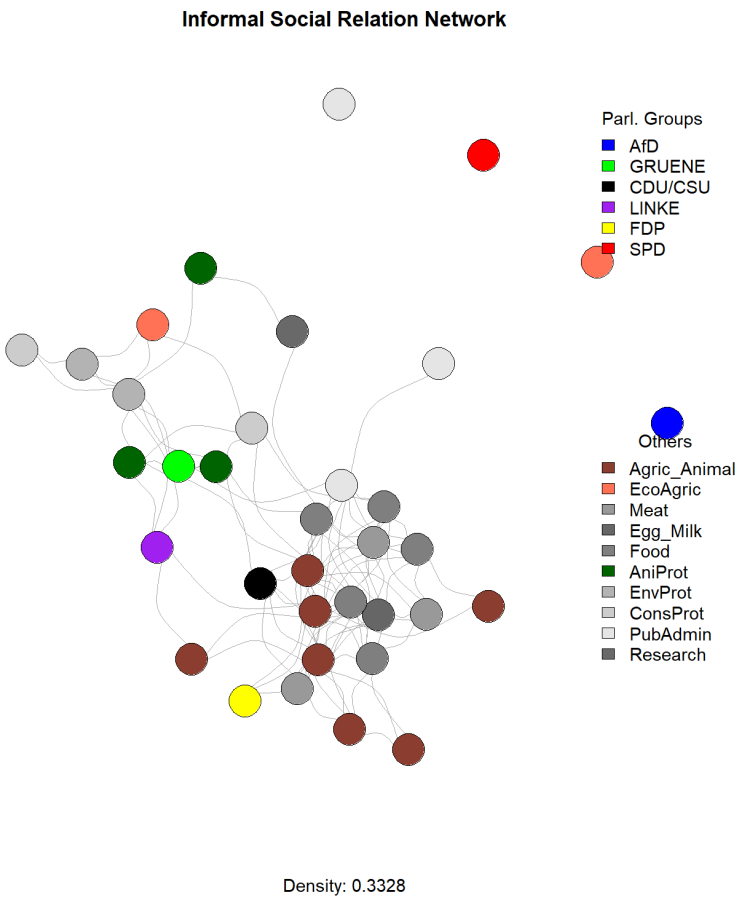

Figure 5: Informal Social Relation Network

results: While Vogeler (2017a,b) shows that governments including green parties promote stronger animal protection laws, Ewert et al. (2018) identify multi-functionalism orientation among German state governments with green participation. Hence, CDU/CSU as well as FDP parliamentary group especially take into account productivity interests of agribusiness. The green (and also the left) group mostly reflect positions or goals of animal and environment protection organizations.

But to confirm this conclusion, more research is needed. The formation of all three networks has to be investigated using (Bayesian) exponential random graph models. In particular, these models should consider endogenous and exogenous variables.

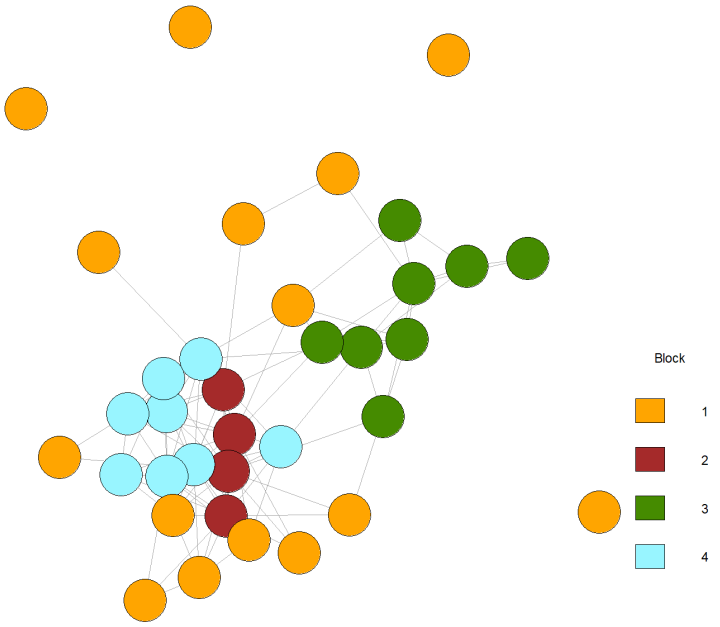

Figure 6: Informal Social Relation Network by Block Membership

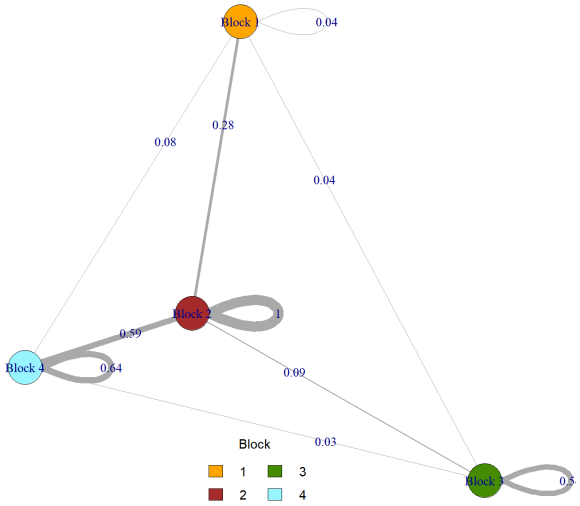

Figure 7: Informal Social Relation Block Model

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