



# Network governance in Finnish higher education and science policy, 2012–2021

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## Abstract

Finnish higher education and science policy has been characterised as corporatist, but reforms after the 1990s have created conditions for a more network-based governance mode of policymaking. These networks empower various stakeholders to participate in policy processes, but they also allow the government, particularly the Ministry of Education and Culture (MEC), to promote the government's interests in and govern through stakeholder networks. In this paper, we ask what kind of network the government (the MEC) uses in higher education and science policymaking, and how it uses the network. We examined a network of organisations that participated in Finnish higher education and science policy in 2012–2021 via the working groups of the MEC. Our methods were social network analysis and expert interviews ( $N=23$ ). Our results show that the network had a small core set of key actors that consisted of state ministries and agencies, universities and their associations, employer and employee unions, and student unions. The network was centralised around the MEC and stable over time, and it was used for knowledge exchange, interest intermediation, and policy advocacy. These are traits of traditional corporatism. Nevertheless, we found that the MEC played a dual role of a coordinator and stakeholder-lobbyist, reflecting more horizontally equal relationships between the actors, especially at the network's core, which is characteristic of networked governance.

**Keywords** Network governance · Corporatism · Policy networks · Higher education policy · Social network analysis · Network change

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## Introduction

Network governance has gained popularity as a theorisation of how higher education policies are made and how higher education institutions and systems are contemporarily steered (e.g., Donina & Paleari, 2019; Ferlie et al., 2008; Kabir, 2021). Compared to traditional government, characteristics of network governance include that governing is performed and policies are made within various network constellations of both public and non-public actors, hierarchies between actors are flattened, power and authority are decentralised, negotiations about the aims and content of policies are continuous, and there is considerable flexibility in political and administrative work (e.g., Klijn & Koppenjan, 2016; Provan & Kenis, 2008; Rhodes, 1997, 2011). According to some scholars (e.g., Rhodes, 1997), network governance leads to ‘hollowing out’ of the state’s power, but others emphasise that because the government steers the networks partaking in governance, the state retains its essential powers (e.g., Klijn & Koppenjan, 2016; Provan & Kenis, 2008).

One form of traditional government against which network governance is contrasted is corporatism. Corporatism has been understood in various ways (Molina & Rhodes, 2002), but contemporary corporatism can be defined as ‘the institutionalised integration of organised interests in policymaking and implementation’ (Binderkrantz & Christiansen, 2015, p. 1023; see also Christiansen et al., 2010). Institutional arrangements to include interest groups in policymaking are the core of corporatism (Binderkrantz & Christiansen, 2015), and interest group networks and a networked mode of operation have already been part of classic corporatist theorising (e.g., Lehbruch, 1984). Compared to network governance, in corporatism the state and its bureaucracies hold stronger positions to coordinate and control public policymaking. Historically, corporatism has been particularly prevalent in Nordic countries, including Finland (Christiansen et al., 2010; Rommetvedt, 2017; Vesa et al., 2018).

In this paper, we study the governance of Finnish higher education and science policymaking. Reforms in Finland’s higher education governance since the 1990s have increased the autonomy of the higher education institutions and made them independent public or private entities separated from the state (e.g., Kauko, 2011; Välimaa, 2012). Cessation of detailed state control has opened interstices for non-state actors to operate, creating conditions for a more network governance-styled policymaking. In this context, we are interested in analysing in what ways the current mode of higher education governance in Finland exhibits a mixture of corporatism and network governance. Specifically, we ask: what kind of network the government uses in higher education and science policymaking, and how it uses the network.

We study working groups set by the Ministry of Education and Culture (MEC) for policy preparation, implementation, and follow-up from 2012 to 2021. We consider organisations as the policy actors, and we analyse the policy network they form that operates within the working group system. We expected that the MEC holds the strongest network position and that the network centralises around it. We anticipated that the network’s core includes state agencies, employee and employer unions, and universities’ and students’ organisations, and that the network remains stable over time. Regarding the network’s role in policymaking, we expected the network members to emphasise knowledge exchange, interest intermediation, and policy advocacy as key activities. A working group’s influence, we expected, depends on the political importance of the issues it worked on. Analysis confirmed all these expectations. However, the network’s core was less centralised around the MEC, and the core was more stable than the network’s periphery. We conclude that the

MEC uses the network to both advance government policies and integrate diverse organisational interests into policymaking. This aids the MEC in policy making and implementation, while simultaneously allowing organisations to influence the MEC's and, consequently, the government's agenda. Overall, we find that the Finnish higher education and science policy exhibits a traditional corporatist undertone mixed with network governance features. Specifically, contrary to a 'hollowing out' of state's power, the state remains a central actor in higher education and science policy.

## Policy networks in higher education policymaking

### Policy networks in corporatism and network governance

Corporatist theory recognises networks as a structural base that links government and interest organisations and integrates organised interests in public policymaking (Lehmbruch, 1984; Molina & Rhodes, 2002). Policy networks are also central to policymaking in network governance theory, but compared to corporatism, policy networks are more autonomous from the state and typically include a more diverse set of organisations (Klijn & Koppenjan, 2016; Provan & Kenis, 2008; Rhodes, 2006). Policy networks have been studied in political sciences for decades (Dal Molin & Masella, 2016; Knoke, 2011). We adopt Rhodes' (2006, p. 426) definition for policy networks, according to which 'policy networks are sets of formal institutional and informal linkages between governmental and other actors structured around [...] beliefs and interests in public policy making and implementation'. Through these linkages, a policymaking process occurs in which various government and non-government actors negotiate and construct public policies (Dal Molin & Masella, 2016; Klijn & Koppenjan, 2016). While actors in such processes may be individual persons, at national-level analyses, they are typically organisations (Knoke, 2011). Understanding how policy networks form, persist, and change is a key objective in policy network research (Knoke, 2011), be it corporatist or network governance-oriented.

Research on the role and influence of policy networks in education policymaking has emerged over the past couple of decades (Kallunki et al., 2025). An under-studied topic in higher education research is how policy networks participate in everyday policymaking. Everyday policymaking occurs in various public and private meetings, seminars, conferences, hearings, events, and communications between policy network's members. These phenomena scarcely provide data robust enough for systematic quantitative analysis. However, regularly convening public working groups and committees with documented and archived records offers an exception: these groups regularly if not continuously operate as platforms for everyday policymaking, and their records can be used to study the policy network.

Networks imply decentralised power structures and flattened hierarchies between the actors partaking in governance (e.g., Klijn & Koppenjan, 2016; Rhodes, 2006). Because the networks and their members assume a stronger position in policymaking and decision-making, the state's power is supposed to diminish. For example, Rhodes (1997) hypothesises a 'hollowing out' of state power. However, network-based governance can take various forms (Provan & Kenis, 2008), and in addition to equalised actors and a flat hierarchy, the actors can have varying degrees of power, and the network can be hierarchised. As a limiting case, as Molina and Rhodes (2002, p. 324) suggest, contemporary corporatism, due to its reliance on networks, might be best understood as a form of network governance.

In any case, in the higher education field, where higher education institutions have substantial autonomy from the state, the prerequisites for network governance exist. When the government authorities steer and coordinate policy networks in such settings, an interesting question is how the government uses the networks: which actors operate in the network and what does the network do?

### **Working groups: policy network's platform**

Many European countries and the European Union use working groups, comprising politicians, bureaucrats, and non-state actors, to assist in policymaking: these groups are variably termed committees, commissions, expert groups, task forces, or reviews (e.g., Hunter & Boswell, 2015; Krick, 2015; Marier, 2009; Rommetvedt, 2017; Rowe & McAllister, 2006). Working groups have often been studied with a framework drawing from corporatism theory (e.g., Binderkrantz & Christiansen, 2015; Christiansen et al., 2010; Rommetvedt, 2017). Working groups serve multiple roles and functions in policymaking, with providing information and knowledge being a basic function (e.g., Arras & Braun, 2018; Gornitzka & Sverdrup, 2011; Krick, 2015; Marier, 2009). Equally, working groups can have a symbolic function of establishing back-up, credibility, and legitimacy for policies and policymaking (Christensen & Holst, 2017; Hunter & Boswell, 2015; Krick, 2015; Rowe & McAllister, 2006). Working groups can also be used to legitimate policies and decisions already made elsewhere (e.g., Boswell, 2008). In liberal administrative traditions like the UK, working groups are seen as spaces for policy advocacy (Saint-Martin, 2014). In the Nordic countries, working groups have been used as a platform for public consultation, as part of the corporatist democratic process of interest intermediation, and as a way to collect information for decision-making (Christensen & Holst, 2017; Christiansen et al., 2010; Rommetvedt, 2017). In the functions of knowledge exchange, interest intermediation, and policy advocacy, working groups can be understood as groups embedded in larger policy networks (e.g., Rhodes, 2006). Overall, working groups are platforms where policy network actors convene to discuss policies.

Employing autonomous working groups to inform, advise, or prepare policies carries a risk for politicians and administrators (Hesstvedt & Christensen, 2021): while the groups may produce grounds for policies, the risk is that the groups' outcomes will not align with the politicians' or administrators' policy preferences (also Hunter & Boswell, 2015; Rowe & McAllister, 2006). To mediate these risks, politicians and administrators attempt to control working groups by delimiting their mandates and terms of reference, selecting their members, and installing administration's loyal representatives into the groups to influence the groups' work (Hesstvedt & Christensen, 2021; Rowe & McAllister, 2006; Hunter & Boswell, 2015). The control techniques used per working group may vary according to the policy area (Hesstvedt & Christensen, 2021) and the political importance of the topic the group works with (Hunter & Boswell, 2015). From a network governance perspective, the aggregate of working groups and their control by the state resembles the 'lead organisation-governed networks' form of network governance as defined by Provan and Kenis (2008). The main features of such a network are centralised network coordination and management, asymmetric power relations between the lead organisation and the rest, and administrative and financial support of the network by the lead organisation, with the network's goals closely aligned with those of the lead organisation. Such a network tends to be highly centralised, brokered, and stable over time (Provan & Kenis, 2008). In the special case where the lead organisation is the state or other public authority, the lead

organisation-governed network mode of network governance is rather indistinguishable from corporatist governance.

Despite the potential of examining official working groups and their archived records to obtain a systematic picture of policy networks operating in everyday policymaking, few studies have combined the focus on working groups with network analysis. Milana and colleagues (2019) studied EU working groups on adult education, Mikulskiene and Pitrenaite-Zilieniene (2013) analysed stakeholder participation in Lithuanian education policy, and Kallunki and colleagues (2023) studied the Finnish Ministry of Education and Culture's working groups. These three are, to our knowledge, the only studies that have targeted government working groups and the networks they give rise to in the field of education policy.

## Research questions

Summarising the discussion above, we contend that by setting up working groups, the government employs particular sets of actors from a larger policy network in policymaking, and that way uses the policy network to govern. We aim to study what kind of network the government uses in higher education and science policymaking, and how it uses the network. This general research question unpacks into the following sub-questions: (i) What characterises the network's structure? (ii) Which organisations are the key actors? (iii) How does the network change over time? (iv) What is the role of the network in policymaking?

## Research context

We study the higher education policy system in Finland, where higher education policy planning, implementation, and follow-up are responsibilities of the Ministry of Education and Culture (MEC). The higher education system consists of universities and universities of applied sciences, where universities are responsible for scientific research and education, and the latter have closer relationships to regional labour markets and development through applied research. The Finnish higher education policy system was state-centred between the 1950s and 1990s, with the MEC holding a key power position (e.g., Lampinen, 2003). Reforms between 1990 and 2015 increased the autonomy of higher education institutions by replacing detailed state legislation with framework laws and line-item budgeting with lump-sum funding. The state nevertheless retained its powers to steer the institutions and the higher education system by legislation, funding, and steering-by-information. (e.g., Kauko, 2019; Välimaa, 2012; Kauko, 2011; Kivistö, 2007.) In their mapping of Western European higher education policy systems, Vukasovic (2023) concluded that Finland can be labelled as a 'towards corporatist' system; that is, it clearly has corporatist characteristics but not as strong as, for example, Sweden and Denmark have. In addition to state agencies and employer and employee organisations that are traditionally recognised as key actors in corporatism (Binderkrantz & Christiansen, 2015; Molina & Rhodes, 2002; Vesa et al., 2018), Vukasovic (2023) notes that in Western European higher education policy, university associations and student unions are also key actors.

The autonomy of higher education institutions prevents the MEC from dictating how the institutions run their operations. Instead of directives, the MEC uses various methods of negotiation, persuasion, and steering-by-information (e.g., Kallio et al., 2022). Working groups can be seen as platforms where negotiations and persuasion transpire. Thus, working groups are an instrument of steering-by-information, similar to seminars, working papers, recommendations, and the like. The working groups typically consist of public

officials and various stakeholders, and they have various tasks associated with the government's higher education policy agenda, policy planning, implementation, and evaluation. Sometimes, working groups produce reports, recommendations, or statements, but they may also operate as discussion forums. In every case, the working groups participate in public policymaking. Both public servants and interest groups in Finland consider the public administration's working groups a key site for advocacy work (Vesa et al., 2018).

As said, working groups have often been studied using corporatism theory. From the network governance perspective, the working groups are coordinated by the MEC: the MEC designs the groups' mandates and remits, invites members to the groups, and appoints the groups' chairs and secretariat—the latter are often MEC employees. These can be seen as measures the MEC uses to control the working groups (Hesstvedt & Christensen, 2021). Additionally, the MEC covers the working groups' costs. These features of the working group system correspond to properties associated with the lead organisation–governed network governance model (Provan & Kenis, 2008). Thus, the policy network operating within the working group structure offers a promising empirical setting to study not only corporatism but network governance too.

Theoretical and contextual discussion above allows us to make the following expectations:

- I. The network involved in the MEC's working groups seems to be a lead organisation–governed one, and we expect that (a) the MEC has the strongest position in the network and (b) the network is centralised around the MEC.
- II. Because of the Nordic corporatist tradition, we expect to find state agencies, employer and employee unions, and universities' and students' organisations at the network's core.
- III. From the network governance perspective, the autonomy of higher education institutions suggests that the MEC uses the network to govern the institutions; thus, we expect to find higher education institutions at the network's core.
- IV. Because we expect the network to be lead organisation–governed, we also expect that the network is stable over time.
- V. Research on the functions of policy networks and working groups leads us to expect that network members report knowledge exchange, interest intermediation, and policy advocacy as the main activities in the working groups and the network.
- VI. Research on committees suggests that a committee's degrees of political autonomy and influence depend on the political importance and weight of the issues the committee deals with, and we expect this to be the case here.

## Data and methods

### Data

We utilised quantitative and qualitative data. We drew quantitative network data from a publicly available Finnish government register (*Hankerekisteri*) that contains information about all government projects and the working groups attached to them. We drew information about MEC's projects from 2010 until 2021 that led us to project websites containing the project documentation. The network data were derived from this documentation (project websites, working group nomination letters, and project reports). We

focus on projects that addressed higher education and science policy and had at least one working group attached to them: there were 161 such projects, and they included 193 working groups. Members of the groups were natural persons who typically represented an organisation. Nomination letters showed that when a member resigned from a group, a new member from the same organisation was quickly nominated to replace them, suggesting that the working group memberships were typically reserved for organisations, not for individuals. Thus, we considered organisations as the policy actors (Knocke, 2011) and focused on the organisational network. The working groups had limited terms, but often their terms spanned over a year or possibly two, so we dropped the 2010 and 2011 panel waves because in those years there might have been groups still operating that were nominated in 2008 or 2009 (which we had no information about): from 2012 onwards, the potential for such missing data should be significantly lower. In exceptional cases, the working groups had longer terms, but we are not aware of any permanent working group under the MEC. After dropping the first two years and cleaning the data by removing working groups that had only individual members not representing organisations, we ended up with 179 working groups and 405 organisations that participated in them during 2012–2021. Table 1 shows the numbers of working groups and their members over time and in total.

The qualitative data includes 23 interviews with the members of these working groups. The interviewees were experts in Finnish higher education policy, most having over 10 years of professional experience. Thus, we conducted the interviews as expert interviews (Bogner et al., 2009). Interviewee selection and interview themes were informed by the preliminary results of the network analysis. We chose interviewees who had substantial experience in participating in working groups (on average, six memberships) or who represented organisations that had a strong presence in the working groups over time. The organisations covered were government ministries, universities, employee and employer unions, and student unions. The interviews were conducted as thematic (semi-structured) interviews, and one of the themes included questions about the working groups and their role in policymaking.

From a research ethics perspective, there is a considerable risk for the interviewees being recognised due to their high-profile positions and the small number of higher education policy experts in Finland. Therefore, we use categorical descriptors when citing them, and we have removed personal identifiers from the quotations. Additionally, interviews were conducted in Finnish, and the authors' English translations hide the precise original diction, offering further protection.

**Table 1** Number of working groups and organisations participating in them per year in Finnish higher education and science policy in 2012–2021

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
Number of working groups	50	53	60	51	35	38	38	29	29	39	179
Number of organisations participating in working groups	193	200	190	166	149	168	196	162	174	190	405

## Methods

Data collection and analysis proceeded in tandem: the interviewee selection and the interviews were informed by the preliminary analysis of the network data, and the interviews in turn informed the network data analysis. The interviews supported the idea of treating organisations as nodes. The interviewees referred to the working groups as arenas of knowledge exchange and negotiations, which led us to use undirected ties. The network data were two-mode affiliation network data, but we converted them into one-mode organisational network data for the analysis (Borgatti et al., 2013). Thus, each adjacency matrix we use here is a non-negatively valued, symmetric square matrix where a cell  $(i, j)$  has a value  $V$  in it if organisations  $i$  and  $j$  sit together in  $V$  working groups. The data were analysed with Ucinet 6 for Windows (Borgatti et al., 2002).

The network data were formatted into panel form so that each year from 2012–2021 was assigned an adjacency matrix containing the working groups in operation during that year: the waves 2010 and 2011 were used in this construction before they were dropped. The network's core in each year was identified with standard continuous core/periphery analysis that identifies the actors with the most (and in this case also the strongest) ties with other actors in the network. The network's structural stability and change were analysed with the QAP matrix correlation: the QAP correlation compares two data matrices for their similarity and assigns a p-value to the obtained correlation coefficient by using a 'quadratic assignment procedure'. The closer the QAP correlation coefficient is to zero, the more different the matrices are, whereas values approaching 1 indicate greater similarity. (Borgatti et al., 2013.) In practice, each annual matrix represents the configuration of the relationships between the network actors in that year, and the QAP correlation measures the change in that configuration between and over the years.

Interview data was analysed with qualitative content analysis (Schreier, 2012). We focused on the discussion about the MEC's working groups and analysed this discussion with guiding questions such as 'what is said about the groups', 'what happens in the groups', 'what are the groups' purposes', and 'what is said about the groups' influence in policymaking'. After siphoning the excerpts for analysis, we categorised them according to the roles they assigned to the working groups in policymaking. The interviewees' accounts of what happens in the MEC's working groups and their purpose were very similar, making the categorisation relatively straightforward.

## Limitations

Our methodology has limitations. First, assuming all working groups and ties are equally important may bias results, as less important groups could skew findings (Christiansen et al., 2010, p. 29). However, using valued ties instead of dichotomous ones mitigates this risk by weighing stronger ties more. Second, formal ties do not guarantee real ties. To address this, interviews included questions about political collaborators, and interviewees frequently named the same organisations found in the network's core. Thus, inferring real ties from formal ones is not a major issue, at least for the core. Third, MEC working groups are just one arena for Finnish higher education policymakers. As a robustness check, we studied the Finnish parliamentary records to identify the actors that are regularly invited to the Parliament Committee on Education hearings, another key arena of higher education

and science policymaking. We found that the same core organizations our analysis revealed were also regularly present in the hearings, indicating that our analysis reveals the key actors correctly.

## Results

### Structure of policy network emerging from working groups

First, we analysed the network panel wave by panel wave. In each panel wave, we found that a small fraction of organisations had the lion's share of all memberships, and most organisations had only one membership per year (a phenomenon known as the power law of scale-free networks). The same was true when the memberships were observed over time (see Appendix Table A1). For example, the 26 organisations with the most memberships over 2012–2021 (that is, 6% of organisations) held 50% of all the seats in the working groups; and, conversely, 55% of organisations had only one membership during the period.

Continuous core/periphery analysis for each panel wave resulted in 42 organisations that belonged to a panel wave core at least once over 2012–2021: 32 organisations were in a core at least twice, and 28 more than twice. Ten organisations belonged to the core in all panel waves. We chose the organisations that belonged to the panel wave cores at least five times, that is, at least half of the time, to represent the network's core over time: this core contains 24 organisations, listed in Table 2. These organisations are the network's key actors, and they are state ministries, universities and their rectors' councils, national students' unions, and employee and employer unions and their central organisations. Somewhat surprisingly, the universities of applied sciences (UAS) are almost excluded from the list (they are only represented by their rectors' council Arene), but this might be explained by the fact that we analysed both higher education and science policy, and the UASes are not as active in science policy as the research universities. While some private companies were present among the network actors, none of them belonged to the network's core. Instead, at the core, the private sector is represented by their central associations, the Confederation of Finnish Industries (large companies) and the Association of Finnish Entrepreneurs (small and medium-sized enterprises).

Table 2 also shows the core organisations' number of working group memberships per year. The number of memberships fluctuates for most organisations, but for some, it remains stable over time. Studying (Pearson) correlations showed that for the MEC, NAE, RCF, Ministry of Economic Affairs and Employment, the rectors' councils (Arene, UNIFI), and the universities (Helsinki, Turku, Tampere), the number of memberships correlated strongly (coefficients above 0.67, most over 0.80) with the total number of working groups. That is, their annual number of memberships depended on the total number of working groups operating during that year. For the rest of the organisations, correlations were much weaker and statistically insignificant. These were student, employer, and employee organisations, Ministry of Finance, Ministry of Social Affairs and Health, ALFRA, and AMKE. These organisations retained or even increased their seats even if the total number of working groups decreased. Overall, it seems that the core organisations have a basic level of representation in the MEC's working groups, but the universities and their rectors' councils, the NAE, and RCF are involved in additional working groups when needed.

**Table 2** Network's core organisations' belonging to the core and the number of their working group memberships per panel wave

Organisation	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total	Number of times at the core over time
Association of Finnish Local and Regional Authorities (AFLRA)	7	6	7	7	4	6	7	4	7	8	28	10
Finnish National Agency for Education (NAE)	22	18	18	20	15	16	18	14	12	15	72	10
Ministry of Economic Affairs and Employment	16	18	19	19	11	13	12	13	13	18	61	10
Ministry of Education and Culture (MEC)	44	44	49	41	26	28	29	26	27	36	157	10
Ministry of Finance	9	9	12	11	7	11	9	10	10	14	43	10
Ministry of Social Affairs and Health	10	11	11	10	5	8	8	10	11	13	40	10
National Union of Students in Finnish Universities of Applied Sciences SAMOK	14	13	12	10	9	6	15	9	8	11	46	10
National Union of University Students in Finland SYL	12	10	11	12	10	7	16	9	8	9	44	10
The Rectors' Conference of Finnish Universities of Applied Sciences Arene Universities Finland UNIFI	8	11	10	10	8	8	7	7	3	5	36	10
University of Helsinki	9	11	11	9	6	7	8	8	4	6	35	10
Confederation of Finnish Industries (EK)	15	18	26	20	16	16	20	11	9	12	64	9
The Finnish Association for the Development of Vocational Education and Training (AMKE)	10	9	6	7	3	4	6	5	6	6	26	8
The Trade Union of Education in Finland, OAJ	4	3	3	6	4	6	6	6	5	4	18	8
Akava – Confederation of Unions for Professional and Managerial Staff in Finland	7	6	6	6	8	8	11	7	6	6	31	8
National Union of Vocational Students in Finland (SAKKI)	6	5	3	5	3	4	6	6	6	7	22	7
University of Turku	6	5	5	8	8	8	9	7	6	4	24	7
Association of Finnish Entrepreneurs	10	13	11	10	7	9	14	6	5	7	38	7
Research Council of Finland (RCF) (formerly: Academy of Finland)	5	4	3	5	4	5	5	6	5	5	19	6
The Central Organisation of Finnish Trade Unions (SAK)	7	11	17	14	9	9	9	7	5	5	37	6
KT—Local Government and County Employers	7	6	4	5	2	3	3	5	6	7	20	6
The Finnish Confederation of Professionals (STTK)	5	5	4	3	2	2	4	5	5	7	19	5
	7	7	4	4	2	3	3	4	4	6	20	5

**Table 2** (continued)

Organisation	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total	Number of times at the core over time
The Union of Upper Secondary School Students in Finland	6	5	5	5	9	6	8	5	3	4	22	5
University of Tampere	8	12	12	9	8	7	6	4	2	3	27	5

*italics = organisation belongs to the network's core in that year*

**Table 3** Degree centralisation over time for the full network and for the core

		Panel wave									
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Degree centralisation	Full network	0.75	0.75	0.71	0.66	0.62	0.65	0.68	0.74	0.79	0.75
	Network's score	0.08	0.09	0.11	0.10	0.19	0.18	0.09	0.17	0.23	0.18

Number of organisations in the full network presented in Table 1. For the core, number of organisations is 24

We compared the evolution of the network's core and the full network over time. Table 3 shows the evolution of degree centralisation for the core and the full network: these statistics were quite stable over time for both the full network and the core. Degree centralisation measures the extent to which a single actor, here the MEC, dominates the network (Borgatti et al., 2013). The full network was dominated by the MEC, but the core was not. That is, the MEC brokered the organisations' relationships in the full network, but the organisations at the core were connected to many other organisations (especially to other core organisations) without the MEC brokering their relationships. This means that the MEC held a strong position in the full network, and the network's structure consisted of a small and well-networked core, around which resided the rest of the network.

To analyse the network's change, we calculated the QAP correlations between the panel wave data matrices. Tables 4 and 5 show these results, respectively, for the full network and for the core. The diagonals of Tables 4 and 5 indicate that the year-to-year change in the network structure was modest for both the full network and the core: the QAP correlation coefficients remain at around 0.80–0.90, suggesting strong stability in the network structure. Over time, as shown by the tables' row coefficients, the structure of the network changed. However, in Table 5, the row coefficients remain higher than in Table 4, suggesting that the change in the network structure was slower at the core than in the full network, and especially in the network's peripheral parts. Thus, it seems that

**Table 4** QAP matrix correlations between panel waves: full network

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2012	1.00	0.90	0.79	0.77	0.60	0.60	0.60	0.65	0.63	0.64
2013		1.00	0.88	0.81	0.63	0.62	0.60	0.62	0.58	0.61
2014			1.00	0.89	0.73	0.67	0.60	0.57	0.53	0.57
2015				1.00	0.83	0.79	0.69	0.67	0.65	0.63
2016					1.00	0.89	0.75	0.62	0.56	0.54
2017						1.00	0.79	0.70	0.63	0.58
2018							1.00	0.81	0.66	0.61
2019								1.00	0.84	0.75
2020									1.00	0.86
2021										1.00

Organisations missing from panels waves imputed as nodes with zero ties

**Table 5** QAP matrix correlations between panel waves: network's core

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2012	1.00	0.92	0.83	0.86	0.70	0.68	0.69	0.74	0.75	0.80
2013		1.00	0.92	0.87	0.69	0.67	0.64	0.64	0.61	0.70
2014			1.00	0.90	0.74	0.72	0.65	0.63	0.58	0.67
2015				1.00	0.83	0.85	0.75	0.79	0.77	0.77
2016					1.00	0.89	0.85	0.70	0.61	0.58
2017						1.00	0.82	0.79	0.72	0.65
2018							1.00	0.77	0.66	0.62
2019								1.00	0.90	0.82
2020									1.00	0.90
2021										1.00

Number of organisations in the network's core is 24

the stability and continuity of the structure of the relationships between the organisations at the core were responsible for the continuity of the full network.

### Use of the network in policymaking

The interviewed experts, both MEC officials and stakeholder organisation representatives, were quite unanimous regarding the working groups' role and activities. The working groups, the interviewees argued, functioned as arenas for continuous discussion and knowledge exchange. Knowledge flowed from MEC to the stakeholders in that the MEC officials informed the stakeholders about the government's positions and upcoming policy and implementation plans. The stakeholders brought knowledge from their constituencies to the MEC and thus to the government. The participants in the working groups attempted to influence one another's opinions, that is, to lobby. This applied to both stakeholders and the MEC officials; not only did the stakeholders try to influence the opinions of the MEC officials, but the MEC officials tried to convince the stakeholders of the merits of the government's positions. Several interviewees, as exemplified below, emphasised the importance of open dialogue, where diverse perspectives and ideas are shared, discussed, and negotiated, suggesting interest intermediation. Sometimes, the discussion was outside the remit of the working group, suggesting that the groups were used as arenas for general lobbying too, not only lobbying for issues at hand.

Interviewer: In your opinion, how important is the role that the MEC working groups have in [higher education and science] policy preparation?

Interviewee: It is [important]. [--] We need those groups because through them we have a good continuous discussion [between the universities and the MEC].

University representative

In working groups, the backgrounds of the issues are discussed much more extensively and then perhaps we can also discuss the issues from different perspectives. [--] Usually, the discussion and this kind of joint weighing of issues produces a broader view, and then the information flows better and the diversity of issues may become better [clarified].

Employee union representative

Regarding the working groups' influence in policymaking, the interviewee accounts cohered. While the working groups were seen as important arenas for influencing policies, both the MEC officials and the stakeholder representatives reported that both a working group's organisation and its influence depended on the issue on which the group worked: there was no single model. When there was a strong government policy position on an issue, the working group may have had little room to influence the policy or its implementation. In such cases, the group may have been only an arena for the MEC to push and defend the government's policy positions, and thus, the working group only served as a symbolic legitimation device that offered participation in the policy process formally but not substantially. However, some working groups were employed with genuine mandates to develop policies, and they had quite broad autonomy in their work. For instance, when there was little government pressure or no pre-defined output, or when the working group was to produce non-binding recommendations instead of legal changes, the group could influence the policy agenda and policy formulation. In such cases, the working groups were the primary arena for policy development. But even if the working groups' influence varied, they were still experienced as important political arenas.

We often have various working groups that we set up, and it supports the collaboration [with stakeholders] in a way or another. It depends a lot on the subject matter, there is no single model.

MEC official

Interviewer: How important do you see the opportunities to influence policies through the MEC working groups?

Interviewee: It always depends a bit on the issue. I feel that some of the working groups may be a bit of a sham in that the MEC has already decided what it wants to get out. [--] But if there are genuinely issues with no strong political guidance, then I think they are effective [way to influence].

Employer union representative

Overall, our analysis suggests that the formation of working groups was a governance technique the MEC used to convene the stakeholders from a broader network to voice their policy positions and participate in the MEC's policy processes. Working groups were a form of continuous consultation and a source of information for all parties and an arena for negotiation and interest intermediation. Specifically, the MEC collected knowledge from the field and disseminated the government's positions. The network, thus, is used for knowledge exchange, interest intermediation, and policy advocacy by both the stakeholders and the MEC.

## Discussion and conclusions

Network governance has gained popularity as a theorisation of how higher education policies are made and how higher education institutions and systems are contemporarily steered. Compared to traditional forms of governing, like corporatism, network governance emphasises networks, flatter hierarchies, and continuous negotiations over policies between state and non-state actors. We studied what kind of network the Finnish MEC uses in higher education and science policymaking, and how it uses the network. We

studied the organisational policy network by analysing the MEC's working groups in 2012–2021. We expected that the MEC has the strongest position in the network and that the network centralises around the MEC. We expected that the network's core includes state agencies, employee and employer unions, and universities' and students' organisations, and that the network is stable over time. Regarding the network's role in policymaking, we expected the network members to emphasise knowledge exchange, interest intermediation, and policy advocacy as key activities. A working group's influence, we expected, depends on the political importance of the issues it worked on. Analysis supported all these expectations. However, the network's core was less centralised around the MEC, and the core was more stable than the network's periphery.

An important and policy-wise consequential issue is then which organisations are represented in the network, especially in its core. The other ministries being key actors aligns with the fact that, in Finland, higher education policies are entwined with other sectoral policies, such as employment, social, and economic policies (e.g., Kauko, 2011; Lampinen, 2003). Universities' representation can be understood through their autonomy; the MEC cannot use directives but instead needs to resort to negotiations and persuasion for which the working groups offer an arena. These characteristics align this network well with the network governance framework (e.g., Klijn & Koppenjan, 2016; Provan & Kenis, 2008; Rhodes, 2011). Student unions, employee unions, and employer unions also belonged to the network's core, which can be understood as the remnant of a long-standing tradition of Finnish corporatism that required interest organisations to be included in policymaking (e.g., Lampinen, 2003; Vesa et al., 2018; Vukasovic, 2023). The participation trends of the core organisations vary over time, but they all have a basic level of representation. Participation of the universities and their rectors' councils, and the MEC and its subordinate agencies was correlated with the total number of working groups, suggesting that these actors are also convened to working groups for additional governance purposes, in line with the network governance model.

Another interesting finding was that the network's core was less centralised around the MEC than the full network. This means that the relationships between the core actors are less mediated (brokered) by the MEC, and they have more direct access to the knowledge exchange and negotiation with the other core actors. They are then more knowledgeable about others' positions and bargaining space. Thus, compared to the network actors in the network's peripheral domains, the core actors have more opportunities to build coalitions to lobby for their shared interests and to influence the MEC's policy formulation. Actors in the peripheral, MEC-centred domains may have power in those specific issues they deal with, but the core actors have broader access to and opportunities to influence the political agenda in higher education and science policy. Moreover, it could be argued that because of the more sustained and stable relationships the core organisations have with the MEC, the more likely they will be able to influence the political agenda; this, however, will remain a topic for further research.

The configuration and stability of the network's core seems to link with the policy content in Finland. Systematic, continuous, and stable inclusion of these core actors in the higher education and science policymaking network is, with every likelihood, associated with the fact that employment and economic justifications play a key part in the Finnish higher education policy (e.g., Kallunki et al., 2015; Kauko, 2011; Lampinen,

2003) and the fact that developing the steering of higher education institutions is ‘frictional’ (Kauko, 2011). The relationship between (a) which organisations are in the network and (b) which policy issues are salient is not one-directionally causal but a circular two-way influence: the existing members push for certain issues and agendas, which then gain salience, and in turn, those members are re-invited in policymaking because they can produce opinions and knowledge about the salient issues. Network stability, then, both produces and reflects stability in policies. Establishing this link empirically will also remain a topic for further research.

Policymaking and governing in Finland has been described as corporatist (e.g., Rommetvedt, 2017; Vesa et al., 2018), including higher education and science policy (Vukasovic, 2023). Our findings support the conclusion that working groups are an institutionalised arrangement to include organised interests in higher education and science policymaking and implementation in Finland, which is a key characteristic of modern corporatism (Binderkrantz & Christiansen, 2015). That is, Finnish higher education and science policy has a corporatist undertone to it. However, we found that while the MEC has a strong position in the full network, the network’s core is not centralised around the MEC, and the interviews pointed to a much more equal and reciprocal relationship between the MEC and the organisations at the network’s core. This means that the network’s core can be more adequately described with network governance terminology than corporatism, even if the core still technically follows the lead organisation-governed mode of network governance (because the MEC controls the working groups’ agendas and member selection) (Provan & Kenis, 2008). In this way, the governing model in Finnish higher education and science policy is a sort of hybrid or a mixture of corporatism and network governance. At least to this degree, we can agree with Molina and Rhodes (2002, p. 324) in that contemporary corporatism might best be understood in terms of network governance.

Nevertheless, it was clear that the MEC was the key organisation in the network. The MEC seems to use the network as a means to govern, and the MEC’s (and its subordinate agencies’) strong position in the network suggests that the MEC has anything but relinquished its powers to the network. The asymmetric power relations are exemplified by the fact that the MEC appoints the working groups’ chairs and secretariats from its own ranks. Thus, the decentralisation of state power and dissolution of the state’s central steering during the 1990s reforms in Finland (e.g., Kauko, 2011) has seemingly been compensated and substituted by wielding power through working groups. Therefore, it is premature to talk about ‘hollowing out’ of state power (Rhodes, 1997), at least in higher education and science policy. Due to its central position in the network, the MEC has accurate knowledge about what each organisation wants and opposes, so it can use the network to design policies that account for different perspectives in advance, thus easing policy formulation and implementation. On the other hand, through the network, the MEC creates opportunities for organisations to opine and influence the MEC’s agenda, and through it, the government’s agenda. Literature has identified knowledge transfer as a key function of working groups (e.g., Arras & Braun, 2018; Gornitzka & Sverdrup, 2011; Krick, 2015) and working groups as an arena for stakeholders to influence policies (e.g., Rommetvedt, 2017; Saint-Martin, 2014; Vesa et al., 2018). Our contribution to this literature is that the MEC also uses working groups to lobby the stakeholders for government positions; that is, lobbying goes both ways.

## Appendix

**Table A1** Number of organisations per number of working group memberships in 2012–2021

<i>N</i> = number of memberships	Number of organisations having <i>N</i> memberships	% of organisations having <i>N</i> memberships
21 or more	24	5.9%
10–20	21	5.2%
6–10	28	6.9%
2–5	108	26.7%
1	224	55.3%
Total	405	100.0%

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## Declarations

**Competing interests** The authors declare no competing interests.

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