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Front sheet

Title:

Policy congruence and advocacy strategies in the discourse networks of minimum unit pricing for alcohol and the soft drinks industry levy

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Abstract

Background and Aim: Public health policy development is subject to a range of stakeholders presenting their arguments to influence opinion on the best options for policy action. This paper compares stakeholders' positions in the discourse networks of two pricing policy debates in the UK: Minimum Unit Pricing for alcohol (MUP) and the Soft Drinks Industry Levy (SDIL).

Design: Discourse analysis was combined with network visualisation to create representations of stakeholders' positions across the two policy debates as they were represented in 11 national UK newspapers.

Setting: United Kingdom.

Observations: For the MUP debate 1,924 statements by 152 people from 87 organisations were coded from 348 articles. For the SDIL debate 3,883 statements by 214 people from 175 organisations were coded from 511 articles.

Measurements: Network analysis techniques were used to identify robust argumentative similarities and maximise the identification of network structures. Network measures of size, connectedness and cohesion were used to compare discourse networks.

Findings: The networks for both pricing debates involve a similar range of stakeholder types and form clusters representing policy discourse coalitions. The SDIL network is larger than the MUP network, particularly the proponents' cluster with over three times as many stakeholders. Both networks have tight clusters of manufacturers, think tanks, and commercial analysts in the opponents' coalition. Public health stakeholders appear in both networks, but no health charity or advocacy group is common to both.

Conclusion: A comparison of the discourse in the UK press during the policy development processes for Minimum Unit Pricing for alcohol and the Soft Drinks Industry Levy suggests greater cross-sector collaboration among policy opponents than proponents.

Keywords: Alcohol, sugar-sweetened beverages, health, policy, public health, discourse networks.

Introduction

The global rise in Non-Communicable Diseases (NCDs) can be understood as 'industrial epidemics' driven at least in part by powerful corporations and their allies promoting products that are also disease agents (1). Decades of mounting evidence on the tobacco industry highlighted its detrimental effect on health and brought about the introduction of upstream policies targeting price, marketing and availability. More recently, UK public health policy makers have turned their attention to upstream policy interventions targeting alcohol and sugar. There is growing evidence that the alcohol industry and ultra-processed food and drink industry use similar strategies to the tobacco industry to undermine effective public health policies (2-4).

Public health policy development is subject to a range of stakeholders presenting their arguments in the news media on the best options for policy action (5-7). In this respect, the news media can be seen as important in contributing to agenda setting (8) and in shaping public and policy opinion on the acceptability of public health policies (9-11). Two recent examples of controversial pricing policy options that prompted intense media debates across the UK were, Minimum Unit Pricing (MUP) for alcohol and the Soft Drinks Industry Levy (SDIL). Both policy options were considered by the UK Government. However, while the SDIL was implemented across the UK in 2018, the introduction of MUP in England was placed on hold indefinitely in 2013, despite being included in the UK Government's 2012 Alcohol Strategy (12). Meanwhile, in June 2012, the Scottish Government passed the Alcohol (Minimum Pricing) Scotland Act 2012, paving the way for MUP in Scotland (13).

The MUP pricing policy targets the sale of cheap, high-strength alcohol to reduce alcohol consumption and related harms. After a failed legal challenge (14), in May 2018 a minimum price of 50p per unit was implemented in Scotland (15). Arguments in support of MUP, appearing in the UK press, largely related to concerns about high levels of problem drinking; its effect on public health and public order; and a widespread belief that most of the alcohol that contributes to drunken behaviour is irresponsibly priced and sold (7, 16). Key opposing arguments in the debate positioned the policy as an illegal barrier to fair trade that would harm the economy and penalise responsible drinkers (7).

Public Health England's report, 'Sugar Reduction: The evidence for action', highlighted the high levels of sugar consumption and associated health harms (17). The report recommended a broad range of measures, including the introduction of a tax on high

sugar products. In the March 2016 budget, the Chancellor of the Exchequer, George Osborne, announced the Conservative Government's intention to introduce the SDIL (18). They intended that the SDIL would encourage producers to reformulate products with a reduced sugar content, to avoid paying the levy (19). Following a consultation period, the levy was introduced in April 2018 and set at 18 pence per litre on soft drinks with a total sugar content of 5 grams or more per 100 millilitres, and 24 pence per litre for those with 8 grams or more per 100 millilitres. The levy was to apply to all sugar-sweetened beverages except pure fruit juices (with no added sugar) and drinks with a high milk content. Key supportive arguments appearing in the UK press centred on the extent of the health harm caused by excess sugar consumption; that such a policy was a necessary government intervention as part of a package of measures; and that voluntary industry codes, such as the Public Health Responsibility Deal, had been ineffective (6). Whereas opposition arguments emphasised that industry was already taking voluntary action and playing an active role in health promotion, therefore further regulation was unnecessary; any form of taxation would be ineffective in tackling the complex problem of obesity; and such measures would cause economic harm to industry and the wider economy (6).

Successful implementation of 'controversial' health policies requires a high level of political commitment and support from advocacy stakeholders (20, 21). It has been argued that interest groups that present a united front may be more effective in having their preferred policy option adopted, than if they work separately (22). Indeed, Rasmussen and colleagues suggest that the likelihood of advocacy success increases when advocates publicly support each other's position (23). Hawkins and McCambridge suggest that a factor in the failure to implement MUP in England was that health advocates were initially under-prepared and did not present consistent arguments for the policy in the media (21). Conversely the complex corporate relationships that exist between unhealthy commodity industries may represent an opportunity for strategic cross-industry collaboration and result in more coherent alignment of media messaging when seeking to influence policy development (24-26). Smith and colleagues highlight the need for research to 'better understand how processed food, soft drinks, and alcohol industries influence public, political, and policy debates', in order to understand how to mitigate against industry messaging and successfully advocate for public health policy via the media (27).

This study seeks to address calls for research to compare stakeholder influencing activities across industry sectors (24, 25, 27). We use discourse network analysis (DNA), a research method that allows the analysis and visualisation of actor-based debates using network analysis, to explore the complex web of arguments, or discourse coalitions (28), that form when stakeholders seek to publicly influence government policy (29, 30). Previous studies have used DNA to describe the appearance of discourse coalitions in support of, and opposition to, MUP and SDIL (6, 7). In the recent commentary on Fergie et al, Schmidt highlights that this methodology is 'likely to prove a particularly valuable tool for comparative research, allowing efficient, systematic, rigorous analysis to compare policy debates internationally and across multiple unhealthy products' (31).

Here we aim to build on our previous DNA studies and use this methodology to compare stakeholders' positions in the discourse networks across two pricing policy debates, MUP for alcohol and the SDIL, as represented in UK newspapers. The comparison of MUP and SDIL is an appropriate case study as they are both examples of 'sin taxes' (pricing policies targeting products deemed harmful to society and individuals) (32, 33); intended to be UK wide policies; and attracted a very public debate in the news media; which in turn affected their chances of policy adoption. Specific research questions are: (i) What are the similarities and differences in the policy discourse networks' composition and structure? (ii) How does the composition of coalitions differ across the two debates and what might this tell us about policy beliefs and advocacy strategies? (iii) How do the arguments that polarise the coalitions differ?

Methods

Pre-existing discourse network analyses on MUP (7) and SDIL (6) were employed as test cases to examine how DNA could be used as a comparative methodology. While the policy context was somewhat different for the two debates, both controversial policies drew significant media attention with clear polarisation in stakeholder views, thus providing a useful case study. Additionally, although MUP was only finally implemented in Scotland, it was originally proposed as a UK wide policy and included in the UK Government's Alcohol Strategy (12).

We searched articles from eleven national UK newspapers, representing all political views and genres, in the months preceding and following key policy announcements:

between May 2011 and November 2012 for the MUP debate; and between May 2015 and November 2016 for the SDIL debate. Stakeholder statements were identified and coded using the *Discourse Network Analyzer* (DNA) software (34), a qualitative content analysis software tool which combines category-based content analysis with network analysis (29, 35). Each coded statement consists of four variables: the person's name, their organisational affiliation, the argument to which the subject refers (further called "concept"), and a binary qualifier indicating the stakeholder's agreement or disagreement with the concept. Weighted one-mode networks of stakeholders were created for both debates and exported from DNA as stakeholder \times stakeholder matrices, using the 'subtract' transformation with 'average activity normalisation' (29). These procedures create a network in which a tie connects any two stakeholder nodes if they agree (more than they disagree) with each other, regarding the concepts in the debate. The methods used to create the separate policy discourse networks are described in detail elsewhere (6, 7). To allow comparison between the pricing debates, common concepts were harmonised wherever possible. For example, 'The policy will reduce consumption of the commodity' was used in favour of 'MUP will reduce consumption of alcohol' and 'The SDIL will reduce consumption of sugar-sweetened beverages'. Concepts that were unique to only one debate were not harmonised; for example, 'Industry plays an active role in public health promotion' was specific only to the SDIL debate. For the MUP debate, 1,924 statements by 152 people from 87 organisations were coded in 348 articles. For the SDIL debate, 3,883 statements by 214 people from 175 organisations were coded in 511 articles. A total of 63 concepts were identified. 29 concepts were common to both debates, 17 unique to MUP, and a further 17 unique to SDIL. See supporting information for a full list of concepts (Data S1) and stakeholder organisations (Data S2) appearing in each debate.

Networks were plotted in *Visone* (a software tool that allows the visualisation and analysis of network structures in network datasets, such as those exported from the DNA software) (36). Ties between actors represent common agreement or common disagreement with a specific concept or argument. A tie weight threshold equivalent to the 67th percentile was applied to the signed network to reduce ties to only relatively robust argumentative similarities and to maximise the identification of both network structures. The 67th percentile (equivalent tie weight thresholds 0.400 for MUP and 0.333 for SDIL) was selected to ensure that the networks could be directly compared. The Girvan-Newman

edge-betweenness community detection algorithm (an algorithm to identify clusters, or discourse coalitions, in the network, i.e.: groups of actors with a similar argumentative position) (37) was used to identify clusters of stakeholder subgroups with argumentative similarities within the discourse network. These clusters can be interpreted as discourse coalitions. The coalitions were then highlighted using blue hyperplanes, the different stakeholder types were visualised with common colours for both debates, and the frequency of codes for stakeholders was represented by the size of the respective node. Network measures were used to compare the two networks and principal coalitions regarding: size - the total number of nodes (actors) in a network or cluster, density – a measure of connectedness of actors within a network cluster or the overall network, expressing the relative number of ties (i.e.: the number of ties as a proportion of the theoretical maximum) (38), and E-I index – a measure of subgroup cohesion, i.e.: how strongly aligned the actors are internally in any one cluster vs external alignment with other clusters (39). The range for E-I index is -1 (all ties are internal to the coalition) to +1 (all ties are external to the coalition).

We examined the relative use of concepts in each debate by comparing the frequency with which they were used and the degree of agreement and disagreement. The concepts that were the most polarising in each network were identified by: first, extracting the fifteen most frequently used concepts for MUP and SDIL separately; secondly, calculating the ratio of agreement to disagreement for each concept; and finally, ordering them by this ratio. As such, the five most polarising concepts were those with the highest ratio in each debate.

The primary research question and analysis plan were not pre-registered and thus the results should be considered exploratory.

Results

Overview

RQ (i) What are the similarities and differences in the policy discourse networks' composition and structure?

The composition of stakeholders in both networks was similar, reflecting the common interests of those participating in the debates. Both networks included Politicians / Political Parties; Government Advisory Bodies; Health Professionals / Professional

Associations; Health Charities / Advocacy Groups; Universities / Academics; Think-tanks / Commercial Researchers; Retailers / Retail Associations; Manufacturers / Associated Industries or Associations; and International Health Organisations. The only stakeholder types that did not appear in both debates were EU Member States / EU body and the Police, which exclusively appeared in the MUP debate (Figs 1 and 2). Wine producing EU Member States were particularly concerned about the legality of MUP, and the Police highlighted MUP as a way of dealing with the violence resulting from 'problem drinkers', two issues that were not prominent in the SDIL debate. The detailed composition and characteristics of each network have been published elsewhere (6, 7). In this article, we focus on the comparison between the two networks and their respective coalitions.

The structure of both networks formed two discourse coalitions representing proponents and opponents of the policies. However, at the chosen tie-weight cut-off, the MUP coalitions are more distinct. Fewer stakeholders (total nodes) are engaged in the debate, with almost twice as many apparent in the SDIL network; 3.3 times as many in the proponents' coalition and 1.7 times as many in the opponents' coalition (Table 1). This reflects the greater number of vocal stakeholders in the SDIL debate, particularly in the proponents' coalition. Additionally, the E-I index for proponents of SDIL is low compared with the other three coalitions (Table 1), indicating that members of this coalition were even more likely to agree with each other than with stakeholders outside the coalition, compared to the other coalitions.

Composition of coalitions

RQ (ii) How does the composition of coalitions differ across the two debates, and what might this tell us about policy beliefs?

Highlighting the ten most active stakeholder organisations in each debate reveals that in both cases the commodity manufacturers and associated industry stakeholders (brown nodes) play prominent roles in opponents' coalitions and are closely aligned with think tanks and commercial researchers (teal nodes) (Figs 3 and 4). Associations representing manufacturers of the products under scrutiny are dominant spokespeople in both debates, in particular: the Scottish Whisky Association and the Wine and Spirit Trade Association for MUP and the British Soft Drinks Association for SDIL. However, the SDIL

network also features a prominent manufacturer (Coca-Cola) and an association representing related industries (the UK Food and Drink Federation).

The SDIL proponents' coalition features active stakeholders from a wider range of public health advocates (government advisory bodies, particularly Public Health England (pink nodes) together with health charities and advocacy groups (purple nodes)) than seen in the MUP network. Six of the most active stakeholders are from these groups compared with only one (Alcohol Concern) for MUP. Other active stakeholders in the MUP proponents' coalition are two professional associations (British Medical Association and the Royal College of Physicians) and one academic institution (University of Sheffield). While academic researchers are apparent in the SDIL network, they are not amongst the ten most prominent stakeholders appearing in this debate.

Political stakeholders (gold nodes) appear across the two coalitions in both networks. However, only the Conservative party is among the most active stakeholders in the SDIL network, compared with four political parties in the MUP network (The Conservatives, Scottish National Party (SNP), Scottish Government and Scottish Labour). This reflects the origins of MUP as an SNP policy targeting what was framed as a Scottish issue of harmful drinking. In both networks, the Conservative party is towards the middle of the networks. However, in both cases this does not reflect a brokering role, but either a change in ideology over the course of the debate (for SDIL, the Conservative shift in position in the middle of the period studied), or splits within the party on the issue (for MUP, prominent politicians openly taking opposing positions over the course of the period studied).

Despite similar patterns in the types of organisations making up the proponents' and opponents' coalitions across the two debates, only thirty organisational stakeholders are common to both (Table 2). This suggests that the debates are relatively sparsely connected to each other, through common stakeholders, despite their topical similarity.

Apart from policymakers (political parties, government departments and advisory bodies), organisations from two other categories of stakeholders contribute to both the MUP and SDIL debates (Figs 5 and 6). Four think tanks and commercial researchers (Adam Smith Institute, Institute of Economic Affairs, Institute for Fiscal Studies and the TaxPayer's Alliance) and six retailers or retail associations (Asda, Sainsbury's, Tesco, British Retail

Consortium, Scottish Retail Consortium and Scottish Grocers Federation) appear in both debates. Think tanks and commercial researchers (teal nodes) appear exclusively in the opponents' coalitions, while the retailers and retail associations (green nodes) spread across both coalitions in both debates. In relation to MUP, few retailers are central to the proponents' coalition, unlike in the SDIL debate, where some retail stakeholders (e.g., Sainsbury's and the British Retail Consortium) are integrated into the proponents' coalition with strong belief ties to key policy proponents.

It is noteworthy that, in contrast, there were no health charities or advocacy groups common to both debates, despite a range of these organisations being very active and central to the proponents' coalitions within each debate. Similarly, while universities and academic researchers appear in one or other debate, only the University of Birmingham is common to both.

Polarising arguments

RQ (iii) How do the arguments that polarise the coalitions differ?

Of the top five concepts that lead to the formation of coalitions in the two networks, two concepts are common to both (Table 3). 'Policy is supported by the evidence' is the most polarising concept for both networks and 'Policy will reduce consumption of the commodity' is the third and fourth most polarising concept for MUP and SDIL respectively. Three of the most polarising concepts are unique to one or other of the debates: 'Policy will penalise responsible consumers' for MUP; 'Industry is taking voluntary actions' and 'Industry plays an active role in public health promotion' for SDIL. Of note is the fact that the two most frequently cited arguments in the SDIL debate do not appear as significant polarising concepts, i.e.: 'Policy needed to address commodity problem' and 'Commodity consumption causes health harm'. These concepts relate to the framing of the problem in relation to population-level health harm and the need for a policy response. Conversely, the two most frequently cited arguments in the MUP debate do result in network polarisation, i.e.: 'Policy will reduce consumption of the commodity' and 'Policy is illegal'. In contrast, these concepts relate to the framing of the solution and its likely effectiveness and legality. Thus, the most frequently cited arguments in the SDIL debate do not result in polarisation of the network,

suggesting a high degree of agreement about the extent of the problem resulting in more closely integrated coalitions.

Discussion

There are calls for more nuanced analyses of stakeholder engagement in health policy development (24, 27, 31). It has been suggested that research should compare stakeholders across multiple unhealthy products and related policies (31). Using DNA methods this study presents the first direct comparison of the discourse coalitions that were evident in the UK press during the policy development processes for MUP and the SDIL. Both networks show similarities in terms of structure, proponents' and opponents' coalitions and similar stakeholder types. However, important differences are revealed in terms of network size and complexity; the relative prominence, and lack thereof, of key stakeholders; subtle differences in the position of industry sub-segments between networks; and the relative polarising impact of frequently cited arguments.

Proponents of the pricing policies in both debates included public health, health charities, advocacy groups, and academics. While these stakeholders were present in both debates, few specific organisations were common to both, suggesting that such proponents tend to make media statements focusing on their area of policy interest. While it is clear that policy advocates are already working across sectors, for example: in the guise of the Cross Party Group on Improving Scotland's Health: 2021 And Beyond (40); and health alliances across the UK and internationally, this study suggests that they may not optimise their media messaging with regard to pricing policies. WHO identifies such upstream policies as 'best buys' to tackle non-communicable diseases, across all lifestyle factors (41). There may be potential space for further cross-sector public health advocacy in support of pricing policies, by elevating the debate and presenting arguments across policy debates in support of their counterparts. Advocates could thus increase their chances of achieving policy congruence, as suggested by Rasmussen and others (23, 42).

In contrast, opponents of regulatory pricing policies were present in both policy debates, specifically those with a vested interest in the economic impact of both policies such as retailers, representatives of licensed premises and commercial researchers. This structural similarity suggests industry stakeholders hold comparable discourse positions, supporting the idea of a common industry 'playbook', facilitated by public spokespeople, as

suggested by Petticrew et al (43). The same four free market think tanks and commercial researchers appear embedded in both opponents' coalitions, closely tied to industry stakeholders, suggesting similar market justice rhetoric based on commercial ideology (44, 45).

Comparing alcohol and tobacco strategies, Savell and colleagues suggest that there are commonalities, including both sectors providing skewed interpretations of evidence whilst also promoting voluntary codes, based on establishing themselves as acting responsibly in relation to health (4). Our findings support this by suggesting that both sides focus on the availability and quality of evidence and this is the most significant polarising argument in both networks. There may be an opportunity for policy advocates and academics to focus their advocacy efforts in the media on stressing the importance of weight of evidence, strength of evidence, source of evidence and how it is best used. Polarising concepts appearing in the SDIL debate but absent in the MUP debate are 'industry is taking voluntary action' and 'industry plays an active role in public health promotion'. This lends support to Nixon et al's findings that the food and drinks industry seeks to establish themselves as an exceptional case that should not be subject to the same controls as producers of other health harming products, and is a key part of their corporate social responsibility rhetoric (6, 46). However, Collin et al highlight the linkages that exist across tobacco, alcohol and ultra-processed food companies, positing the idea of a single unhealthy commodity industry requiring a consistent regulatory approach (2).

A key difference between the two networks is the number and distribution of associated industry stakeholders such as retailers and restaurants, with a greater number in the SDIL network, including the active voice of the UK Food and Drink Federation. Six key retailers are common to both debates but appear in different positions. For example, the British Retail Consortium and Sainsbury's appear as proponents of SDIL and opponents of MUP, whereas Tesco occupies inverse positions. This, together with wider industry engagement in the SDIL debate, reinforces the need to clearly define industry sub-segments and their likely policy positions, as suggested by Collin et al (24). Policy advocates may benefit from understanding the policy responses of multiple industry sub-segments to effectively counter policy objections and leverage potential policy support.

One of the limitations of this study, which examines the debates as static networks, is that it does not allow analysis of subtle shifts over time. While the change in position of the Conservative Party in the SDIL debate was the only fundamental change in ideological position, there was an ongoing interplay of subtle shifts in emphasis and relative prominence of arguments over time in both debates. Future studies would benefit from comparing network development over time. Secondly, harmonising the concepts for the two debates may have resulted in the loss of some nuanced arguments. However, the coders of the two debates worked together to ensure consistency and minimise this risk. Thirdly, the periods studied for each debate were four years apart: 2011-12 for MUP and 2015-16 for SDIL. The passage of time could have influenced stakeholders' strategies and the nature of their responses to proposed fiscal policy. However, we chose these time periods deliberately to examine the debates at similar stages of policy development. Finally, while we recognise the importance the digital world of echo chambers, tailored information and micro-targeting, which means that social media plays an increasing role in influencing the policy agenda (47), traditional newspapers remain an important barometer of the current political agenda.

Conclusion

In conclusion, this visualisation of the discourse networks apparent in the debates on pricing policies spanning two unhealthy commodity industries, may represent a manifestation of the underlying discursive strategies, that is manipulation or framing of a set of arguments by actors in order to achieve a certain goal, employed by policy stakeholders to influence policy makers and the public, via the news media. The network comparison is suggestive of greater cross-sector collaboration among policy opponents than proponents. Our analysis also suggests that, in seeking policy congruence, there may be a space for further cross-sector public health advocacy, by presenting arguments across policy debates in support of their counterparts. However, we recognise there are potential barriers to this model, not least resource constraints and the risk of mission creep for some public health advocates. Given the limited presence of academic institutions across the networks, and the importance of statements relating to evidence in polarising both networks, we suggest academics contribute more frequently on issues relating to evidence in policy

debates. Finally, we suggest that DNA could usefully be applied to compare other policy debates over time and across countries, in attempting to tackle NCDs.

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Author contributions

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Accepted Article

Table 1: Network comparisons

Network measures	MUP	SDIL
<i>Whole network</i>		
Total nodes	87	175
Total ties	617	2,463
Density	8%	8%
<i>Proponents coalition</i>		
Nodes	33	109
Total ties	365	1,900
Internal ties	287	1,739
External ties	78	161
Ties to opponents' coalition	60	155
Density	27%	15%
EI index	-0.57	-0.83
<i>Opponents coalition</i>		
Nodes	35	60
Total ties	301	715
Internal ties	231	558
External ties	70	157
Ties to proponents' coalition	60	155
Density	19%	16%
EI index	-0.53	-0.56

Table 2: Common stakeholders appearing in both networks

Politician / Political Party	Conservatives / Labour / Liberal Democrats Scottish Conservatives / Scottish Labour / Scottish Liberal Democrats / SNP / UK Government / UK Government Department of Health / HM Treasury
Government Advisory Body	Chief Medical Officer / Health Select Committee / Local Government Association
Health Professional / Professional Association	British Medical Association / Royal College of Physicians / Faculty of Public Health / NHS
Health Charity / Advocacy Group	
University / Academic Researcher	University of Birmingham
Think Tank / Commercial Researcher	Adam Smith Institute / Institute of Economic Affairs / Institute for Fiscal Studies / TaxPayers' Alliance
Retailer / Retail Association	Asda / Sainsbury's / Tesco / British Retail Consortium / Scottish Retail Consortium / Scottish Grocers Federation
Manufacturer / Associated Industry or Association	British Beer & Pub Association / JD Wetherspoon
International Health Organisation	
EU Member State or EU body	
Police	

Table 3: Most polarising concepts used and level of prominence in each debate

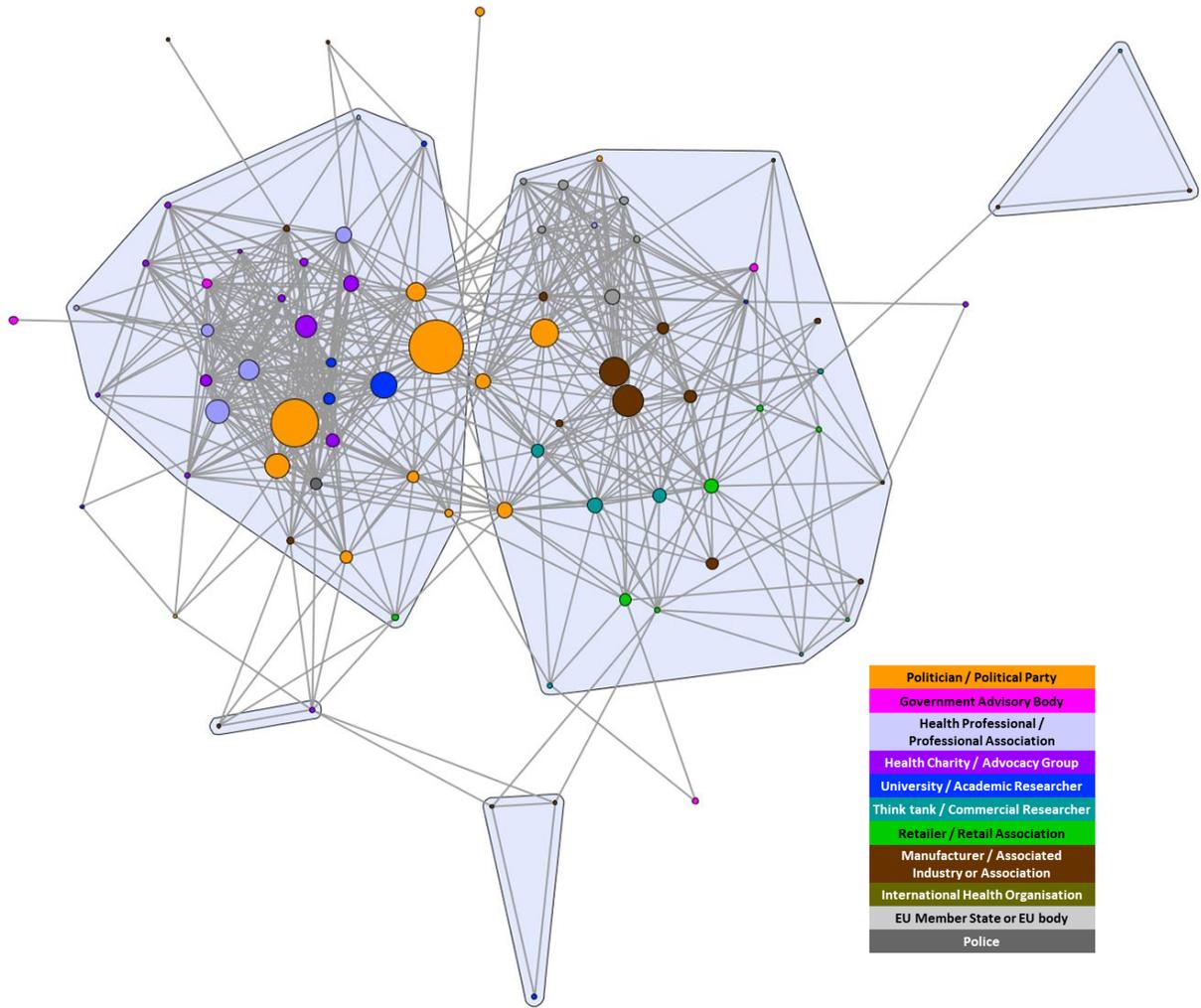
Rank as a polarising concept in the MUP debate		Prominence ¹	
		MUP	SDIL
Policy is supported by evidence	1	13	8
Responsibility deals with industry are ineffective	2	16	21
Policy will reduce consumption of commodity	3	1	3
<i>Policy will penalise responsible consumers²</i>	4	6	-
Policy is illegal	5	2	35

Rank as a polarising concept in the SDIL debate		Prominence	
		SDIL	MUP
Policy is supported by evidence	1	8	13
<i>Industry taking voluntary action²</i>	2	5	-
Policy will improve population health	3	4	3
Policy will reduce consumption of commodity	4	3	1
<i>Industry plays an active role in public health promotion²</i>	5	13	-

¹ Prominence indicates relative frequency of use in each debate (rank 1 = most frequently used)

² *Italics = concept unique to one network*

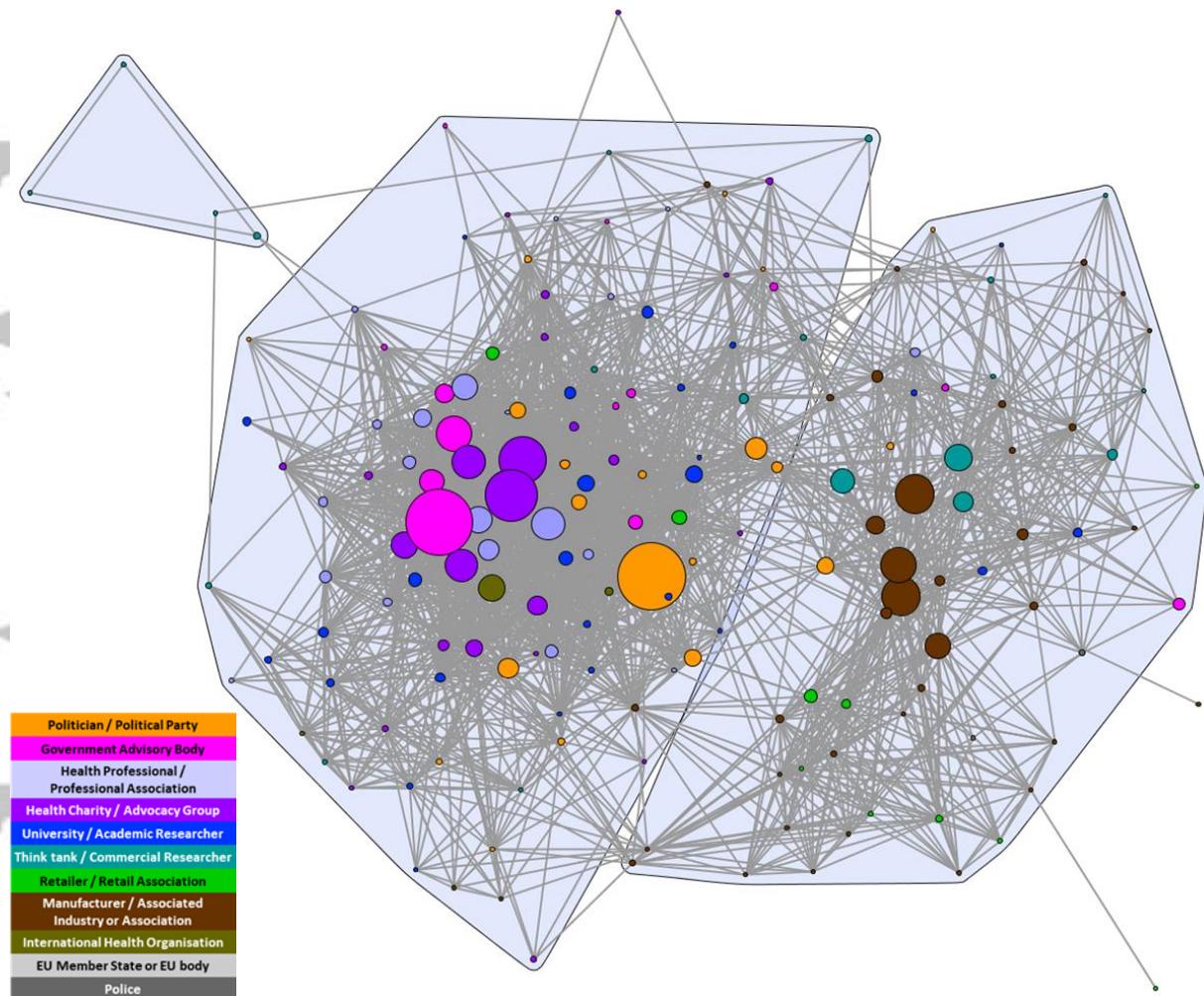
Figure 1: MUP DNA network showing stakeholder organisations colour coded by stakeholder type



Tie weight cut-off at 67th percentile, i.e.: <0.400 . Nodes sized by frequency in the debate.

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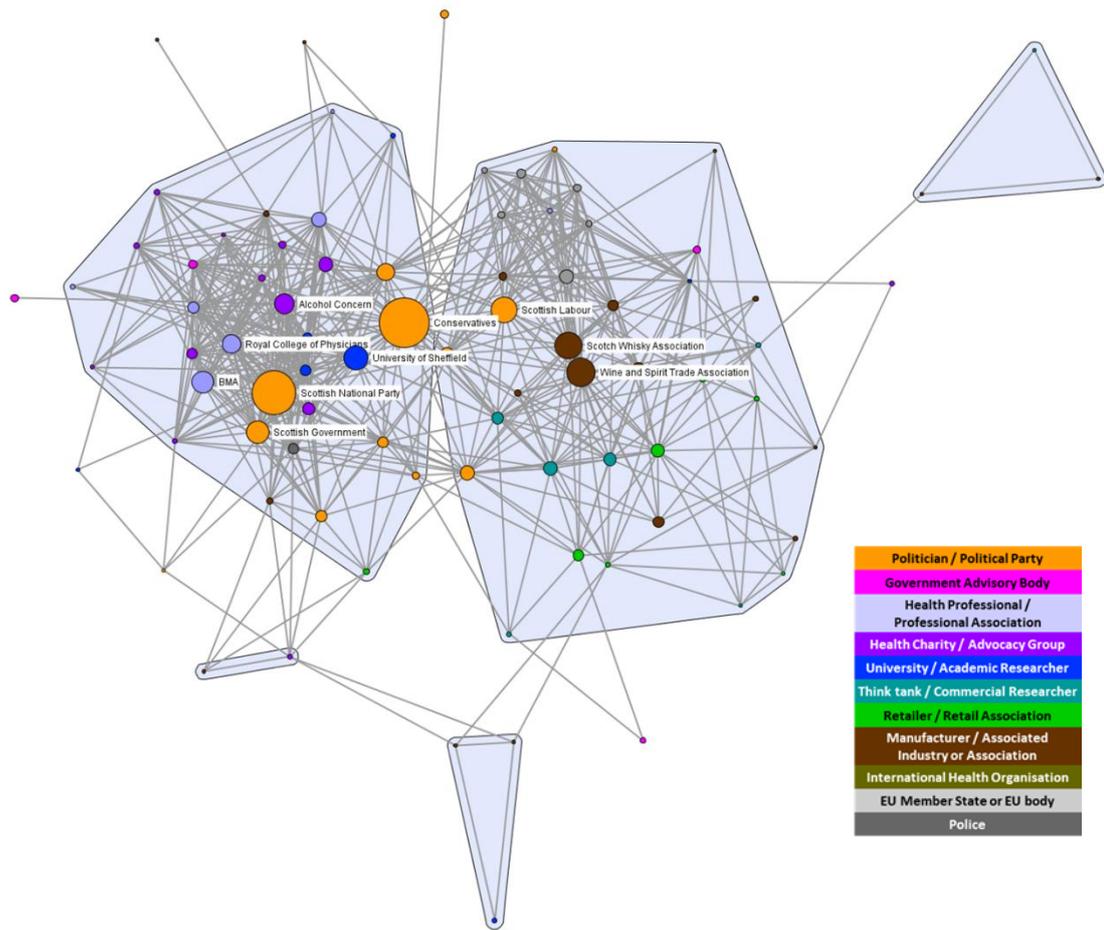
Figure 2: SDIL DNA network showing stakeholder organisations colour coded by stakeholder type



Tie weight cut-off at 67th percentile, i.e.: <0.333 . Nodes sized by frequency in the debate.

Accept

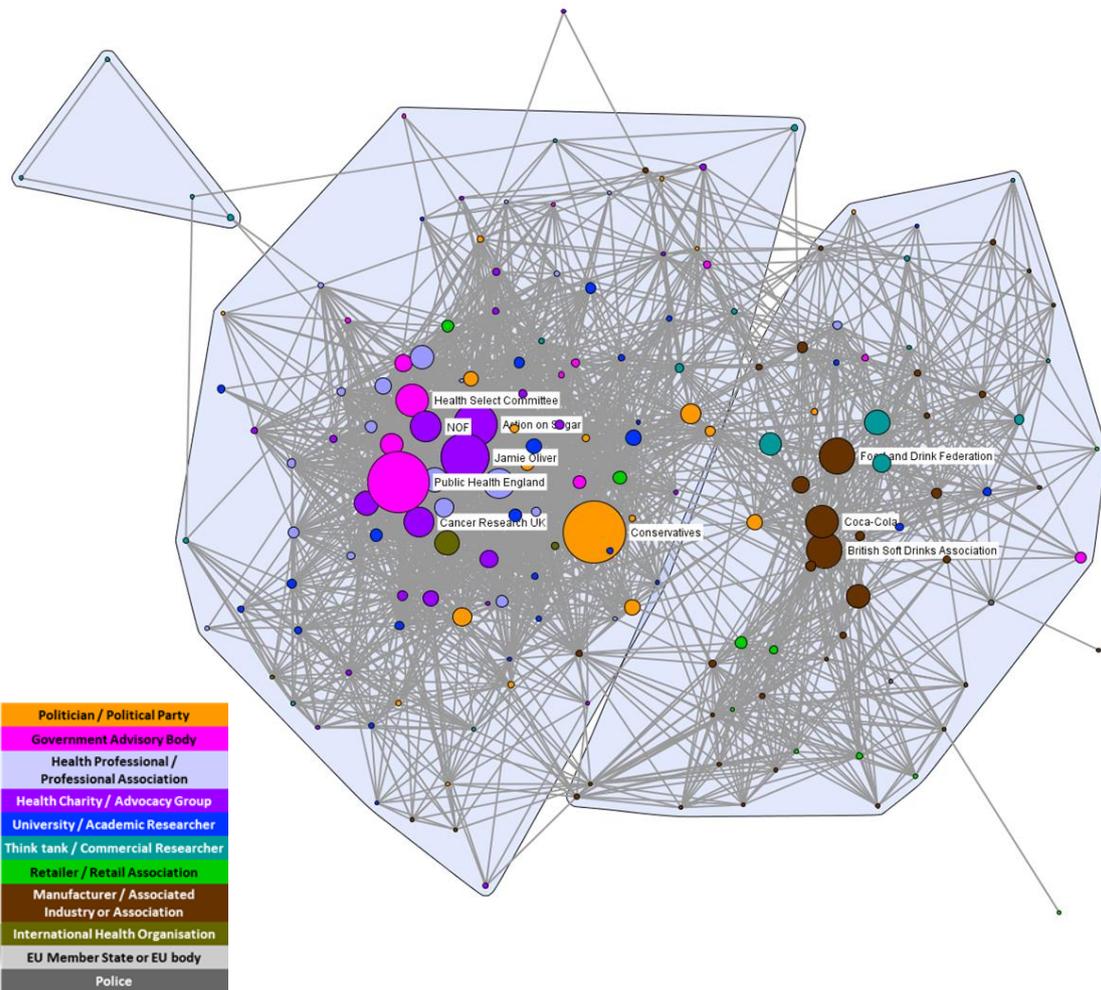
Figure 3: DNA network highlighting the 10 most active stakeholder organisations in the MUP debate



BMA = British Medical Association

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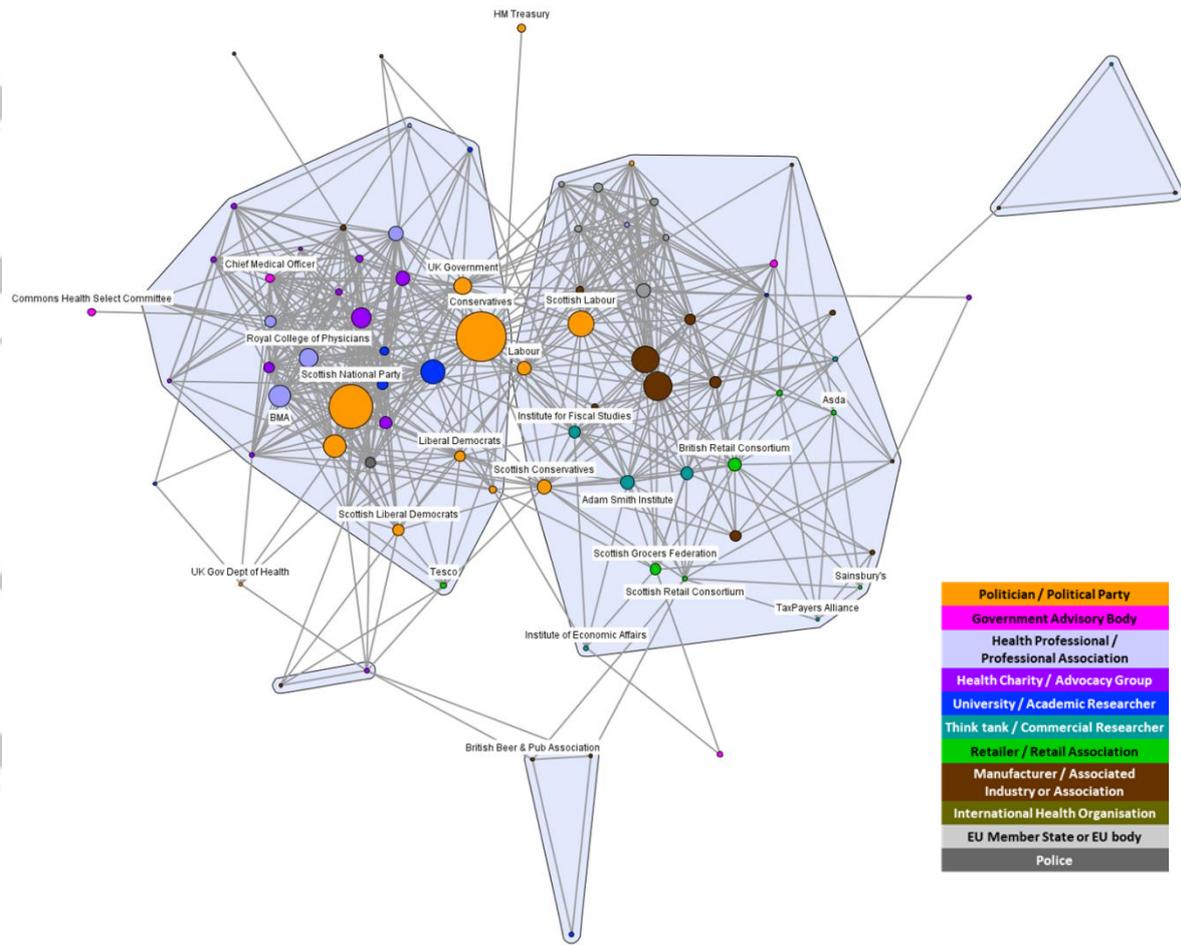
Figure 4: DNA network highlighting the 10 most active stakeholder organisations in the SDIL debate



NOF = National Obesity Forum

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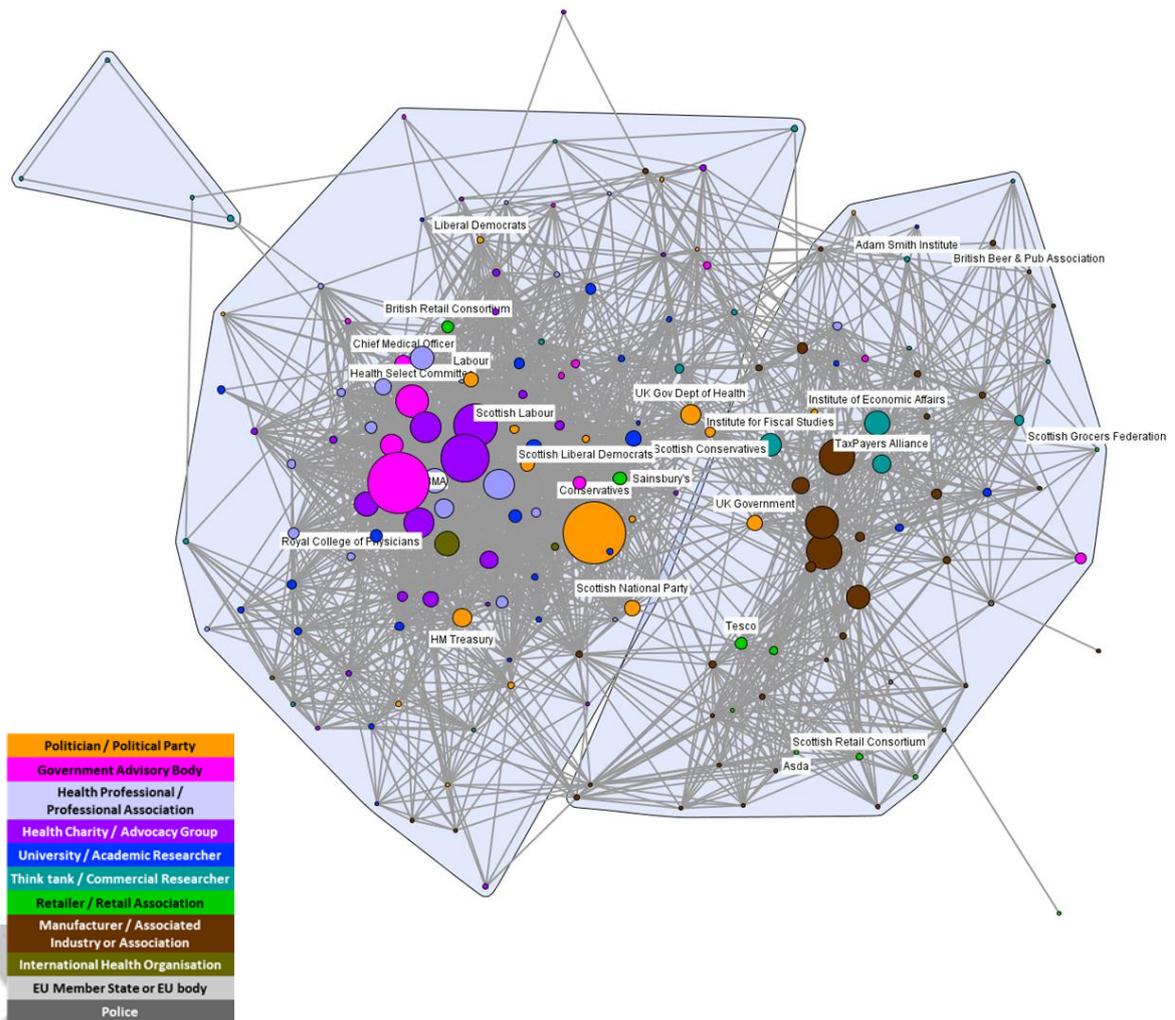
Figure 5: DNA network illustrating where stakeholder organisations common to both debates appear in the MUP network



BMA = British Medical Association

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Figure 6: DNA network illustrating where stakeholder organisations common to both debates appear in the SDIL network



BMA = British Medical Association

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