SOCIAL NETWORK ANALYSIS REPORT

Structured in-depth mapping and analysis of stakeholders, relevant for multi-actor and multi-stakeholder collaboration in tackling childhood obesity in EU

STOP, WP10, D10.2

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1 Introduction

The STOP (Science and Technology in childhood Obesity Policy), a Horizon 2020-funded project to tackle childhood obesity, aims at expanding and consolidating the multi-disciplinary evidence base upon which effective and sustainable policies can be built to prevent and manage childhood obesity[1]. The aim of the project is to find the most successful and effective approaches to reduce the incidence of childhood obesity, while helping children already affected by the disease to get the best support.

In addition to exploring some of the determinants of childhood obesity, the STOP project aims to expand and consolidate multidisciplinary evidence base upon which effective and sustainable policies can be built to prevent and manage childhood obesity. Among other objectives, the project aims to engage with relevant stakeholder groups in a systematic manner.

STOP WP10 aims at supporting the STOP policy work packages (four to eight) in understanding the stakeholders landscape in the area of nutrition physical activity and childhood obesity in EU and attitudes of different stakeholders groups towards the reviewed STOP obesity policies. Stakeholder platforms and individual stakeholders were identified by STOP project partners and examined according to the STOP Work Package (WP)10 stakeholder's identification methodology.

Furthermore, the goal of WP10 is to build a space in which multiple stakeholders could work together towards the common aim of improving children´s food and physical activity environments. To achieve this, NIJZ and WP10 partners have implemented several actions to date. Partners have conceptualised the welfare mix to identify stakeholders from different societal spheres, based on the obesity diagram framework[2].A guideline document to identify the stakeholders was prepared (Annex A).

In a parallel process, the European Public Health Association (EPHA) led the WP10 work on reviewing existing EU platforms engaging nutrition and physical activity stakeholders. The assessment covered seven main EU-level platforms which were described in accordance with five key characteristics, namely platform aims, working method, types of outputs, membership structure, and level of evaluation. Special attention was brought to the structure of platform membership. Furthermore, NIJZ and EPHA have prepared the comparative analyses of stakeholders' characteristics, comparing the characteristics of the individual stakeholders to the characteristics of the stakeholders involved in existing EU platforms.

WP10 aim is to bring together key actors from health, health enhancing physical activity, food and the nutrition sector, together with other relevant actors, to promote a shared understanding of the challenges and necessary joint actions to define and implement solutions to address childhood obesity.To be able to analyse the network of involved stakeholders and it's characteristics and aliances, stakeholders were invited to take part in the stakeholders´ survey. The results of the survey are presented in this Social Network Analysis Report.

2 Framework and Methodology

WP10 is one of three pillars of the overall structure of STOP and supports knowledge translation and increasing the overall impact of the STOP project. Among other outputs, STOP aims to provide a viable multi-stakeholder framework, based on effective communication and negotiation approaches[3], while translating the new knowledge and insights of STOP among academic research, public health application actions and policy decision making implementation spheres. Other research and implementation projects could benefit from and build on the experiences gathered in the described STOP multi-stakeholder framework.

STOP is enabling broad, inclusive, engaging, participatory and transparent stakeholder engagement in different processes, as it is important to incorporate the concepts and knowledge of different sectors into research and knowledge translation processes, and thereby increasing the relevance of the project outputs and recommendations.

Within STOP multi-stakeholder framework, specific characteristics of the multi-stakeholder relationships are explored, including[4] understanding the necessity for joint multi-stakeholder approaches in acting to decrease childhood obesity, readiness to collaborate with other of stakeholders categories, capacity and resources which stakeholders have available to cooperate with other stakeholder groups, stakeholders have the necessary skills and knowledge to improve existing multi-stakeholders cooperation, capacity and resources which stakeholders have available to cooperate with other stakeholder groups; stakeholders' willingness to work on a multi-sectoral initiatives with other stakeholder groups, exploring the level of trust (existing or needed) for a multi-stakeholders work among

[1] http://www.stopchildobesity.eu/

[2] https://doi.org/10.1016/S0140-6736(18)32822-8

[3] http://www.nijz.si/sites/www.nijz.si/files/publikacije-datoteke/vsevladni_pristop_za_zdravje_in_blaginjo_prebivalcev.pdf

[4] https://eurohealthnet.eu/sites/eurohealthnet.eu/files/publications/SFS%20Report%20final_23May2012%20%28002%29.pdf

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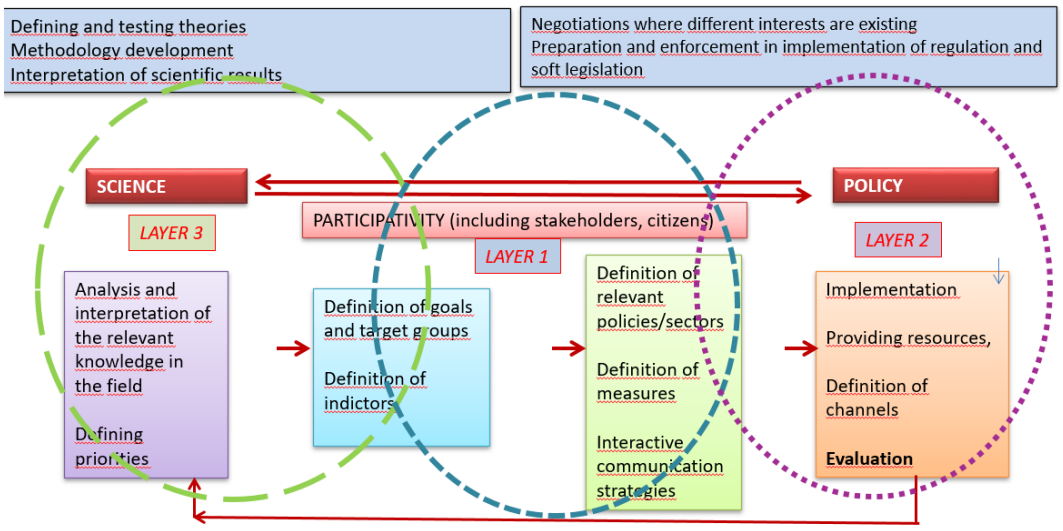
stakeholder groups; accountability in multi-stakeholder relationships[5] and governance issues, as well as influencing stakeholders groups categories, and influence of the drivers for action in different stakeholder groups.

Figure 1: Interlinks of policy and expert cycle, a specific know-how area, based in health in all policies (HiAP) approach with multidisciplinary competence, providing knowledge transfer; source NIJZ[3]



2.1 Stakeholders identification - Welfare triangle and obesity diagram

The list of stakeholders invited to the survey was jointly composed by the STOP project's WP 3 – 11 coordinators and other representatives. The idea was to address as many relevant stakeholders as possible and include not just the usual suspects but also those who those among stakeholders tend to be pushed aside. To ensure we successfully achieved this, we adopted a structured approach which identified the potential main drivers of obesity (via obesity diagram framework) on one hand and the spheres of society on the other (welfare mix).

Partners adapted and conceptualised the welfare mix for the needs of STOP to identify stakeholders from different societal spheres (Figure 2). Welfare mix is a concept that was originally developed to enable the identification of differences among the societal groups in the welfare states[6]. Welfare mix is now often used and adapted for the needs of understanding of different spheres of society in different contexts. For the purposes of the STOP project, we are using the welfare mix to identify as many relevant stakeholders in childhood obesity as possible.

[5] https://www.who.int/management/partnerships/accountability/AccountabilityHealthSystemsOverview.pdf
[6] Esping-Andersen G (1990) The three worlds of welfare capitalism. Princeton, New Jersey: Princeton University Press

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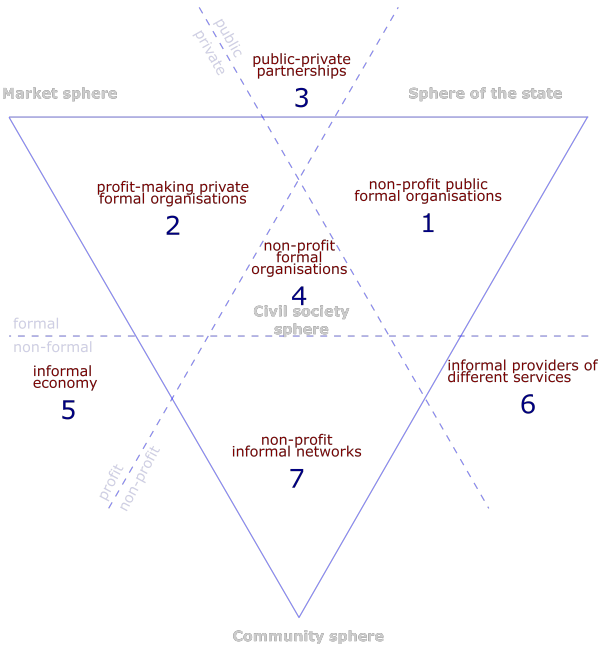
Figure 2: Welfare mix triangle (Esping-Andersen G, 1990)



The welfare mix typology is describing seven societal spheres, using three diversification characteristics of stakeholders in the case of STOP – profit/non-profit, formal/non-formal and public/private (description in Annex A). Some examples of the seven societal spheres (Figure 2) are listed below:

The welfare mix typology:

1. Non-profit public formal organisations (e.g., National Institute of Public Health: 1);
2. Profit making private formal organisations (we would not like to engage individual organisations but umbrella organisations like FoodDrinkEurope, which are borderline: 2, 4);
3. Public private partnerships (like to some extent European Innovation Partnership - EIP FOOD: 3);
4. Non-profit formal organisations (e.g., European Public Health Alliance: 4);
5. Informal economy (e.g., Ombudsman: 5);
6. Informal providers of different services (e.g., scouts: 6, 4);
7. Non-profit informal networks (e.g., associations of parents in local communities: 7, 4).

The obesity diagram[7] was the first conceptual model to show obesity as a consequence of complex adaptive systems. Similarly to the socio-ecological model, its structure is centred at the individual level. While this is helpful in explaining differences in obesity drivers among individuals, it does not address the evolution of the obesity epidemic nor it's causality neither it takes the impact of the global syndemic of obesity, undernutrition and climate change into account. In spite of the above mentioned shortages of the obesity diagram, the concept was useful for the STOP stakeholders identification as it conceptualise comprehensively the content fields, relevant for childhood obesity (Annex A).

Active collaboration with WP3, WP4, WP5, WP6, WP7, WP8 and WP9 leaders was undertaken to identify key stakeholders in their respective work packages. Stakeholders who were viewed to be particularly under-represented in this process were sought through more direct channels (especially stakeholders from the transport sector and built environments, where project partners from WP7 were addressing the stakeholders via their professional fomal and non-formal contacts).

Following this, a number of relevant organisations were identified as key stakeholders (and/or right-holders, as the ones who primarily benefit from the policies) on the theme of childhood obesity. On behalf of the STOP project, they were invited to engage with the project consortium and partners aimed at informatively exploring the most effective ways to tackle childhood obesity.

[7] https://doi.org/10.1016/S0140-6736(18)32822-8

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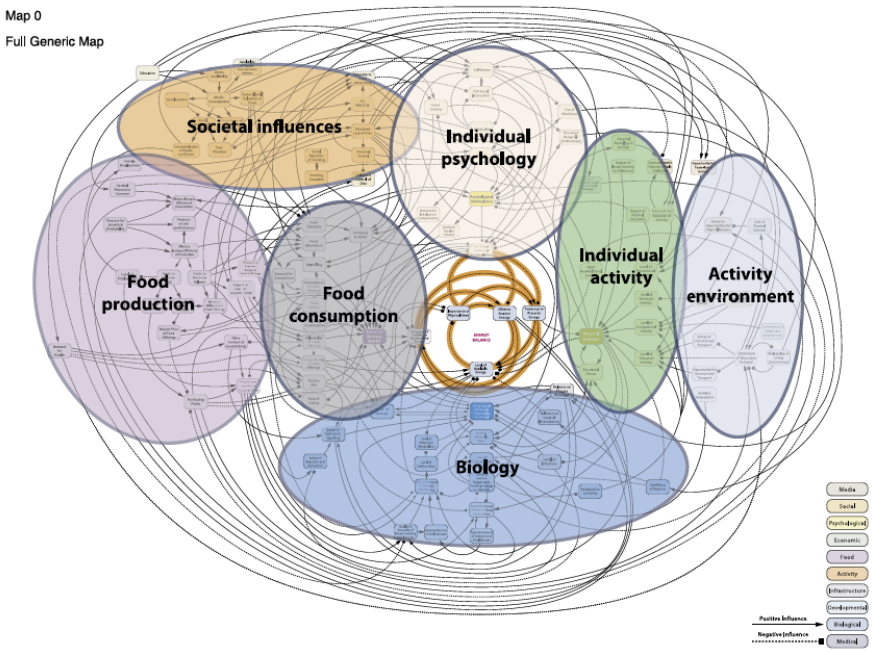
Figure 3: Obesity system influence diagram [7]



2.2 Questionnaire and stakeholders survey

The data presented in this report is based on web survey, conducted among stakeholders organizations that have a direct or indirect links with childhood obesity. Survey and the corresponding questionnaire were based on a number of previous experiences, such as DG SANCO Policies on marketing food and beverages to children - POLMARK[8] project (2008/09) and DG EMPL Active and Healthy Ageing for Slovenia - AHA.SI[9] project (2014/16). Since implemented in STOP, the stakeholders methodology was further upgraded in Alpine Space Transnational Governance of Active and Healthy Ageing - ASTAHG[10] project (2018/21).

Data gathering for the description of the stakeholders networking requires a specific questionnaire which aims at diversifying stakeholders' roles and positions, and not merely describe them. Questions are triggering stakeholders to decide for one or the other response option within individual question, positioning them in different clusters. The participation of the WP4 – WP8 partners in the process of the questionnaire composition was of the upmost importance as they knew all the details in stakeholders positions and attitudes towards individual explored STOP policy measures to be addressed in the area of childhood obesity prevention. Together with the WP4-8 leaders, guidelines were developed to help identify the relevant content policy topics and to support the composition of the differentiation statements (Annex B).

The survey questionnaire (Annex C) was composed of:

- the stakeholders' identification questions (sector, public-private, formal-nonformal, profit-nonprofit; position of respondent);
- questions for identification of the stakeholders focal interests (food reformulation, food labeling, food taxation, marketing of foods; social marketing campaigns; development of measures in the private sector to contribute to tackling childhood obesity; measures to increase physical activity in children; measures to treat childhood obesity in the health sector);
- questions around the characteristics of the decision-making processes in reversing obesogenic environments (means of influence, used and promising);
- attributes of multi-stakeholder collaboration in decreasing childhood obesity;

[8] https://webgate.ec.europa.eu/chafea_pdb/assets/files/pdb/2007325/2007325_deliverable_3_review_of_regulations_in_eu.pdf

[9] http://staranje.si/

[10] https://www.alpine-space.eu/projects/astahg/en/home

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- question on how powerful stakeholders perceive the position of their organisation in the policy decision-making processes regarding childhood obesity.

Stakeholders were invited to express their attitudes towards specific statements in the form of a questionnaire (Annex C). The data was gathered through the welfare mix triangle approach with the support of the 1ka online tool[11]. Likert scales with 5 to 7 agreement options were used.

The stakeholders´ survey was tested by a few selected EU stakeholders and national stakeholders in Slovenia. To ensure the confidentiality of the survey, it was then piloted by the Finish National Institute (THL) on a sample of the Finnish stakeholders, and for the private sector by selected members of the Slovene Chamber of Commerce and Industries. The stakeholders´ questionnaire was finalised by mid-February 2019.

The invitation letter was composed and tested with all the relevant project partners, EC (DG SANTE) and some interested Member States (Finland, France, Slovenia). The final survey was circulated between the end of February and early April 2019, addressing the identified stakeholders, with the respect of GDPR. Several reminders were sent out to the identified stakeholders, to general e-mail addresses, in line with GDPR. The status of the survey was checked on daily basis and four intermediate response reports were prepared to inform partners on the level of the stakeholders' engagement. Based on the intermediate response results partners were encouraged to address targeted stakeholders groups additionally, again in line with GDPR. DG Sante was following the process and supported it with the reminders which were were at far most potential driver for increased response when sent out.. The Web survey closed in early April, with a total of 184 useful responses, exceeding well the initial goal of collecting 100 responses.

It is important to notice that GDPR was implemented just a few months after the beginning of the project, when STOP consortium had started working on the development of the stakeholders survey. To ensure alignment with GDPR, in-depth exploration on how to approach stakeholders was conducted in the first months of the project. Due to the GDPR requirements, the collection of individual stakeholders upon their initial identification (anonymisation of the data was initially planed in further steps for the analysis) was not implemented. The workplan for the stakeholders survey was therefore adapted accordingly. Stakeholders were identified less precisely with the help of the welfare triangle and obesity diagram. While the level of identification of STOP stakeholders is less advanced than initially planned, project partners in WP10 anyway provided adequate results to enable the consortium the implementation of the further steps, planned in WP10.

2.3 Statistical methods of work

This report provides an overview of the collected data, mainly composed of summary tables and descriptive statistics of obtained variables. When appropriate, statistical significance of differences between compared mean values were tested using analysis of variance (ANOVA). Section 3.3 explores the reduction of data dimensions using principal component analysis and Ward's clustering.

Section 3.4 introduces agreement charts as a tool for sounding the attitudes of stakeholders toward surveyed topics (Survey question Q8, Annex C). Agreement charts are graphical representations of distances among stakeholders according to their responses to surveyed topics. The same distances are used to assign stakeholders to clusters, which are described according set of basic descriptive variables.

It is important to notice that due to a small number of cases, some of the descriptions of obtained clusters are only informative. This is the consequence to data splitting and survey design focused on participation of stakeholders on specific topics.

We focused on the clustering stakeholders according to the topic of their engagement (Survey question Q7, Annex C). The clustering was performed using 2-Mode blockmodeling, one of the clustering methods developed in social network analysis [12].

3 Results with discussion

3.1 Characteristics of the stakeholders involved

The majority of organisations who participated in the survey fall in the formal part of the welfare triangle, mainly coming from non-profit (84,7 %) and profit (15,3 %) sectors. The coverage of stakeholders is presented in Table 1.

[11] https://www.1ka.si/d/en

[12] https://www.cs.cmu.edu/~eairoldi/nets/public/dore.bata.ferl.2004.pdf

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Table 1: Coverage of welfare triangle

			Freq
Public	Profit	Formal	7
Private	Profit	Formal	16
Public-private	Profit	Formal	2
Public	Non-profit	Formal	86
Private	Non-profit	Formal	32
Public-private	Non-profit	Formal	20
Public	Profit	Informal	0
Private	Profit	Informal	0
Public-private	Profit	Informal	0
Public	Non-profit	Informal	1
Private	Non-profit	Informal	0
Public-private	Non-profit	Informal	1

One of the objectives of the STOP project is to involve a broad spectrum of stakeholders. From a sectoral perspective, the majority of represented organisations operate in Health, Research and Education sectors (Table 2). No one identified as mainly operating in the Environment, Finance or Banking investment and Labour sectors.

Table 2: Q1 - Please indicate which sector your organisation mainly operates in

response	frequency
Research	35
Health	95
Education	18
Agri-food chain	10
Social affairs	4
Environment	0
Transport	5
Built environment	2
Physical activity and sports	3
Finance or banking investment	0
Labour	0
Other:	12

Stakeholders operating in Agrifood-chain were asked to further specify their field of operation. A majority mainly operate in food processing industry (6), retail (2) and others (2) were also represented. No stakeholders from primary agricultural production and catering field of operation were identified. Regarding environment, STOP is not emphasizing the links between obesity and climate food and thus not addressing environmental stakeholders.

Additionally, stakeholders were asked how they perceived the power of their organisation in the policy decision-making processes regarding childhood obesity (Table 3). It is indicated that stakeholders perceive their position to be more powerful if they work at regional and national level and less powerful when working at higher levels.

Table 3: How powerful do you perceive the position of your organisation in the policy decision-making processes regarding childhood obesity?

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	21%	29%	35%	12%	6%	72
National level	16%	41%	27%	13%	6%	70
European level	36%	43%	14%	6%	0%	69
International/Global level	49%	36%	10%	4%	0%	69

3.2 Identification of organisations focal interests

One of the key objectives of the survey was to identify focal interests of participating stakeholders. The main question used for interests identification was *"Please, indicate the relevance of the following areas or activities, listed below, for your organisation. Some of the topics and statements might be irrelevant for your organisation, in such case please mark that option."* It should be noted that respondents were asked to consider the relevance of these areas specifically with regards to their organisation. This is particularly relevant as a specific organisation might not work or be involved in the areas mentioned. Respondents were able to answer on five item measurement scale indicating that certain topic was irrelevant (1), of low relevance (2), relevant to some extent (3), relevant (4) or very relevant (5). The five areas are based on the content of the following five specific WPs of the STOP project:

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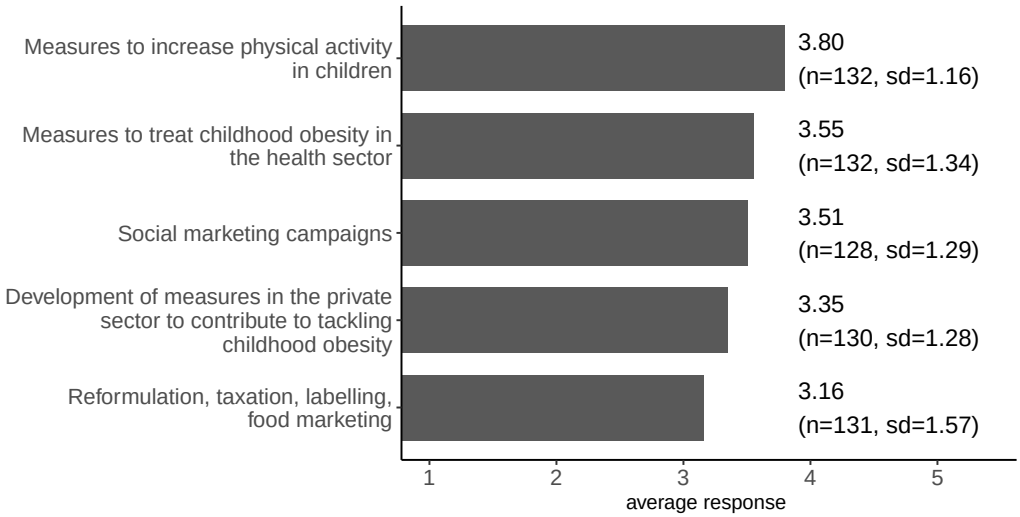
1. Reformulation, taxation, labelling, food marketing (WP4)
2. Social marketing campaigns (WP5)
3. Development of measures in the private sector to contribute to tackling childhood obesity (WP6)
4. Measures to increase physical activity in children (WP7)
5. Measures to treat childhood obesity in the health sector (WP8)

Based on the analysis of the included stakeholders, it seems like most are interested in physical activity areas/activities(Figure 4).

Figure 4: Please, indicate the relevance of the following areas or activities, listed below, for your organisation:



The following sub-sections represent results of the stakeholder survey regarding stakeholders' focal interest by WP areas.

3.2.1 WP4 – Regulation and fiscal policies

Questions covered in this section address topics of reformulation, taxation, labelling and food marketing.

First, we asked stakeholders for their opinion regarding the success of policies, measures and activities in changing obesogenic environments to prevent childhood obesity as part of comprehensive approach. Among the suggested policy options, *food labeling* and *food marketing* were identified and perceived by stakeholders as most successful. On the other hand, food taxation was perceived as least successful.

Table 4: In the opinion of your organisation, how successful are the following policies, measures and activities in changing the obesogenic environment to prevent childhood obesity, as a part of comprehensive approach?

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Valid	avg	sd
Food taxation	13 (12%)	15 (14%)	12 (11%)	22 (20%)	48 (44%)	110 (100%)	3.7	1.4
Food labelling	4 (4%)	10 (9%)	11 (10%)	22 (20%)	63 (57%)	110 (100%)	4.2	1.2
Food reformulation	4 (4%)	6 (6%)	14 (13%)	31 (30%)	50 (48%)	105 (100%)	4.1	1.1
Food marketing	7 (6%)	8 (7%)	10 (9%)	21 (19%)	64 (58%)	110 (100%)	4.2	1.2

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Table 5: Mean values of 'successfulness of policies' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
Food taxation	4	3.5	3.1	.	3.1	3.8	.	3.7 (110)
Food labelling	4.2	4.3	4.1		4	4.2		4.2 (110)
Food reformulation	4.1	4.3	3.8		4.1	4.1		4.1 (105)
Food marketing	4.3	4.2	3.8		4.1	4.2		4.2 (110)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

The stakeholders were then asked which approach would be most promising to ensure the successful implementation of the previously mentioned policies, measures and activities. Stakeholders identified *legislation* as the perceived most promising approach for successful implementation of the *food taxation, food labeling* and *food marketing policies*. For successful implementation of the food reformulation policies, *establishing guidelines or standards* was identified and perceived as the best approach. However, additional research was perceived and highlighted as least successful for all above-mentioned policies, measures and activities.

Table 6: According to your organisation, which of the following approaches would be most promising for successful implementation of the policies, measures and activities, listed below, in changing the obesogenic environment to prevent childhood obesity?

	Legislation	Establishing guidelines or standards	Supporting collaborative action	Fiscal measures	Additional research	Valid n
Food taxation	66%	15%	11%	48%	11%	61
Food labelling	64%	44%	16%	8%	5%	75
Food reformulation	33%	47%	36%	18%	15%	73
Food marketing	54%	46%	23%	14%	5%	74

Regarding *labeling*, stakeholders perceived labels providing an overall nutritional grade more effective than labels providing nutrient-specific information in *supporting healthier consumer choice*. They believed labels with nutrient-specific information in *encouraging companies price reactions* and in *encouraging companies to reformulate products* to be slightly more effective than the ones previously mentioned.

Table 7: Labels which provide an overall nutritional grade are more effective than labels which provide nutrient specific information in:

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Valid	avg	sd
supporting healthier consumer choice	6 (10%)	0 (0%)	10 (17%)	16 (28%)	26 (45%)	58 (100%)	4	1.3
encouraging companies price reactions	5 (9%)	3 (5%)	25 (44%)	13 (23%)	11 (19%)	57 (100%)	3.4	1.1
in encouraging companies to reformulate product	4 (7%)	4 (7%)	18 (32%)	10 (18%)	21 (37%)	57 (100%)	3.7	1.2

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Figure 5: Labels which provide an overall nutritional grade are more effective than labels which provide nutrient specific information in:

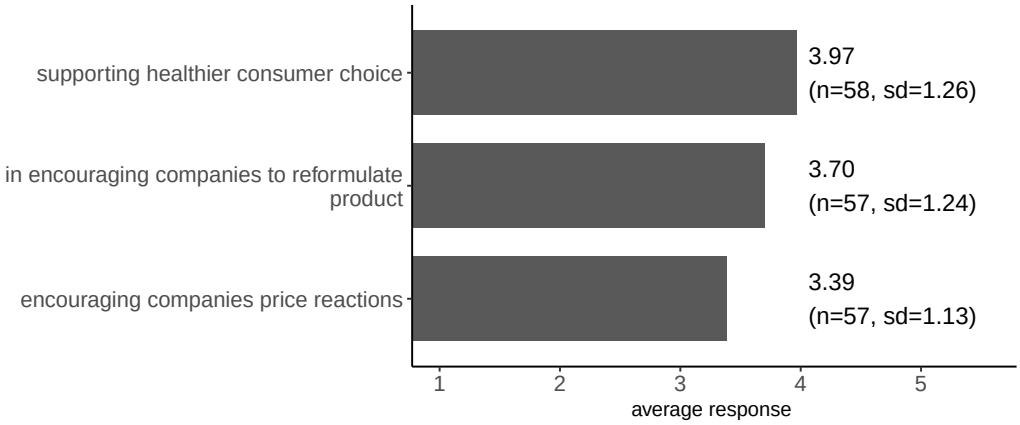


Table 8: Mean values of 'effectiveness of labels' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
supporting healthier consumer choice	4	4	3.8		4	4		4 (58)
encouraging companies price reactions	3.7	3.1	3.3		3.7	3.3		3.4 (57)
in encouraging companies to reformulate product	3.9	3.7	3.2		3.6	3.7		3.7 (57)

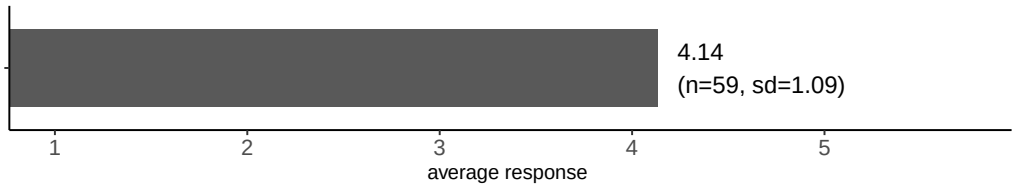
$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

Furthermore, stakeholders agree (somewhat agree, agree) that labelling systems should include recommended portion sizes.

Table 9: Labelling system should integrate recommended portion sizes.

Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Valid	avg	sd
1 (2%)	5 (8%)	10 (17%)	12 (20%)	31 (53%)	59 (100%)	4.1	1.1

Figure 6: Labelling system should integrate recommended portion sizes.



Stakeholders answered that **marketing** of food high in fat, sugar and salt, targeted to children should be restricted to children up to 18 years (49%). Only 7% believed that that marketing should be restricted to children up to 8 years old.

Table 10: Marketing of food high in fat, sugar and salt, targeted to children should be restricted to children up to:

18 years	16 years	14 years	12 years	10 years	8 years	Valid n
28 (49%)	7 (12%)	9 (16%)	6 (11%)	3 (5%)	4 (7%)	57 (100%)

Overall, stakeholders agree that for food groups which are major contributors to population intakes, composition

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targets/standards, based on best practice, should be established for the content of *saturated fat in certain foods, sodium in certain food and added/free sugar in certain foods.*

Table 11: For food groups which are major contributors to population intakes, composition targets/standards, based on best practice, should be established for the content of:

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Valid	avg	sd
of saturated fat in certain foods.	7 (12%)	2 (4%)	7 (12%)	8 (14%)	32 (57%)	56 (100%)	4	1.4
of sodium in certain foods.	7 (13%)	0 (0%)	5 (9%)	6 (11%)	37 (67%)	55 (100%)	4.2	1.4
of added/free sugar in certain foods	6 (11%)	0 (0%)	4 (7%)	3 (5%)	42 (76%)	55 (100%)	4.4	1.3

Table 12: Mean values on 'labelling system' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
of saturated fat in certain foods.	4.3	3.8	3.6		3.3	4.1		4 (56)
of sodium in certain foods.	4.7	3.9	3.6	*	3.2	4.4	*	4.2 (55)
of added/free sugar in certain foods	4.7	4	4		3.7	4.5		4.4 (55)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

We then explored the topic of taxation. In general, stakeholders believe that a tax proportional to the nutrient content of a product is more effective than a tax based on the value of a product (*to support consumers in purchasing healthier options, to encourage companies price reactions and to encourage companies to reformulate product*).

Table 13: Tax proportional to the nutrient content of product is more effective than the tax based on the value of product:

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Valid	avg	sd
to support consumers in purchasing healthier options.	6 (10%)	6 (10%)	7 (12%)	12 (20%)	28 (47%)	59 (100%)	3.8	1.4
to encourage companies price reactions	3 (5%)	2 (4%)	18 (32%)	12 (21%)	22 (39%)	57 (100%)	3.8	1.1
to encourage companies to reformulate product	3 (5%)	3 (5%)	12 (21%)	14 (24%)	26 (45%)	58 (100%)	4	1.2

Table 14: Mean values of 'tax basis' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
to support consumers in purchasing healthier options.	4.2	3.7	3.1		3.8	3.9		3.8 (59)
to encourage companies price reactions	4.1	3.8	3.4		3.8	3.9		3.8 (57)
to encourage companies to reformulate product	4.3	3.9	3.5		3.6	4.1		4 (58)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

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Regarding reformulation, taxation, labelling and food marketing, stakeholders also highlighted:

- *"The need to consider these simultaneously with other policies (eg. school policy);*
- *Before enhancing label information, better health literacy is needed;*
- *The need to develop approaches that contribute to reduced social inequities;*
- *Develop a universal labelling system – clearer labelling;*
- *Valuable lessons from other sectors can be learned, eg. from tobacco successes; comprehensive strategies, including many interventions at many levels to comprehensively address the affordability, availability and acceptability;*
- *Shift from industry self-regulation to more government-led regulation;*
- *Tax should be inversely proportional to the nutrient content."*

3.2.2 WP5 – Consumer Behaviour: Creating Demand for Healthy Lifestyles

Questions covered in this section address topics of creating demand for healthy lifestyles.

Almost half (47%) the stakeholders believe that social marketing campaigns are successful, as part of a comprehensive approach, in changing obesogenic environments to prevent childhood obesity. Only 3% of respondents disagreed with this statement.

The most promising approaches for successful implementation of social marketing campaigns focused on changing obesogenic environments to prevent childhood obesity, perceived by stakeholders, is supporting *collaborative action* (63%) and *Establishing guidelines or standards* follows (34%).

Table 15: In the opinion of your organisation, how successful are the following policies, measures and activities in changing the obesogenic environment to prevent childhood obesity, as a part of comprehensive approach?

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Valid	avg	sd
Social marketing campaigns	3 (3%)	10 (9%)	14 (13%)	31 (28%)	52 (47%)	110 (100%)	4.1	1.1

Table 16: Mean values of 'successfulnes of policies' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
Social marketing campaigns	4.1	4.1	4.1		4.1	4.1		4.1 (110)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

Table 17: According to your organisation, which of the following approaches would be most promising for successful implementation of the policies, measures and activities, listed below, in changing the obesogenic environment to prevent childhood obesity?

	Legislation	Establishing guidelines or standards	Supporting collaborative action	Fiscal measures	Additional research	Valid n
Social marketing campaigns	18%	34%	63%	8%	15%	71

Furthermore, stakeholders believed that social marketing campaigns to reduce childhood obesity were most successful if they first targeted physical activity options in the environment and then education programmes and approaches. However, disagreement was found regarding other actions (*target social media use among children, target nutrition composition of products, target self-confidence and body image, target sleep patterns of children and target portion sizes*).

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Figure 7: Social marketing campaigns for reducing childhood obesity are more successful if they:

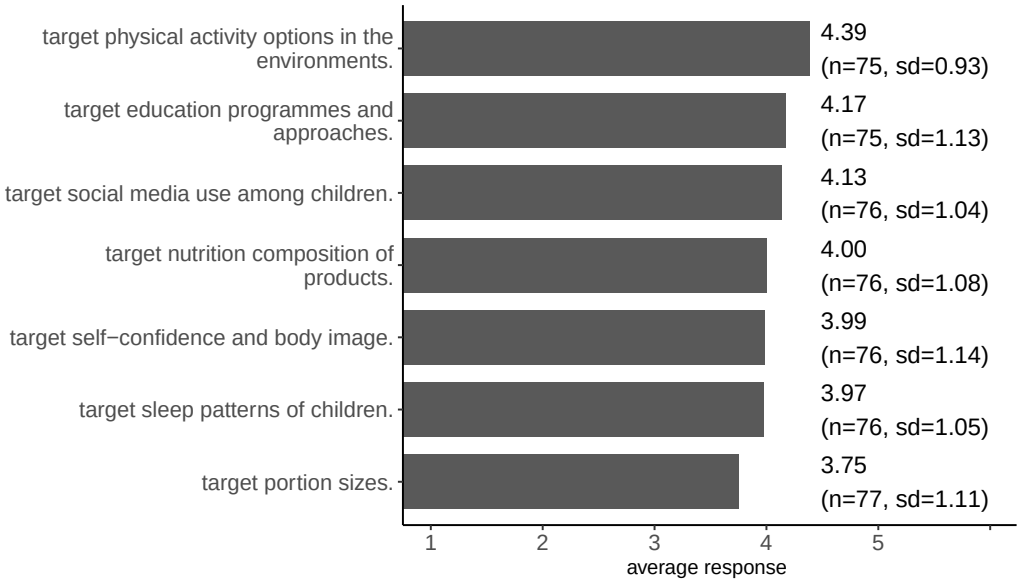

Table 18: Mean values on 'social marketing campains' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
target portion sizes.	4	3.7	3.1	*	3.9	3.7	*	3.8 (77)
target nutrition composition of products.	4.1	4.1	3.3	.	4	4	.	4 (76)
target physical activity options in the environments.	4.5	4.5	3.8	.	4.7	4.3	.	4.4 (75)
target sleep patterns of children.	4.1	4	3.4		4.2	3.9		4 (76)
target education programmes and approaches.	4.2	4.2	3.9		4.5	4.1		4.2 (75)
target social media use among children.	4.1	4.3	3.6		4.5	4.1		4.1 (76)
target self-confidence and body image.	4.1	4.2	3.4		4.3	3.9		4 (76)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

Regarding social marketing campaigns for reducing childhood obesity, stakeholders also highlighted:

- *"The need to consider which social marketing channels we use for public health;*
- *Focus should be on wellbeing and good life (rather than prevention and comfort removal);*
- *Family involvement needed;*
- *Need for nutritional education;*
- *The need for different approaches, depending on the targeted audience;*
- *Social media campaigns can't replace legislations;*
- *The role of health promotion campaigns in comparison to social marketing campaigns;*
- *More resources for younger generations (school lessons for 12 – 18 years: it is not social marketing, it is education);*
- *The need to show the public the importance of the commercial determinants of health."*

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3.2.3 WP6 – Healthy food and food choice environments

Questions covered in this section address topics of healthy food and food choice environments.

Based on a scale of 1 to 5, stakeholders' responses revealed an average score of 4 - stakeholders believe that monitoring business actions and performance are successful in changing the obesogenic environment to prevent childhood obesity as a part of comprehensive approach. Only 5% of respondents disagree with this statement.

Stakeholders have different opinions and beliefs about the most promising approach for successful implementation of monitoring business actions and performance in changing the obesogenic environment to prevent childhood obesity. As seen in Table 20, three options were identified as most promising: legislation (36%), establishing guidelines or standards (32%) and supporting collaborative action (29%). Fiscal measures and additional research were valued equally (20%).

Table 19: In the opinion of your organisation, how successful are the following policies, measures and activities in changing the obesogenic environment to prevent childhood obesity, as a part of comprehensive approach?

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Valid	avg	sd
Monitoring business actions and performance	5 (5%)	4 (4%)	22 (21%)	29 (28%)	43 (42%)	103 (100%)	4	1.1

Table 20: According to your organisation, which of the following approaches would be most promising for successful implementation of the policies, measures and activities, listed below, in changing the obesogenic environment to prevent childhood obesity?

	Legislation	Establishing guidelines or standards	Supporting collaborative action	Fiscal measures	Additional research	Valid n
Monitoring business actions and performance	36%	32%	29%	20%	20%	59

Table 21: Mean values of 'successfulnes of policies' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
Monitoring business actions and performance	3.9	4.3	3.7		3.6	4		4 (103)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

Entities in agri-food chain are performing different actions to support the creation of healthy food environments. Stakeholders were asked to express their opinion on the focus of business impact assessments. They mostly agree that business impact assessment of actions supporting the creation of healthy food environments should focus mainly on the *transparency of actions and operations* (average response = 4,5) and less on *performance in core business indicators* (average response = 3,5).

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Table 22: Entities in agri-food chain are performing different actions in supporting creation of healthy food environments. Business impact assessment of those actions should concentrate most to the:

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Valid	avg	sd
performance in core business indicators	6 (8%)	1 (1%)	32 (44%)	15 (21%)	19 (26%)	73 (100%)	3.5	1.1
established processes for implementing commitments	3 (4%)	0 (0%)	12 (17%)	33 (46%)	24 (33%)	72 (100%)	4	0.9
established monitoring and evaluation of commitments implementation.	3 (4%)	0 (0%)	8 (11%)	20 (28%)	41 (57%)	72 (100%)	4.3	1
transparency of actions and operations.	2 (3%)	0 (0%)	5 (7%)	15 (21%)	51 (70%)	73 (100%)	4.5	0.9

Table 23: Mean values on 'actions in supporting creation of healthy food environments' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
performance in core business indicators	3.4	3.8	3.4		3.6	3.5		3.5 (73)
established processes for implementing commitments	4	4.2	3.9		4.1	4		4 (72)
established monitoring and evaluation of commitments implementation.	4.3	4.5	4.1		4.4	4.3		4.3 (72)
transparency of actions and operations.	4.7	4.6	4.1		4.9	4.5		4.5 (73)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

In this section stakeholders were additionally asked for their opinion on the role of the possible roles of food industry. Most stakeholders opted for the engagement of industry in *obesity prevention* (average response = 4,0). However, *to support professional and/or scientific events and awarding* was the least popular answer.

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Figure 8: The role of the food industry is:

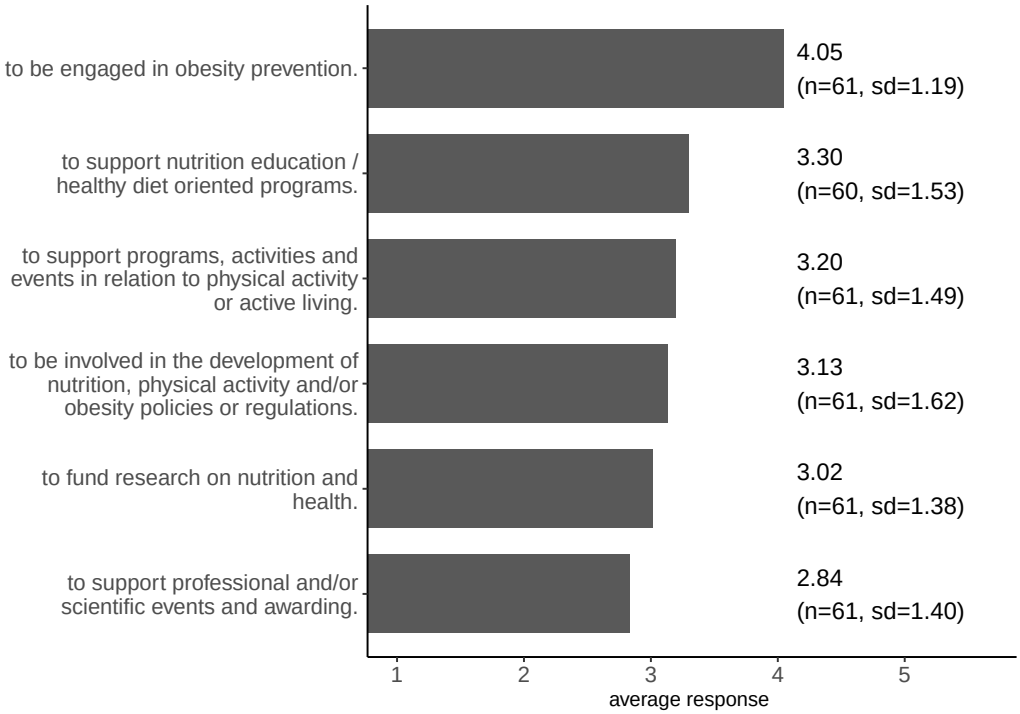

Table 24: Mean values on 'the role of industry' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
to fund research on nutrition and health.	3.1	3	3		4.1	2.8		3 (61)
to support professional and/or scientific events and awarding.	2.8	2.9	2.9		3.6	2.7		2.8 (61)
to support nutrition education / healthy diet oriented programs.	3.2	3.6	3.1		4.4	3.1		3.3 (60)
to support programs, activities and events in relation to physical activity or active living.	3.2	3.5	2.9		4.1	3		3.2 (61)
to be involved in the development of nutrition, physical activity and/or obesity policies or regulations.	3.3	3.1	2.9		4.1	2.9		3.1 (61)
to be engaged in obesity prevention.	4.2	4	3.8		4.8	3.9		4 (61)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

Regarding business impact assessments, different stakeholders also stressed the following issues:

- *"Conflict of interest excludes the food industry in research/education programmes;*
- *These actions should not be an excuse for not adopting stricter legislations (self commitments by industry are not effective);*
- *Industry should focus on the development and reformulation on their own;*
- *Slowly engage individuals to make healthier food choices without impacting their revenue;*

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- *The role of the food industry is to produce products which consumers want and need;*
- *Business and educational campaigns should be seperated (althrough food industry contribute financially);*
- *Corporations to pay attention on keeping jobs."*

3.2.4 WP7 – Physical activity

Questions covered in this section address topics of physical activity. We mainly focused on the promotion of physical activity, physical activity in schools and active transport among children. Stakeholders believed that, as part of a comprehensive policy package, *measures to promote physical activity in schools* are most successful in changing the obesogenic environment to prevent childhood obesity.

Table 25: In the opinion of your organisation, how successful are the following policies, measures and activities in changing the obesogenic environment to prevent childhood obesity, as a part of comprehensive approach?

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Valid	avg	sd
Fiscal measures to promote physical activity	4 (4%)	6 (6%)	20 (19%)	31 (29%)	46 (43%)	107 (100%)	4	1.1
Measures to promote physical activity in schools	1 (1%)	4 (4%)	7 (7%)	21 (20%)	71 (68%)	104 (100%)	4.5	0.9
Measures to promote active transport among children	2 (2%)	8 (8%)	10 (10%)	19 (18%)	66 (63%)	105 (100%)	4.3	1.1

Table 26: Mean values of 'successfulnes of policies' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
Fiscal measures to promote physical activity	4.2	4	3.2	*	3.5	4.1	*	4 (107)
Measures to promote physical activity in schools	4.6	4.7	3.8	*	4.5	4.5	*	4.5 (104)
Measures to promote active transport among children	4.5	4.3	3.8	.	4.3	4.3	.	4.3 (105)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

We then asked stakeholders which of these approaches would be most promising to ensure the successful implementation of the previously mentioned policies, measures and activities. Legislation was identified as perceived most promising approach for successful implementation of fiscal measures to promote physical activity. To ensure the successful implementation of the measures to promote physical activity in schools, *establishing guidelines or standards* was identified as the perceived most successful approach. Furthermore, for measures to promote active transport among children *supporting collaborative action* was identified as the most successful. *Additional research* was identified as the least successful option for all policies, measures, and activities.

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Table 27: According to your organisation, which of the following approaches would be most promising for successful implementation of the policies, measures and activities, listed below, in changing the obesogenic environment to prevent childhood obesity?

	Legislation	Establishing guidelines or standards	Supporting collaborative action	Fiscal measures	Additional research	Valid n
Fiscal measures to promote physical activity	39%	26%	24%	38%	18%	66
Measures to promote physical activity in schools	36%	55%	49%	11%	12%	83
Measures to promote active transport among children	35%	50%	53%	15%	14%	78

Regarding fiscal policy options, stakeholders were also asked about their perception of the possible success to support the increase in levels of physical activity in children. Stakeholders believe that the fiscal policy would be most successful *if schools should be aided by state and municipalities to improve their infrastructure for PA/sports* (average response = 4,7). Among the possible factors for success, they perceived the *financial support from municipalities for sport-for-all programmes* as the second most popular approach (average response = 4,6).

Figure 9: Following fiscal policy options are successful for supporting the increase of physical activity in children:

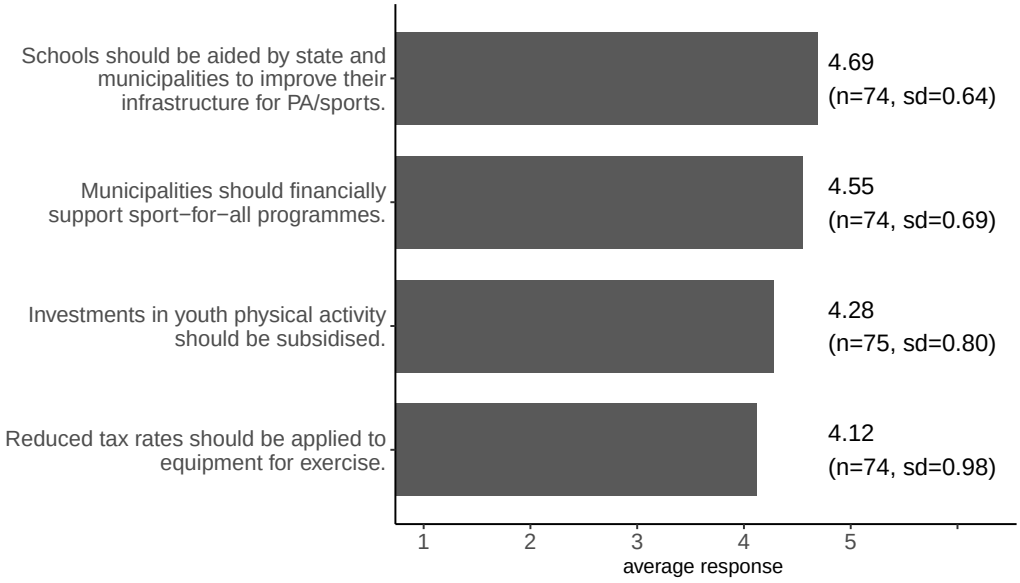

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Table 28: Mean values on 'the fiscal policy options' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
Investments in youth physical activity should be subsidised.	4.2	4.4	4.2		4.3	4.3		4.3 (75)
Reduced tax rates should be applied to equipment for exercise.	4.1	4.2	4.2		4.5	4.1		4.1 (74)
Municipalities should financially support sport-for-all programmes.	4.6	4.5	4.7		4.6	4.5		4.6 (74)
Schools should be aided by state and municipalities to improve their infrastructure for PA/sports.	4.7	4.7	4.7		4.8	4.7		4.7 (74)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

The following section focuses on policies, measures and activities that refer to *measures to promote physical activity in schools*. Among opportunities to increase physical activity in children that schools across the EU could offer, stakeholders think that *providing active learning and active breaks during school time* is the most promising (average response = 4,7). *Extracurricular physical activity that should be offered to all children free of charge within the obligatory school curricula* follows (average response = 4,6). The least favourable selected option was *one hour of physical education per day mandatory for all children, throughout primary and secondary schools* (average response = 4,4).

Table 29: Schools across EU could offer numerous opportunities for increasing physical activity in children:

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Valid	avg	sd
Extracurricular physical activity should be offered to all children free of charge within the obligatory school curricula.	1 (1%)	0 (0%)	6 (8%)	14 (19%)	53 (72%)	74 (100%)	4.6	0.8
One hour of physical education per day should be mandatory for all children throughout primary and secondary school.	2 (3%)	1 (1%)	10 (14%)	14 (19%)	47 (64%)	74 (100%)	4.4	1
Schools should provide active learning and active breaks during school time.	0 (0%)	0 (0%)	5 (7%)	9 (12%)	60 (81%)	74 (100%)	4.7	0.6
Obligatory short breaks in sitting should be introduced throughout primary and secondary school.	1 (1%)	1 (1%)	11 (15%)	11 (15%)	50 (68%)	74 (100%)	4.5	0.9
School curricula need to include lessons about the benefits of PA (outside physical education lessons).	0 (0%)	1 (1%)	10 (14%)	10 (14%)	52 (71%)	73 (100%)	4.5	0.8

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Table 30: Mean values on 'pysical activity and schools' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
Extracurricular physical activity should be offered to all children free of charge within the obligatory school curricula.	4.6	4.6	4.5		4.9	4.6		4.6 (74)
One hour of physical education per day should be mandatory for all children throughout primary and secondary school.	4.4	4.5	4.2		4.7	4.3		4.4 (74)
Schools should provide active learning and active breaks during school time.	4.7	4.8	4.7		4.7	4.7		4.7 (74)
Obligatory short breaks in sitting should be introduced throughout primary and secondary school.	4.5	4.5	4.2		4.5	4.4		4.5 (74)
School curricula need to include lessons about the benefits of PA (outside physical education lessons).	4.5	4.6	4.4		4.8	4.5		4.5 (73)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

Active transport is offering children numerous opportunities to be physically active with clear responsibilities from different sectors, levels and stakeholders. Stakeholders agree most with statement that active mobility should become a policy based on mobility and land use planning, especially in urban environments (average response = 4,7). Active commuting to school for children under 12 should be encouraged under adult supervision. They also agree that the promotion and implementation of active transport to school should made mandatory for schools (average response = 4,2).

Figure 10: Active transport is offering children numerous opportunities for being physically active, with clear responsibilities for different sectors, levels or stakeholders:

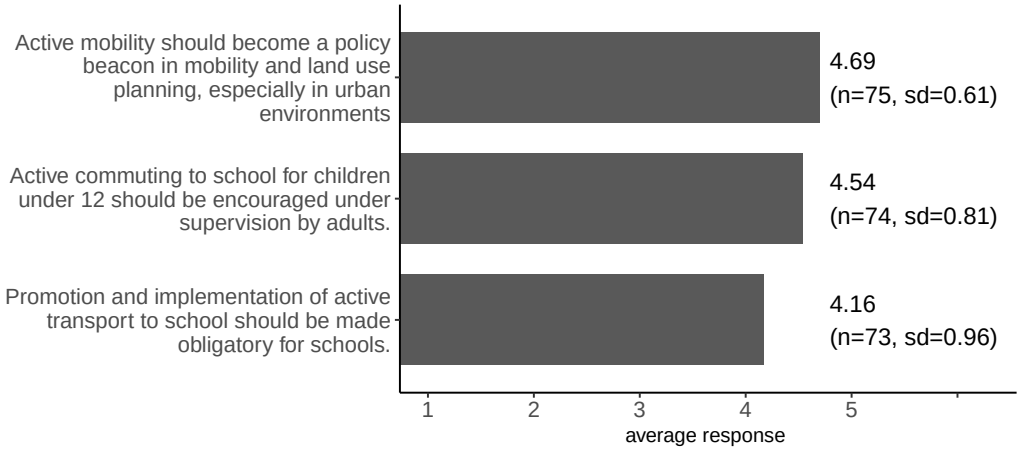

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Table 31: Mean values on 'active transport' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
Active mobility should become a policy beacon in mobility and land use planning, especially in urban environments	4.7	4.7	4.8		4.6	4.7		4.7 (75)
Active commuting to school for children under 12 should be encouraged under supervision by adults.	4.5	4.5	4.7		4.6	4.5		4.5 (74)
Promotion and implementation of active transport to school should be made obligatory for schools.	4.3	4	4.2		4.5	4.1		4.2 (73)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

Regarding policy actions enhancing physical activity in children, stakeholders also highlighted:

- *"The role of school personnel (active mode of travel should be encouraged, promoted and rewarded);*
- *Role-models are very important (policy measures to encourage all members of society to be active and participate in physical exercises should be included in municipalities, regional and national agendas);*
- *Physical and mental health are essential needs for children;*
- *Physical literacy;*
- *Active mobility is least practical;*
- *We are involved in psycho medico social center working with schools (from 3 to 18 years) difficulties differ from one region to another - equal for girls and boys - cultural behaviours - traditional food to be changed;*
- *Need for healthy lifestyle lessons;*
- *Physical activities integrated in everyday life;*
- *Free play and creative play during break time."*

3.2.5 WP8 - Health Care

Questions covered in this section address topics related to health care.

Based on a scale from 1 to 5, stakeholders believed with 4.4 average that *capacity building for the implementation of programmes for the treatment of childhood obesity in the health sector* is successful in reversing childhood obesity as a part of comprehensive approach. From 99 stakeholders, responding to that part of the questionnaire, only 1 disagreed with this statement.

Stakeholders have different perceptions about the most promising approach for successful implementation of this action to change obesogenic environments to prevent childhood obesity. Based on Table 34, *supporting collaborative action* was seen as the most effective action (56%). *Establishing guidelines or standards* (44%) and *legislation* (36%) followed. Once again, *additional research* was chosen as least effective (22%).

Table 32: In the opinion of your organisation, how successful are the following policies, measures and activities in changing the obesogenic environment to prevent childhood obesity, as a part of comprehensive approach?

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Valid	avg	sd
Capacity building for the implementation of programs for the treatment of childhood obesity in the health sector	1 (1%)	4 (4%)	14 (14%)	16 (16%)	64 (65%)	99 (100%)	4.4	0.9

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Table 33: Mean values of 'successfulnes of policies' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
Capacity building for the implementation of programs for the treatment of childhood obesity in the health sector	4.6	4.3	4.1		4	4.5		4.4 (99)

∗ Mean differences significant at $\alpha \leq 0.05$, · Mean differences significant at $\alpha \leq 0.10$

Table 34: According to your organisation, which of the following approaches would be most promising for successful implementation of the policies, measures and activities, listed below, in changing the obesogenic environment to prevent childhood obesity?

	Legislation	Establishing guidelines or standards	Supporting collaborative action	Fiscal measures	Additional research	Valid n
Capacity building for the implementation of programs for the treatment of childhood obesity in the health sector	36%	44%	56%	19%	22%	73

The following question relates to the main challenge in health systems regarding the appropriate treatment for childhood obesity. Stakeholders identified the main challenges as (Table 35): *lack of understanding of the need for teamwork, lack of education/knowledge of health professionals, lack of financial resources, lack of human resources and lack of time of health professionals.*

Table 35: If obesity in child is detected, the main challenge for appropriate treatment in health system is:

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Valid	avg	sd
lack of time of health professionals.	13 (20%)	3 (5%)	12 (18%)	22 (34%)	15 (23%)	65 (100%)	3.4	1.4
lack of human resources.	7 (11%)	5 (8%)	10 (16%)	21 (33%)	21 (33%)	64 (100%)	3.7	1.3
lack of financial resources.	6 (10%)	4 (6%)	12 (19%)	17 (27%)	23 (37%)	62 (100%)	3.8	1.3
lack of education/knowledge of health professionals.	7 (11%)	6 (9%)	6 (9%)	19 (30%)	26 (41%)	64 (100%)	3.8	1.4
lack of understanding of the need for team work.	7 (11%)	1 (2%)	10 (16%)	20 (31%)	26 (41%)	64 (100%)	3.9	1.3

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Table 36: Mean values on 'appropriate treatment' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
lack of time of health professionals.	3.3	3.3	3.6		3.6	3.3		3.4 (65)
lack of human resources.	3.7	3.7	3.5		4.4	3.6		3.7 (64)
lack of financial resources.	3.8	3.8	3.7		4.7	3.6		3.8 (62)
lack of education/knowledge of health professionals.	3.7	3.9	3.8		4.1	3.8		3.8 (64)
lack of understanding of the need for team work.	4	3.8	3.8		4.1	3.9		3.9 (64)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

Stakeholders were then asked to what extent they agree on identifying the most promising approach to effectively manage obesity (Figure 11).

Figure 11: If we want to manage obesity effective, the most promising approach is:

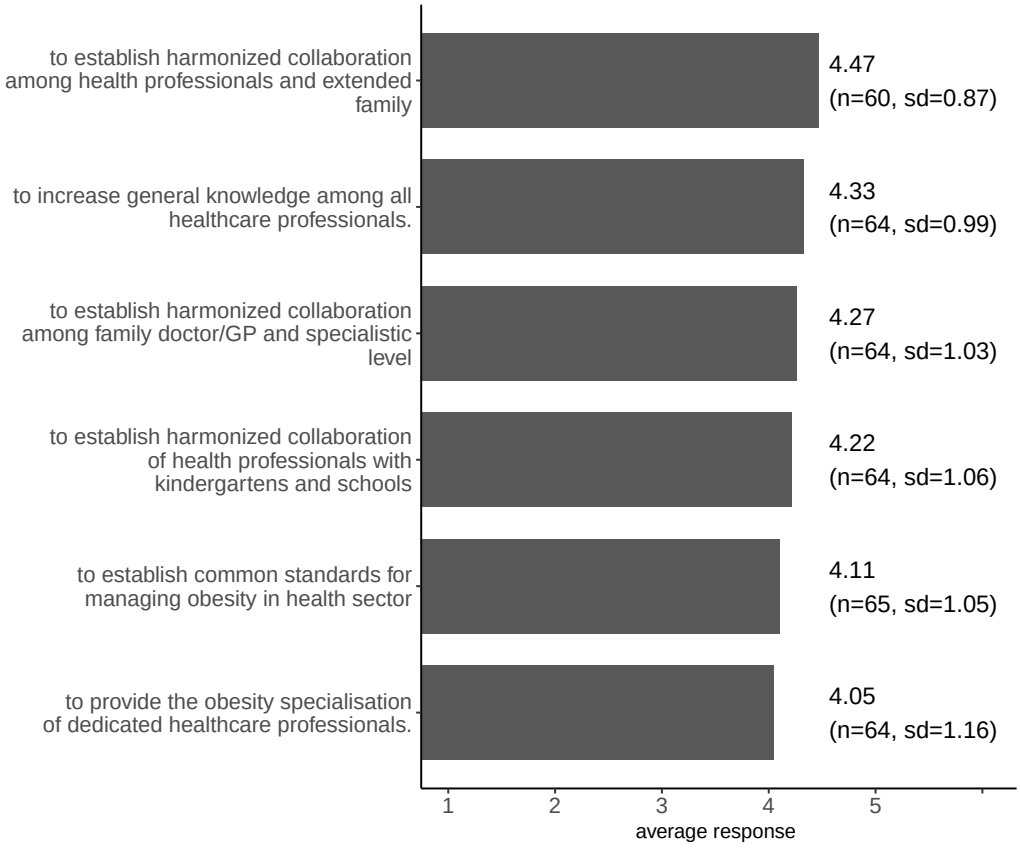

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Table 37: Mean values on 'effective management of obesity' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
to establish common standards for managing obesity in health sector	4.3	4	3.8		4.3	4.1		4.1 (65)
to increase general knowledge among all healthcare professionals.	4.4	4.3	4.1		4.7	4.3		4.3 (64)
to provide the obesity specialisation of dedicated healthcare professionals.	4.1	4.2	3.7		4.6	4		4 (64)
to establish harmonized collaboration among family doctor/GP and specialistic level	4.3	4.3	4.2		4.7	4.2		4.3 (64)
to establish harmonized collaboration of health professionals with kindergartens and schools	4.4	4.3	3.6	.	4.7	4.1	.	4.2 (64)
	4.1	4.2	4.3		4	4.2		4.2 (23)
(text)	-2.4	-2	-2	.	-2.4	-2.2	.	-2.3 (172)
to establish harmonized collaboration among health professionals and extended family	4.4	4.5	4.4		4.7	4.4		4.5 (60)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

It is obvious that topic of effective management of childhood obesity across the health sector raised several additional responses from participating stakeholders. In the offered open question stakeholders communicated a number of different thoughts, comments, proposals – more as to other policy topic:

- *"Participation of the health sector in multi-level multi-component interventions;*
- *Increase efforts of schools to deal with overweight children before they are living with obesity;*
- *Increase health workforce capacity that can work effectively in the area;*
- *Multi-disciplinary approach: nutritionists, physical therapists, social workers, school nurses take care of the child to find out what works best for her/him and cooperation of all stakeholders: parents, school, family doctor, specialists, classmates, friends;*
- *Target mental health factors which could have a detrimental impact on obesity;*
- *Establish a holistic view on the leading causes for obesity: built environment, transport habits, life rhythm, common attitudes towards active transport etc;*
- *Break barriers between health professionals around roles and responsibilities (the medical doctor is probably not the best professional to deliver evidence-based care due to high cost and often over controlling in the healthcare environment. Traditional clinical governance models may not apply as effectively to the treatment of lifestyle diseases for which surgery and medications are often not the first option for treatment)."*

Regarding measures to treat childhood obesity in the health sector, stakeholders also highlighted:

- *"Why is the focus on treatment and not prevention?*

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- *The need to handover sufficient awareness among government higher officials in order to get expected willingness and knowledge of the severity on upcoming increased number of obese children that can affect the future healthy young generation to give focus on making policies;*
- *Obesity is preventable but very hard to treat, therefore the importance of structural prevention is paramount, i.e. measures that are beneficial for all parts of society, not only addressing the well-off, cannot be underestimated;*
- *Without incentives (price, costs, reimbursement) no chance for success;*
- *We need to conduct high quality research in collaboration with families/children and patients regarding what treatment success is as it may not align well to a traditional view of success;*
- *Make the individual origin of obesity well understood;*
- *Children eat what their families provide so education has to start with who plans and provides food for the children and not necessarily targeting the children themselves;*
- *Sensibilise schools to their role;*
- *New and emerging professions need to be added to the workforce to improve the skill mix. (best practice in Norway and Denmark in the management of musculo-skeletal conditions with the use of doctors of chiropractic who can manage and treat msk and go into co-morbidities with the rest of the health could be rolled out to other countries in Europe);*
- *Need for holistic approaches to tackling social inequalities."*

In the concluding open questions, stakeholders had the opportunity to answer to the following question: *"What, in the opinion of your organisation, are the main challenges in providing healthy food, regular physical activity and low levels of sedentary behaviour for children and adolescent?"* As feedback they have listed the inputs below:

- *"Interdisciplinary approach to include mental health aspects prescription for physical activity issues around patient and data protection buddy programme;*
- *Affordability and access to healthy foods throughout a social gradient and considering vulnerable groups; systems-approach and multi-sector collaboration; sustainability of the EU food and farming systems; EU-driven voluntary approach to better regulation agenda; air pollution especially in urban environments and its link with environments in which children are able to play and be physically active; low or lack of digital and health literacy among children, especially in deprived areas and of disadvantaged backgrounds;*
- *The power of the food industry, lobbying;*
- *Any policy on healthy eating should be part of a wider overarching strategy on healthy lifestyles (i.e. physical activity + healthy diets + other energy balance related behaviours). Any policy measure has to be science-based with a proven impact on health. Public health should be the end point indicator to measure effectiveness of any policy - focus on consumption is not enough as it does not necessary entail a positive impact on health.*
- *Road safety, public safety;*
- *Development of evidence-based effective programmes for health promotion and obesity prevention and to implement them on a wide-scale;*
- *Increase resources at all levels both research and implementation of programmes in health care sector and society;*
- *Children adopt the behaviour of their environment. Therefore, childhood obesity prevention and treatment must protect children form ubiquitary exposure to unhealthy foods and food marketing, lack of physical education, lack of accessibility to sports facilities, safe active school transport and lack of free space and time to run, play, and be physically active;*
- *The main challenge is the power of the industry to keep influencing children's preferences, free-time activities and food environments;*

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- *Fear of letting children out on their own. Lack of free access to community facilities and activities. Schools are no longer close to home, requiring longer travel;*
- *Most schools do not provide space or grounds for physical activity, due to poor land allocation;*
- *No regulatory systems for the food industry;*
- *Limited government budget for prevention & health promotion (as compared to budget for health care & marketing by the food industries); limited political courage & willingness (because of lobbying?); short-term political thinking;*
- *Prevention, information, stakeholder and target groups involvement."*

Regarding the childhood obesity in general, stakeholders have highlighted among final remarks:

- *"Policy should address the availability of like-for-like swaps in purchases that are inelastic (going back to the chocolate egg example, biscuits, chocolates, sweets are all inelastic). There is little value in providing education to buy better alternatives (eg., sugar free ice cream) when these are unavailable. Fruits and vegetables have always been available and people know they are healthy. A different approach is needed to make the healthier (note maybe not low in saturated fat or salt) choice the easiest one;*
- *We need to lower the environmental pressure on families with low social economic status;*
- *Awareness of politicians;*
- *We should focus our actions around the rights of the child and how policy supports or erodes these;*
- *We have to aim for ambitious and strict food policy and keep industry away when discussing and adopting new legislation;*
- *Note that junk food and sugary drink industries are keen to divert public and policy-makers attention to physical activity. We therefore need to anticipate this adverse pressure, and routinely build appropriate push-back into all our comprehensive strategies for obesity prevention;*
- *Family-centered approaches, family education and the use of primary and secondary schools to raise awareness of families (health promoting schools) are needed;*
- *The corruption in science and publishing needs to be addressed. The economist has highlighted this issue. Poor peer review research from several decades ago led to the focus on fat in the diet, and the sugar industry had a free run at the food market as a result of fake research;*
- *Ongoing research and continued programme development must be further supported and more widely disseminated, or the likelihood of widespread application will be diminished. There is a need to pull together global actors to help inform collaborative efforts across multiple stakeholders to develop and test new strategies for prevention and treatment of childhood obesity. At some point, these actors will need to have a position that creates accountability in the food industry to provide healthier options to the consumer;*
- *We should not provide one-size-fits-all solutions but concentrate on children with genetic or epigenetic risks and their families;*
- *Close attention should be made towards the impact of mental health and not just the physical aspects."*

The summary table (Table 38) is added at the end of the chapter, on the most promising approaches for successful implementation of the policies, measures and activities, in changing the obesogenic environment to prevent childhood obesity. The summary overview brings clear distinction among STOP policy areas. For *Regulation and fiscal policies* (this section address topics of reformulation, taxation, labelling and food marketing), legislation and establishing guidelines or standards are perceived as the two most promising approaches among stakeholders. In *Social marketing*, stakeholders perceive supporting collaborative action as the most promising approach.

For it is no visible agreement in perception of the most promising approach, all of the proposed approaches might have some potential according to the stakeholders´ view. No clear perceived promising approach in *Monitoring business action and performance* is one of the challenges to be addressed in the future stakeholders dialogues in

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STOP years three and four. Rather similar conclusion could be valid for the *Fiscal measures to promote physical activity.*

Stakeholders believe that *Measures to promote physical activity in schools, Measures to promote active transport among children* and *Capacity building for the implementation programmes for the treatment of childhood obesity in the health sector* are the STOP policies where establishing guidelines or standards and supporting collaborative action are the most promising approaches.

Additional research is mainly perceived as the least promising approach in the majority of the discussed policies, with Monitoring business action and performance and Capacity building for the implementation programmes for the treatment of childhood obesity in the health sector as exemptions, indicating that more evidence and argumentation in the policy decision making processes would be beneficial.

Table 38: Summary of the most promising approaches for successful implementation of different actions, to change the obesogenic environment to prevent childhood obesity, as a part of a comprehensive approach

	Legislation	Establishing guidelines or standards	Supporting collab-orative action	Fiscal measures	Additional research	Comments
Food reformulation	++	+++	++	+	+	
Food labelling	++++	+++	+	+	+	
Food marketing	+++	+++	++	+	+	
Food taxation	++++	+	+	+++	+	
Social marketing campaigns	+	++	++++	+	+	
Monitoring bussines action and performance	++	++	++	++	++	Max. legislation (39%), min. fiscal measures and additional research (20%)
Fiscal measures to promote physical activity	++	++	++	++	+	++ (max. Legislation 38%, min supporting collaborative action – 23.5%)
Measures to promote physical activity in schools	++	+++	+++	+	+	
Measures to promote active transport among children	++	+++	+++	+	+	
Capacity building for the implementation programes fort the treatment of childhood obesity in the health sector	++	+++	+++	+	++	

0–19%= + 20–39=% ++ 40–59=% +++ 60–79%= ++++

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3.3 Characteristics of decision-making processes in preventing obesogenic environments – contextual analysis

Policy decision making processes are complex, with different means of influence. We asked the stakeholders to express their organisation's views on means of influencing the policy decision making processes regarding childhood obesity.

Before starting the in-dept contextual analyses, we are presenting the description of the data. We have been exploring three sets of means of influence and compared "the most promising means" in each of the sets (Tables 39, 40 and 41) with "the commonly used means"(Tables 42, 43 and 44), by public, private, public-private and profit, non-profit categories.

In the first set, we tried to understand the relationship organisations from different welfare mix spheres have towards different systems-based options in preventing obesogenic environments (strengthening the regulatory capacity, the voluntary approach or the funding capacity, supporting professional associations or research, or defining specific relationships among stakeholders). The indicated most promising mean seems to be, for all different categories of stakeholders, the strengthened regulatory approach (Table 39).

Table 39: Mean values on 'the most promising means' scores by Welfare triangle categories - part 1

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
strengthening regulatory capacity	4.3	4.1	3.8		4	4.2		4.2 (64)
strengthening the voluntary approach funding capacity	3	3.3	3.3		3.4	3.2		3.2 (67)
building workshops for professional associations	3.9	3.6	3.3		2.9	3.8		3.7 (68)
facilitate (e.g. financially supporting) research on the subject	4.1	3.6	3.4		3.1	3.9		3.8 (70)
defining public health driven relationships between national governments and the global food industry	3.7	3.7	3.9		3.9	3.8		3.8 (68)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

Regarding lobbying or advocacy, the most promising mean is to approach policy decision makers directly, when a specific policy option is in question (Table 40).

Table 40: Mean values on 'the most promising means' scores by Welfare triangle categories - part 2

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
lobby or advocate directly policy makers for specific policy options	4.2	4.3	4.3		3.4	4.4		4.3 (65)
lobby or advocate directly influential experts for specific policy options	3.9	3.5	3.9		3.1	3.9		3.8 (63)
lobby or advocate via NGOs for specific policy options	3.8	3.7	3.8		3.1	3.9		3.8 (65)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

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Table 41: Mean values on 'the most promising means' scores by Welfare triangle categories - part 3

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
develop some consortium of actors having similar interest on policy options	3.9	4.3	3.9		4.1	4		4 (68)
organise a scientific committee of experts on the subject	3.7	3.4	3.4		2.7	3.7		3.6 (70)
informing and empowering interested networks	3.9	4.2	4.2		3.6	4.1		4.1 (66)
organise some events with the participation of the policy makers	3.9	3.8	3.8		3.4	3.9		3.9 (66)
strenghtening the involvement of adolescents (target group) in decision making processes	4	3.3	4.2	.	2.9	4	.	3.8 (63)

∗ Mean differences significant at $\alpha \leq 0.05$, · Mean differences significant at $\alpha \leq 0.10$

In comparison to the most promising means, the commonly used means stakeholders are practicing, are not much different. The most often used strategy to influence the policy decision making processes is "informing and empowering interested networks" (Table 42).

Table 42: Mean values on 'commonly used means' scores by Welfare triangle categories - part 1

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
strengthening regulatory capacity	2.9	2.9	3.6		3.2	3		3.1 (59)
strengthening the voluntary approach	3	4	3.4	*	3.7	3.4	*	3.5 (57)
funding capacity building workshops for professional associations	2.8	2.8	3.8	.	3.3	2.9	.	3 (59)
facilitate (e.g. financially supporting) research on the subject	3.6	2.5	3.5	*	3.1	3.2	*	3.2 (59)
defining public health driven relationships between national governments and the global food industry	2.6	3.6	2.8	.	4.4	2.9	.	3.1 (56)

∗ Mean differences significant at $\alpha \leq 0.05$, · Mean differences significant at $\alpha \leq 0.10$

Table 43: Mean values on 'commonly used means' scores by Welfare triangle categories - part 2

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
lobby or advocate directly policy makers for specific policy options	3.3	3.9	3.8		3.3	3.7		3.7 (61)
lobby or advocate directly influential experts for specific policy options	3.2	3.2	3.3		3	3.3		3.2 (57)
lobby or advocate via NGOs for specific policy options	3	3.6	3.8		3.1	3.5		3.4 (60)

∗ Mean differences significant at $\alpha \leq 0.05$, · Mean differences significant at $\alpha \leq 0.10$

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Table 44: Mean values on 'commonly used means' scores by Welfare triangle categories - part 3

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
develop some consortium of actors having similar interest on policy options	3.4	3.8	3.6		3.6	3.6		3.6 (61)
organise a scientific committee of experts on the subject	3.5	2.8	3.2		2	3.3		3.2 (61)
informing and empowering interested networks	3.5	4.2	3.9		3.7	3.8		3.8 (59)
organise some events with the participation of the policy makers	3.2	3.5	4.1		3.4	3.6		3.5 (59)
strenghtening the involvement of adolescents (target group) in decision making processes	2.5	2.5	2.8		2.7	2.6		2.6 (57)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

There are no significant differences among public, private and public-private on one hand and between for profit and not-for profit organizations on the other, in most promising means for influencing the policy decision making processes.

Regarding most commonly used means, we could observe the distinction among above listed stakeholders spheres (public, private and public-private) for strengthening the voluntary approach (higher rated by private and for profit stakeholders) and supporting professional associations or research (higher rated by public and public-private stakeholders).

Similar distinction in the system-based options for influencing policy decision making processes we could observe between for profit and not-for profit organizations.

Results indicate that private and for-profit stakeholders are more keen to define specific relationships among stakeholders what also gives the potential for further stakeholders dialogues discussions.

We have also been exploring the attributes of multi-stakeholder collaboration in decreasing childhood obesity. We were interested in understanding the necessity for a joint approach, readiness, capacities and resources, necessary skills and knowledge, willingness, level of trust and accountability for the joint multi-stakeholder approach, but also the importance of considering health inequalities, sustainability and environmental issues for such relationships (Table 45). Willingness to work together and level of trust among stakeholders are indicated as the most important attributes of collaboration (Fig. 12).

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Table 45: For your organisation, how important are the following attributes of multi-stakeholder collaboration in decreasing childhood obesity?

	Not important at all	Not important	Neutral	Important	Very important	Valid	avg	sd
understanding of the necessity of the joint multi-stakeholder approach	1 (1%)	0 (0%)	11 (15%)	25 (33%)	38 (51%)	75 (100%)	4.3	0.8
readiness to collaborate with other stakeholders	0 (0%)	1 (1%)	6 (8%)	31 (42%)	36 (49%)	74 (100%)	4.4	0.7
capacities and resources which stakeholders have available to cooperate with others	0 (0%)	1 (1%)	9 (12%)	31 (43%)	31 (43%)	72 (100%)	4.3	0.7
necessary skills and knowledge stakeholders possess to improve cooperation	0 (0%)	0 (0%)	9 (12%)	31 (42%)	33 (45%)	73 (100%)	4.3	0.7
capacities and resources available to cooperate	0 (0%)	1 (1%)	9 (12%)	30 (41%)	33 (45%)	73 (100%)	4.3	0.7
willingness to work on a multi-sectoral initiatives	0 (0%)	0 (0%)	6 (8%)	27 (37%)	40 (55%)	73 (100%)	4.5	0.6
level of trust among stakeholders	0 (0%)	0 (0%)	9 (12%)	23 (32%)	41 (56%)	73 (100%)	4.4	0.7
accountability in multi-stakeholder relationships	0 (0%)	0 (0%)	13 (18%)	23 (32%)	36 (50%)	72 (100%)	4.3	0.8
influence of drivers for action (economic, public health, ...)	0 (0%)	1 (1%)	8 (11%)	28 (38%)	36 (49%)	73 (100%)	4.4	0.7
consideration of health inequalities and social determinants	0 (0%)	3 (4%)	6 (8%)	20 (28%)	42 (59%)	71 (100%)	4.4	0.8
consideration of sustainability and environmental issues	1 (1%)	1 (1%)	6 (8%)	22 (31%)	42 (58%)	72 (100%)	4.4	0.8

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Figure 12: For your organisation, how important are the following attributes of multi-stakeholder collaboration in decreasing childhood obesity?

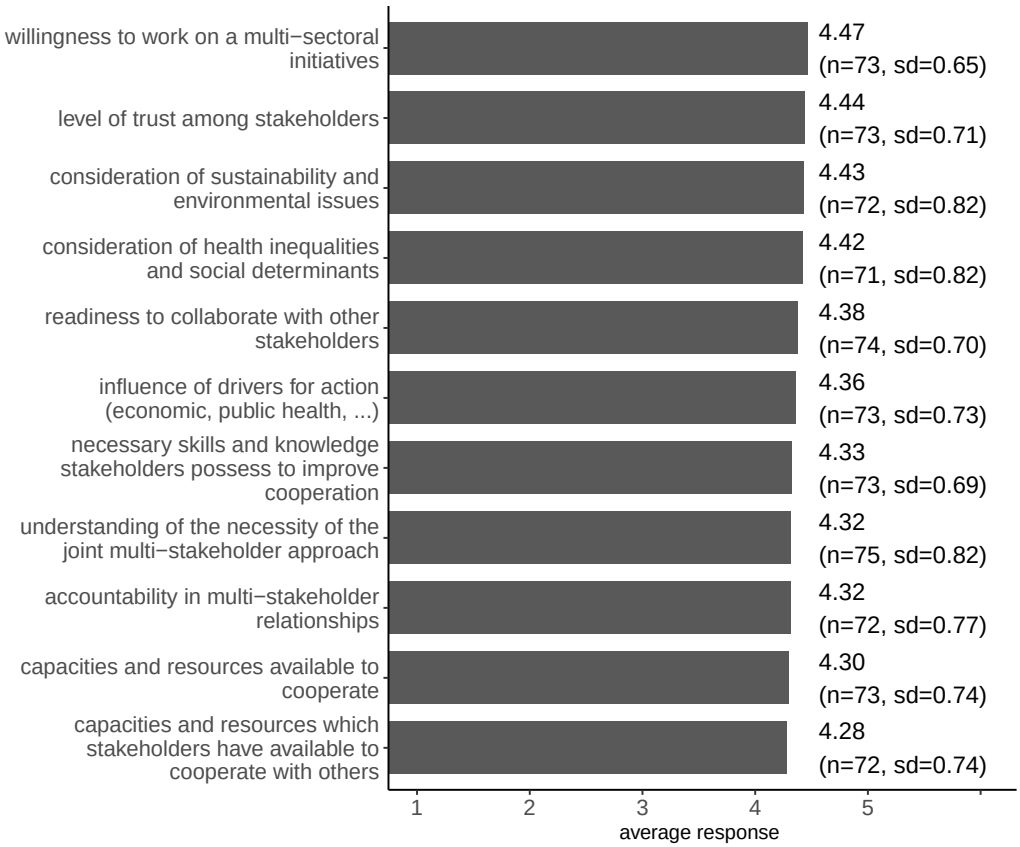

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Table 46: Mean values on 'multi-stakeholder collaboration' scores by Welfare triangle categories

	Public	Private	Public-private	ANOVA sig	Profit	Non-profit	ANOVA sig	avg (n)
understanding of the necessity of the joint multi-stakeholder approach	4.2	4.5	4.2		4	4.4		4.3 (75)
readiness to collaborate with other stakeholders	4.3	4.5	4.4		4.1	4.4		4.4 (74)
capacities and resources which stakeholders have available to cooperate with others	4.3	4.3	4.2		3.9	4.3		4.3 (72)
necessary skills and knowledge stakeholders possess to improve cooperation	4.4	4.3	4.2		4.1	4.4		4.3 (73)
capacities and resources available to cooperate	4.3	4.4	4.4		4	4.3		4.3 (73)
willingness to work on a multi-sectoral initiatives	4.4	4.6	4.6		4.4	4.5		4.5 (73)
level of trust among stakeholders	4.3	4.4	4.8		4.4	4.4		4.4 (73)
accountability in multi-stakeholder relationships	4.2	4.3	4.5		4.3	4.3		4.3 (72)
influence of drivers for action (economic, public health, ...)	4.4	4.3	4.2		4.4	4.3		4.4 (73)
consideration of health inequalities and social determinants	4.5	4.2	4.7		4.1	4.5		4.4 (71)
consideration of sustainability and environmental issues	4.5	4.4	4.3		4.3	4.4		4.4 (72)

$*$ Mean differences significant at $\alpha \leq 0.05$, $\cdot$ Mean differences significant at $\alpha \leq 0.10$

In this subsection, the in-depth analysis of set of indicators on "Characteristics of decision making processes in reverting obesogenic environments" is presented.

The indicators used for the following analysis were measured as part of compound questions Q35, Q36 and Q37 - measuring a) *the most promising means to influence the policy decisions in childhood obesity?* and b) *...means your organisation uses most often to influence the policy decisions in childhood obesity?* Each of these two layers has 13 indicators.

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Figure 13: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

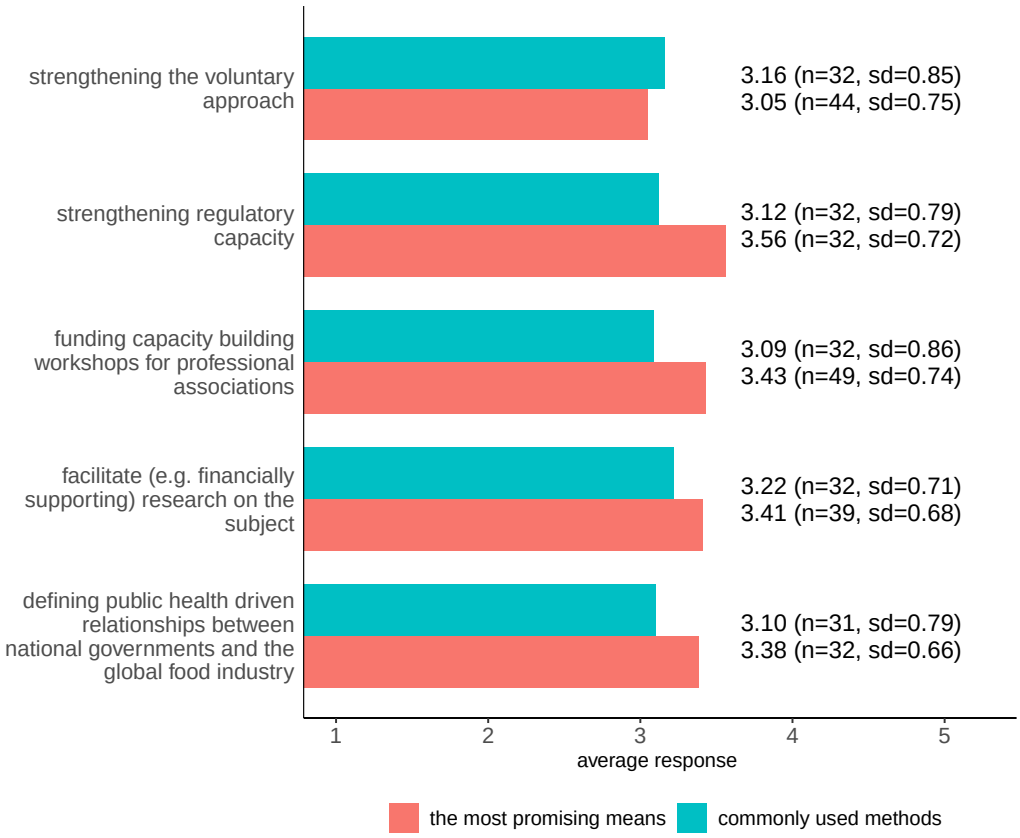

Figure 14: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

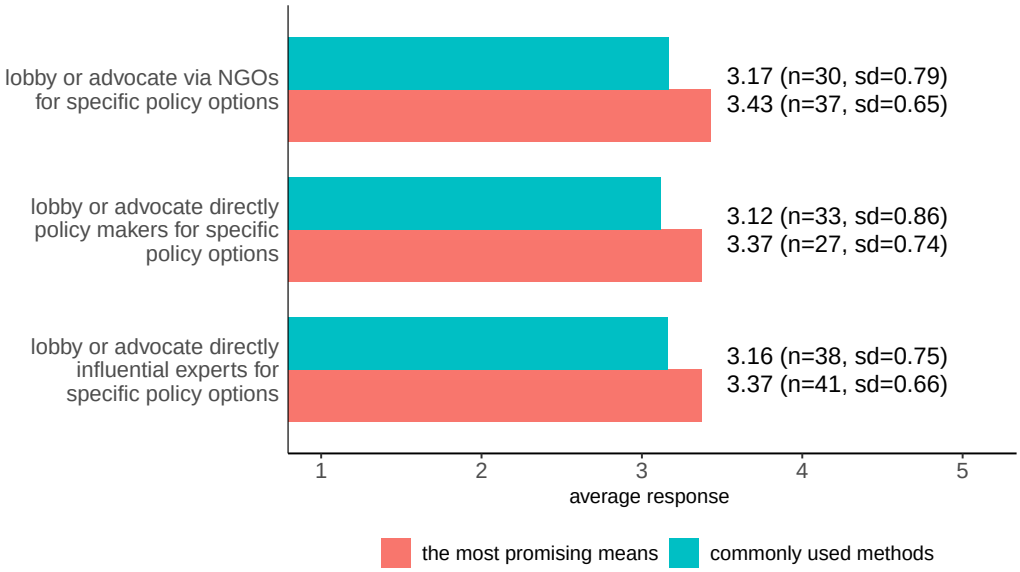

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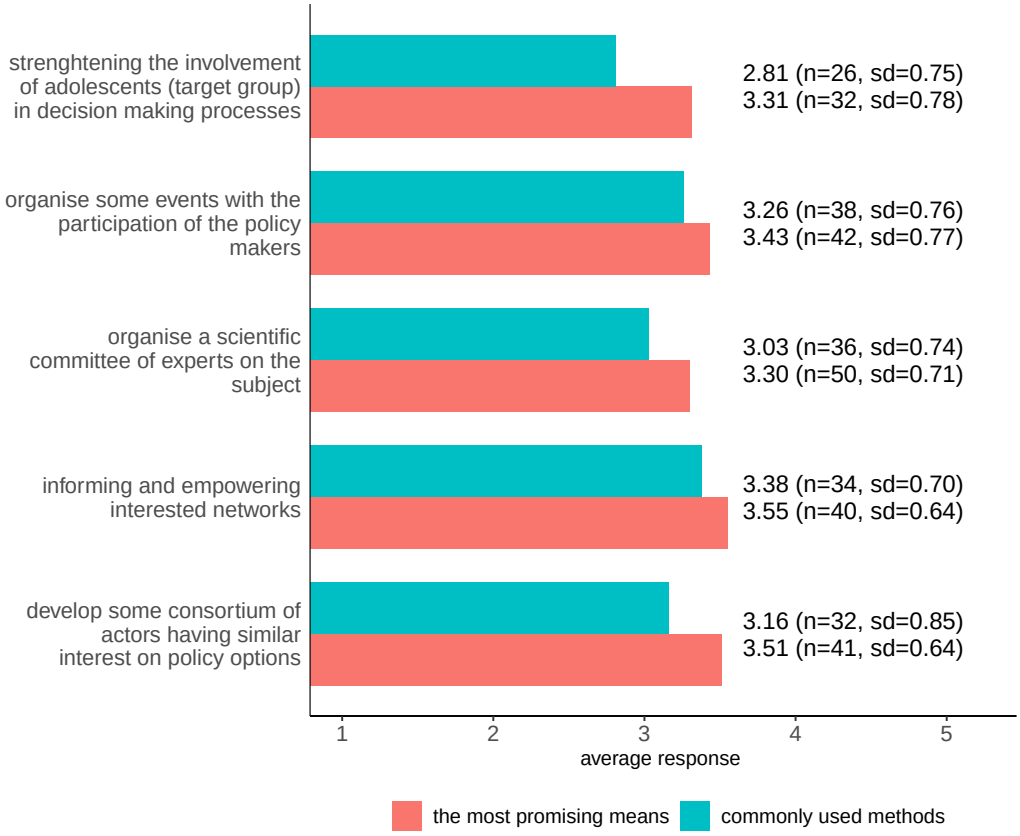
Figure 15: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?



The goal of following analysis is to present the information measured with these 26 indicators and present it in relation to other properties of the stakeholders included in the survey. The method applied to reach the goal is exploratory factor analysis.

The analysis is focusing on the first layer of indicators measuring the most promising means.

3.3.1 Treatment of missing data

To be able to perform a joint analysis of 13 indicators measuring the opinion of stakeholders on the most promising means to influence policy decisions, the measures for control of the presence of missing values must be taken. From 185 representatives of stakeholders responding to the survey, only 55 responded to all stated questions on the topic of most promising means. To verify the structure of valid cases we compared it the structure of all measured data. The distribution of valid cases according to the three variables defining stakeholder position in the welfare triangle is practically the same as the one of all cases (Table 47). Therefore, we will assume that the unresponses did not affect the overall results and the conclusions obtained by performed analysis.

Table 47: Structure of valid cases compared to all measured data.

	Complete	Valid
Profit	14.9% (25)	12.7% (7)
Non-profit	85.1% (143)	87.3% (48)

	Complete	Valid
Formal	98.8% (166)	100% (54)
Informal	1.2% (2)	0% (0)

	Complete	Valid
Public	56.6% (94)	47.2% (25)
Private	28.9% (48)	32.1% (17)
Public-Private	14.5% (24)	20.8% (11)

To gain more analytical power with a larger number of analysed units, the Expectation-Maximisation (EM) algorithm was used for imputation of missing values. It should be noted that missing values were inputed only into the cases with partial missing data. The final analysed dataset includes 73 units.

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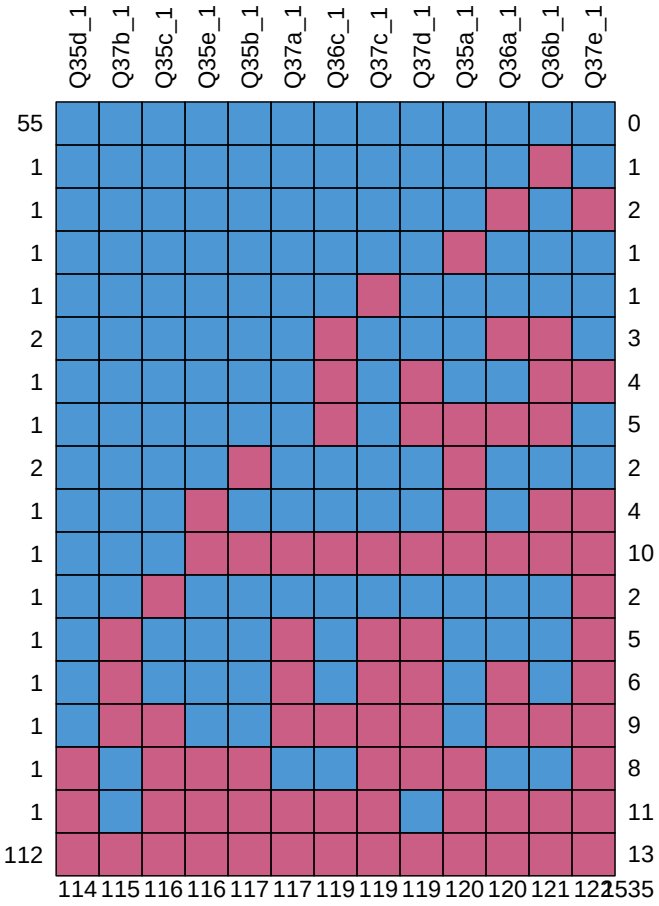
Figure 16: Missing value pattern - most promising means



3.3.2 Dimension reduction with Principal Component Analysis

To present and analyze the multivariate dataset, an exploratory multivariate analysis was performed by which the data was reduced from 13 (indicators) to only two components. The analysis was performed using *pca* function of *psych* package in *R*.

Component weights presented in following table are weights of measured indicators (variables) on each obtained component. The weights are used to contextually describe (name) obtained components. Only loadings of absolute value higher than 0.4 are shown in following table.

Table 48: Loadings

	RC1	RC2
Q35a_1		0.840
Q35b_1*		-0.489
Q35c_1	0.652	
Q35d_1	0.611	
Q35e_1	0.582	
Q36a_1		0.752
Q36b_1	0.444	0.581
Q36c_1		0.715
Q37a_1	0.602	
Q37b_1	0.690	
Q37c_1	0.823	
Q37d_1	0.700	
Q37e_1	0.516	

*Q35b_1 is contextually reversed

The proportion of variability captured by the first component is 0.3 and the second one 0.2 - reducing analysed data from 13 to only two dimensions retains 50% of variability. According to component loadings on the set

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of indicators, below are the proposed descriptive names for the components. Note that the weight on indicator Q38b_1 is relatively high at both components. Indicator Q35b_1 is contextually reversed so it's weight is negative:

Table 49: Indicators defining RC1

indicator	**RC1: Soft background mechanisms for health in all policies approach**
Q35c_1	funding capacity building workshops for professional associations
Q35d_1	facilitate (e.g. financially supporting) research on the subject
Q35e_1	defining public health driven relationships between national governments and the global food industry
Q36b_1	lobby or advocate directly influential experts for specific policy options
Q37a_1	develop some consortium of actors having similar interest on policy options
Q37b_1	organise a scientific committee of experts on the subject
Q37c_1	informing and empowering interested networks
Q37d_1	organise some events with the participation of the policy makers
Q37e_1	strengthening the involvement of adolescents (target group) in decision making processes

Table 50: Indicators defining RC2

indicator	**RC2: Advocating regulation of specific policy options**
Q35a_1	strengthening regulatory capacity
Q35b_1*	strengthening the voluntary approach
Q36a_1	lobby or advocate directly policy makers for specific policy options
Q36b_1	lobby or advocate directly influential experts for specific policy options
Q36c_1	lobby or advocate via NGOs for specific policy options

*Q35b_1 is contextually reversed

3.3.3 Describing stakeholders according obtained components

Two components provide us a two-dimensional space defined according to (by opinion of stakeholders) the most promising strategies to influence the policy decision in childhood obesity. This space is presented in the subsequent figures, with the first dimension, the support of Soft background mechanisms for health in all policies approach (RC1), represented on the horizontal axis and the second dimension, the support of strategies involving lobbying for regulation of specific policy options (RC2), on the vertical axis.

In each diagram, centroids (average values) for specific categories of stakeholders are presented. The context of welfare triangle is presented with two variables in Figure 17: these are centroids of public, private and public-private organisations, and centroids of organisations according to their profit or non-profit type of operation. Beside the name of the category in the legend, the number of stakeholders in each category is reported.

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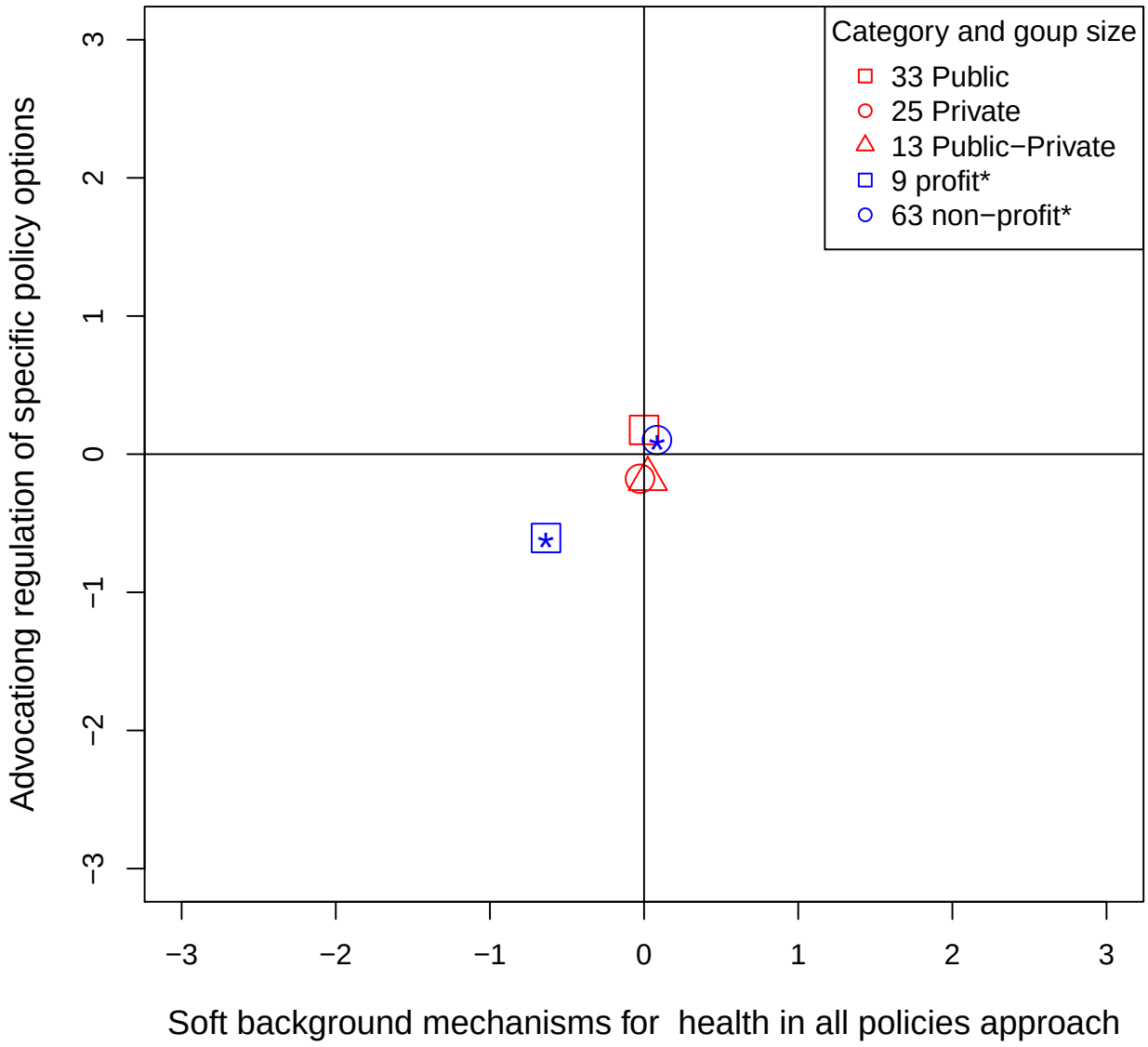
Figure 17: Positioning of stakeholders accoring to Welfare triangle in two dimensional space



To evaluate the differences between analysed categories of stakeholders, we performed a oneway ANOVA on each of the components. In Figure 17, the profit – non-profit categories with significant differences on both dimensions are marked with asterisks (*). Nine profit oriented stakeholders believe regulations and soft background mechanisms are less promising means to influence the policy decisions than non-profit stakeholders. The results in the diagram are centered, so zero represents the average response of all stakeholders. Consequently, three categories with the largest numbers of stakeholders (research, health and education) are positioned close to the center of the diagram.

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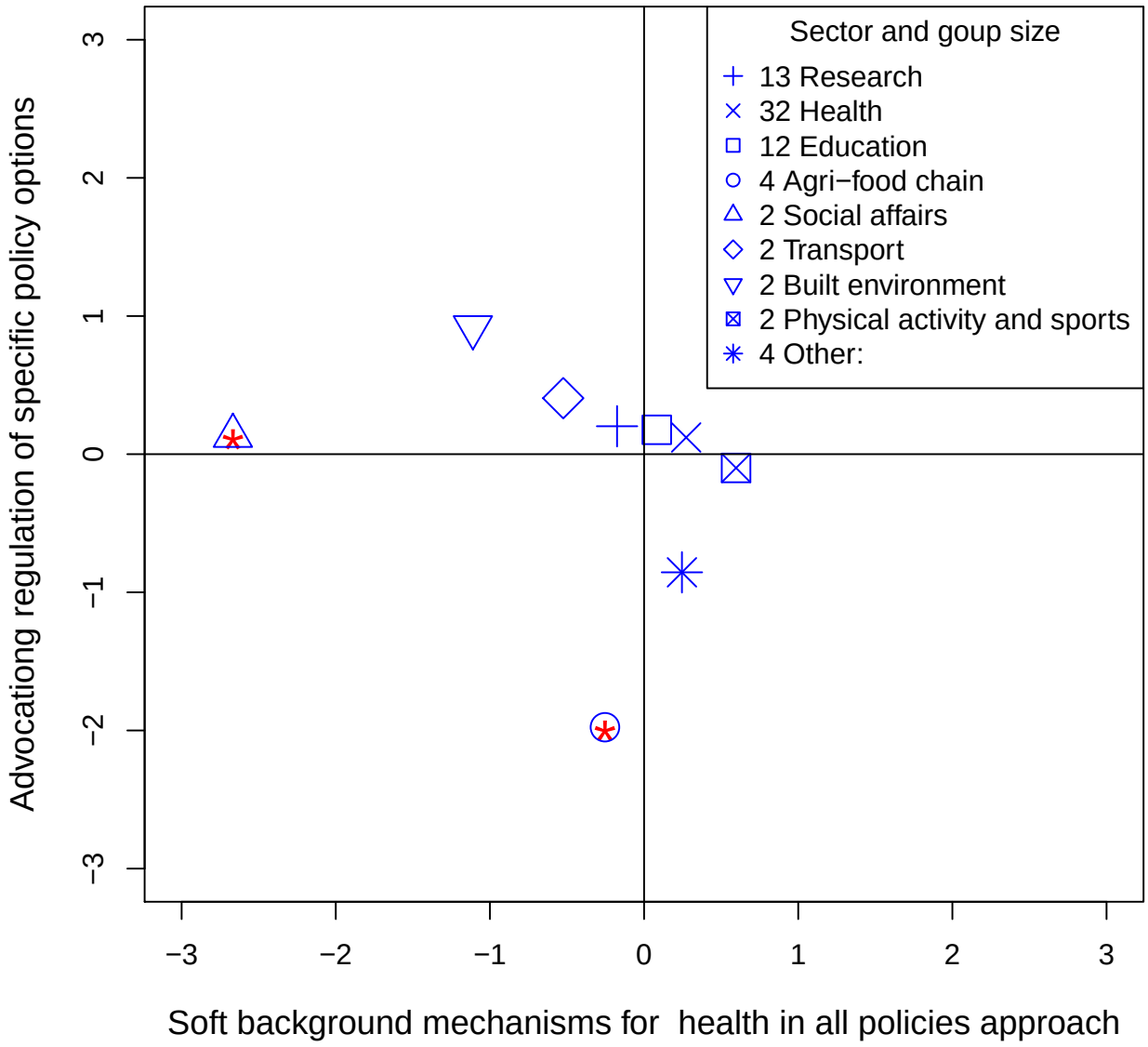
Figure 18: Positioning of stakeholders according to Sector of operation in two dimensional space



In Figure 18, the centroids represent sectors in which stakeholders operate. Only two categories of this variable (two with the smallest numbers of stakeholders) are significantly different from others. These are categories (1) composed of only two stakeholders active in social affairs with very low opinion towards soft mechanisms and (2) of four stakeholders from agri-food chain with lower levels of confidence in the successfulness of regulatory measures. In terms of the level of believing into regulatory approaches, the highest average score belongs to stakeholders dealing with built environments. On soft background mechanisms, the highest average score was among stakeholders dealing with physical activity and sports.

3.3.4 Clustering of stakeholders according to their assessment of most promising means

To simplify descriptions of stakeholders according to their attitude towards the most promising means to influence the policy decisions in childhood obesity, clustering of stakeholders was performed on a complete set of 13 indicators (measured variables). The clustering is based on euclidean distance between stakeholders and Ward's criterion function. As a result, we obtained five clusters of stakeholders with distinct combinations of attitudes on two analysed components – the use of soft and use of regulatory means.

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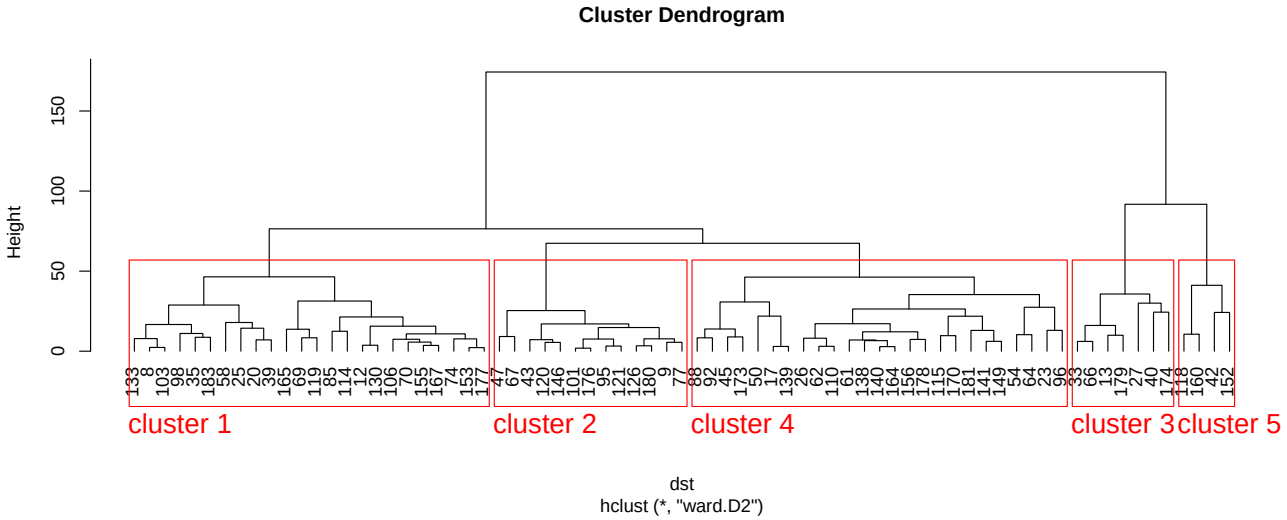
Figure 19: Dendrogram of units according to similarity on most promising means to influence the policy decisions in childhood obesity



The dendrogram highlights structural similarity across clusters. Clusters No. 1, 2 and 4 form the main large groups of stakeholders, while clusters No. 3 and 5 position relatively far from the rest. Sizes of clusters vary from two relatively small clusters, cluster No. 3 compound of seven and cluster No. 5 of with four stakeholders, one mid-sized cluster (No. 2) of thirteen stakeholders and two larger clusters (No. 1 and No. 4) with twenty-four and twenty-five stakeholders.

Table 51: Sizes of obtained clusters

	clu
1	24
2	13
3	7
4	25
5	4

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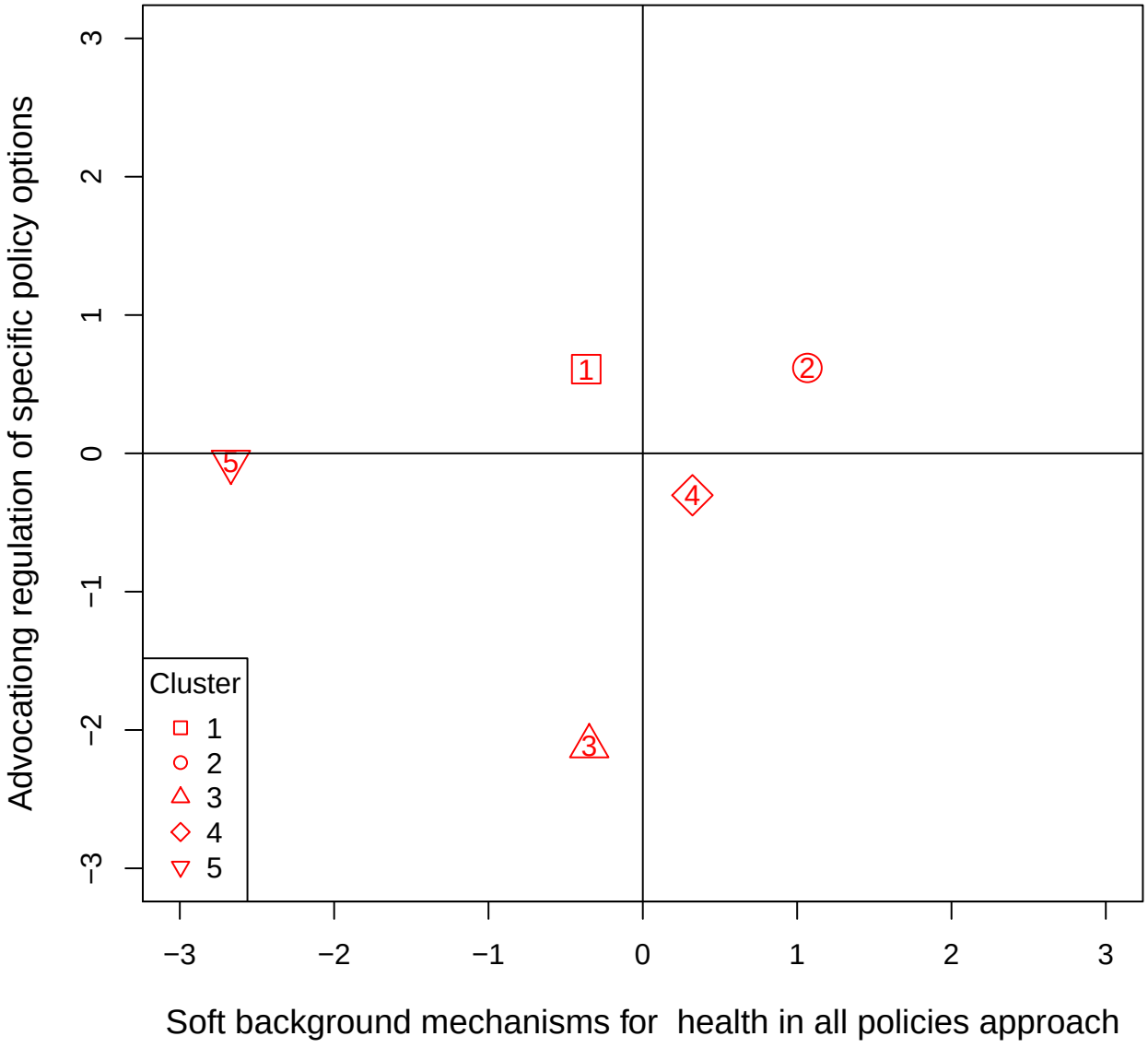
3.3.5 Obtained clusters and two dimensional space

Obtained clusters of stakeholders are distributed in two-dimensional space according to attitude of their members towards advocating regulative approaches or soft background approaches to influence the policy decisions in childhood obesity. The differences of values on each of the two dimensions were tested using ANOVA and were large enough to be statistically significant.

Figure 20: Presentation of three dimensions according to obtained clusters



Positions of clusters:

- **Cluster No.1**: has high, above average, attitude towards regulative approaches and low, below average, attitude towards soft approaches to influence policy decisions.
- **Cluster No.2**: has high above average attitude on both dimensions. They believe in regulative and soft approaches to influence policy decisions.

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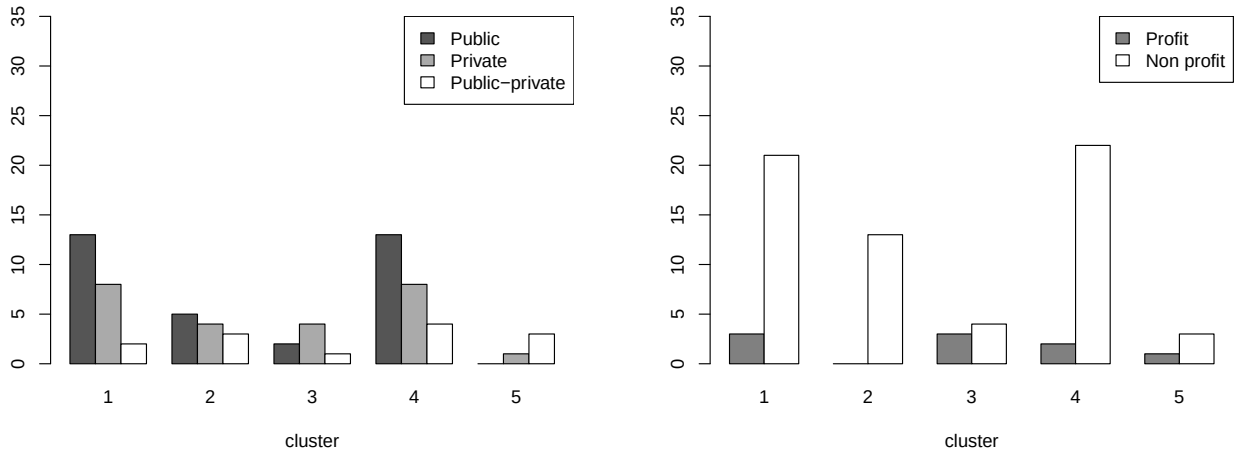
- **Cluster No.3**: has extremely low attitude towards regulatory approaches and low (but close to average) attitude towards soft background mechanisms.
- **Cluster No.4**: has high, above average, attitude towards soft approaches and low, below average, attitude towards regulative approaches to influence policy decisions.
- **Cluster No.5**: has extremely low attitude towards soft approaches and average attitude towards regulative measures.

3.3.6 Cluster membership

Since each cluster is a compound of a variety of stakeholders, the description of clusters according to stakeholder membership is not as clear as looking at single descriptive variables. Below is the description of the different clusters according to cluster similarity and size.

Figure 21: Description of clusters according to distribution of welfare triangle categories



- **Clusters No.1 and No.4**: the largest clusters, both positioned close to the center of diagram and mirrored over diagonal. Their structure according to welfare triangle variables is practically the same. The differences can be observed in structure according to stakeholders' sector of operation (Figure 22). Both clusters have similar representation of stakeholders from Research and Health sector. Regarding the other sectors, cluster 4 is much more diverse: it has slightly higher number stakeholders from Education and two stakeholders from Physical activity and sports category which is not present in the first cluster.
- **Cluster No.2**: mid-sized cluster, positioned above average on both presented dimensions. Regarding sectoral structure, this cluster covers mostly health and education-oriented stakeholders. This is also the only cluster without representative of profit organisations.
- **Cluster No.3**: one of two small clusters with stakeholders who have very low opinion on regulative dimension. Proportionally it is the cluster with highest level of profit organisations. At the same time, this is the only cluster with no representative among stakeholders operating as research organisations.
- **Cluster No.5**: small cluster of stakeholders with least belief in soft mechanisms used to influence the policy decisions in childhood obesity. The cluster is compound of both stakeholders from social affairs sector and other two from research and education sector.

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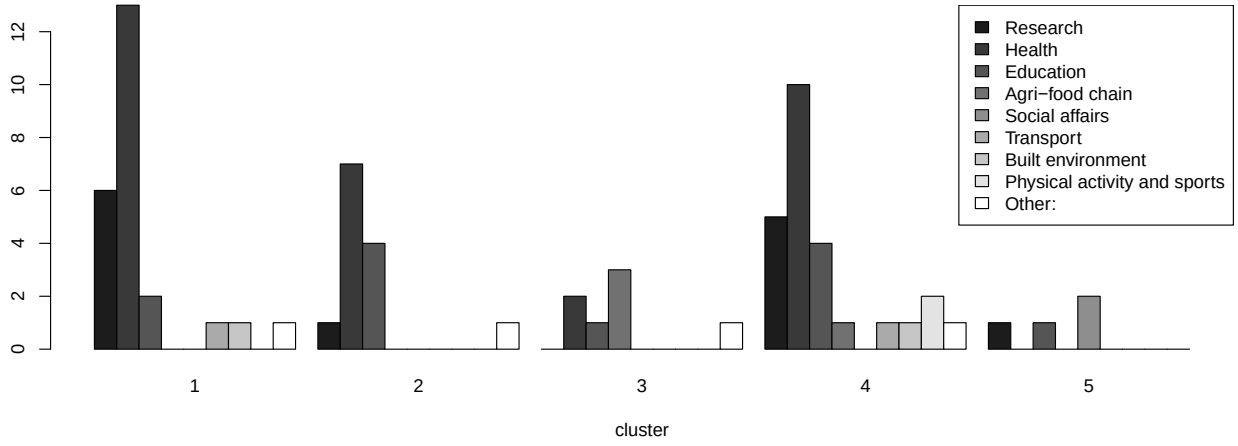
Figure 22: Description of clusters according to distribution of sectors



The indicators presenting the relevance of the named areas or activities for stakeholders have very low interpretative value regarding the division the stakeholders into clusters. The only topic for which cluster members have significantly different mean values is Q7e – *Measures to treat childhood obesity in the health sector*. In this context, the stakeholders that are not active in the promotion of measures to treat childhood obesity in the health sector are mainly placed into cluster No.3.

Table 52: Description of clusters according to areas of stakeholder activities (Q7)

	cluster	1	2	3	4	5
Q7a	Reformulation, taxation, labelling, food marketing	0.37	-0.01	-0.03	-0.39	0.12
Q7b	Social marketing campaigns	0.11	0.06	-0.37	-0.12	0.48
Q7c	Development of measures in the private sector to contribute to tackling childhood obesity	0.00	-0.54	0.16	0.18	0.30
Q7d	Measures to increase physical activity in children	0.03	-0.19	-0.37	0.28	-0.66
Q7e*	Measures to treat childhood obesity in the health sector	-0.27	0.39	-0.72	0.28	-0.11

*Differences are significant at $\alpha \leq 0.05$

The general overview of Table 52 indicates that members of cluster No.1 are active in the topic of *Reformulation, taxation, labelling, food marketing* and do not deal with *measures to treat childhood obesity in the health sector*. Members of cluster No.2 are mainly active in *measures to treat childhood obesity in the health sector* and inactive in *development of measures in the private sector to contribute to tackling childhood obesity*. Members of cluster No.3 indicated low level of engagement in all areas, the highest reported engagement of the members is in *development of measures in the private sector to contribute to tackling childhood obesity*. Stakeholders from cluster No.4 engage on *measures to increase physical activity in children* and *measures to treat childhood obesity in the health sector*. Members of cluster No. 5 are active on the topic of *social marketing campaigns* and *development of measures in the private sector to contribute to tackling childhood obesity*.

3.3.7 Perception of power

Majority of stakeholders believe they are the most powerful on regional and national level. Stakeholders clustered in **cluster No.4** reported the highest level of perceived powerfulness on regional and international levels, while on national level the most powerful are stakeholders from **cluster No.2**. Stakeholders from the first cluster have relatively high but not the highest values on all measured levels. Those clustered in small marginal**clusters No.3 and No.5** reported the lowest level of perceived powerfulness among all.

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Table 53: Description of clusters according to their perception of power (Q41)

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Regional	2.32	2.85	2.00	3.04	2.00
National	2.82	2.92	1.67	2.74	1.25
European	1.91	2.00	1.50	1.96	1.50
International/global	1.68	1.64	1.33	1.83	1.50

3.3.8 Clusters according to opinion on specific policy measures and stakeholder activities

The contextual analysis allowed us to explore some of the differences among the clusters, and look at the opinion of included stakeholders with regards to the impact selected policies, measures and activities can have on obesogenic environments. Cluster differences for each of the measured indicators were tested using ANOVA. Indicators for which the differences were statistically significant with $\alpha = 0.05$ are marked with $*$, those with differences statistically significant at $\alpha = 0.10$ are marked with $\cdot$. Scores are standardised and centered around average, so positive values indicate above– and negative values below–average score. Descriptions of clusters are provided only for indicators where differences are significant with at least $\alpha = 0.10$.

- **Food taxation**: If clusters No.1 and No.4 are relatively close regarding the opinion on the most promising means to shape policies, they are quite far apart on the topic of food taxation. The average score of stakeholders from cluster No.1 is 0.54, and of those from cluster No.4 is -0.10. The extremely negative value (-1.40) is reported by cluster No.3, with stakeholders being mainly profit organisations who also have very low opinion on regulative approaches to policy making.
- **Food labeling**: Members of two clusters share very low opinion on food labeling as successful policy. These are (again) stakeholders from cluster No.3, and stakeholders from cluster No.2, who otherwise seem to have relatively high opinion on regulative and soft approaches to policy formation. On the opposite side of the scale are members from clusters No.5, with strong disbelief in soft mechanisms for building policies, and No.1.
- **Food marketing**: Members of cluster No.1. and No.5 have high opinion on policies dealing with food marketing. On the other hand, the disbelief is high again among members of cluster No.2.
- **Physical activity in schools and Active transport** policies have strong support in cluster No.3 and are disbelieved among members of clusters No.2 and No.5.

Although the differences between clusters for other indicators are not significant, an (indicative) overview can seen in which members of cluster No.1 have high positive opinion on the successfulness of policies regarding reformulation, taxation, labelling and food marketing, members of cluster No.2 have in average very low opinion on all policies except those targeting fiscal measures to promote physical activity. Cluster No.3 has negative opinion on policies targeting food taxation, labelling, fiscal measures to promote physical activity and positive on those targeting social marketing campaigns, capacity building of the health sector and promotion of physical activity in schools and active transport. Cluster No.4 is close to average on all policies except those on capacity building of the health sector. Members of the last cluster (No.5) have high opinion on policies regarding food labelling and food marketing, and low on physical activity and strengthening the health sector.

Table 54: Description of clusters according to successfulness of the policies (Q8)

	cluster	1	2	3	4	5
Q8a$*$	Food taxation	0.54	-0.14	-1.40	-0.10	0.31
Q8b$*$	Food labelling	0.31	-0.52	-0.63	0.13	0.42
Q8c	Food reformulation	0.25	-0.61	0.00	0.06	0.05
Q8d $\cdot$	Food marketing	0.46	-0.45	-0.12	-0.21	0.40
Q8e	Social marketing campaigns	-0.13	-0.36	0.71	0.08	0.38
Q8f	Monitoring business actions and performance	0.18	-0.56	0.02	0.11	0.13
Q8g	Fiscal measures to promote physical activity	-0.05	0.30	-0.42	0.04	-0.24
Q8h $\cdot$	Measures to promote physical activity in schools	-0.00	-0.47	0.40	0.27	-0.84
Q8i $\cdot$	Measures to promote active transport among children	0.13	-0.55	0.63	0.13	-0.57
Q8j	Capacity building for the implementation of programs for the treatment of childhood obesity in the health sector	-0.39	-0.03	0.28	0.33	-0.45

$*$Differences are significant at $\alpha \leq 0.05$; $\cdot$Differences are significant at $\alpha \leq 0.1$

Unfortunately, none of the indicators describing importance of relations have significant differences in means between obtained clusters (Table 54). The question for this set of indicators was: “How important are the following

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attributes of multi-sectoral and multi-stakeholder relationships in decreasing childhood obesity?". Therefore, the following interpretation is just indicative and reveals some general structure of the attitudes which is, for of each cluster, very stable over all 11 indicators. All mean values of responses of stakeholders from cluster No.1 are negative (below average) and none of them show any major deviations. Since overall average response for all indicators was above 4, this suggests all mentioned attributes are important but less important than in average for members of all clusters. On the other hand, responses of cluster No.2 to all indicators are positive (above average), and the highest overall when compared to other clusters. For cluster No.3, the differences are more diverse with indicative positive attitudes towards the understanding the necessity of the joint multi-stakeholder approach and readiness to collaborate with other stakeholders and indicative negative attitude towards capacities and resources which stakeholders have available to cooperate with others. In cluster No.4, values are varying around zero (mean) with no significant deviations. Cluster No.5 has stronger indicative negative attitudes on all attributes except one: consideration of health inequalities and social determinants.

Table 55: Description of clusters according to importance of relations (Q38)

	cluster	1	2	3	4	5
Q38a	understanding of the necessity of the joint multi-stakeholder approach	-0.34	0.35	0.41	0.11	-0.40
Q38b	readiness to collaborate with other stakeholders	-0.18	0.28	0.46	-0.01	-0.49
Q38c	capacities and resources which stakeholders have available to cooperate with others	-0.18	0.37	-0.35	0.12	-0.35
Q38d	necessary skills and knowledge stakeholders possess to improve cooperation	-0.20	0.55	-0.21	0.03	-0.45
Q38e	capacities and resources available to cooperate	-0.19	0.31	-0.20	0.14	-0.43
Q38f	willingness to work on a multi-sectoral initiatives	-0.10	0.71	-0.19	-0.13	-0.70
Q38g	level of trust among stakeholders	-0.21	0.33	0.06	0.06	-0.29
Q38h	accountability in multi-stakeholder relationships	0.00	0.45	-0.02	-0.24	-0.02
Q38i	influence of drivers for action (economic, public health, ...)	-0.03	0.47	-0.30	-0.12	-0.18
Q38j	consideration of health inequalities and social determinants	-0.12	0.50	-0.14	-0.18	0.40
Q38k	consideration of sustainability and environmental issues	-0.16	0.38	0.28	-0.02	-0.52

Table 56: Summary table of clustering results according to the most promising means to influence the policy decisions.

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Cluster size	24	13	7	25	4
Attitude towards regulative approaches	High	High	Extremely low	Low	Average
Attitude towards soft approaches to influence policy decisions	Low	High	Low (close to average)	High	Extremely low
Welfare triangle categories	Research Health Education	Health Education NO profit org	High in profit org. NO research	Research Health Education PA	Social affairs (R+Ed)
Q7a*	+			–	
Q7b			–		+
Q7c		–			+
Q7d			–	+	– –
Q7e	–	+	– –	+	
Perception of power	Reg +++ Nat ++++ EU ++ Glob ++	Reg ++++ Nat ++++ EU ++ Glob ++	Reg ++ Nat ++ EU + Glob +	Reg +++++ Nat ++++ EU ++ Glob +	Reg ++ Nat + EU + Glob +
Indicative interpretation Q38**	Neg, **all below average**, less important	**All above average**, the highest among all clusters	Pos. for necessity, readiness, neg. for capacities and resources	**All around mean values**	Strong neg. on majority, pos. for health inequalities, social determinants

Q7: 1-1,5 +; 1,5-2 ++; 2-2,5 +++; 2,5-3 ++++, >3 +++++

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Table 57: Summary table of clustering results according to the most promising means to influence the policy decisions - part 2.

Clust.	Size	Q8a*	Q8b*	Q8c	Q8d·	Q8e	Q8f	Q8g	Q8h·	Q8i·	Q8j
1	24	+++	++	++	+++	–	+	–	0	+	– –
2	13	–	– – –	– – – –	– – –	– –	– – –	++	– – –	– – –	–
3	7	– – – –!	– – – –	0	–	++++	+	– – –	++	++++	++
4	25	–	+	+	– –	+	+	+	++	+	++
5	4	++	++	+	++	++	+	– –	– – – –	– – –	– – –

Q8: 0,01- 0,20 (-/+); 0,21 – 0,40 (–/++); 0,41 – 0,60 (—/+++); 0,61 and more (—-/++++)

Table 58: Variable wordings

Relevance of listed areas or activities for the organisation		How successful are listed policies, measures and activities?	
Q7a	Reformulation, taxation, labelling, food marketing	Q8a∗	Food taxation
Q7b	Social marketing campaigns	Q8b∗	Food labelling
Q7c	Development of measures in the private sector to contribute to tackling childhood obesity	Q8c	Food reformulation
Q7d	Measures to increase physical activity in children	Q8d ·	Food marketing
Q7e∗	Measures to treat childhood obesity in the health sector	Q8e	Social marketing campaigns
		Q8f	Monitoring business actions and performance
		Q8g	Fiscal measures to promote physical activity
		Q8h ·	Measures to promote physical activity in schools
		Q8i ·	Measures to promote active transport among children
		Q8j	Capacity building for the implementation of programs for the treatment of childhood obesity in the health sector

∗Differences are significant at $\alpha \leq 0.05$; ·Differences are significant at $\alpha \leq 0.1$

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3.4 Agreement charts - clustering of stakeholdes

In the following sections, agreement charts are introduced as a tool for sounding the attitudes of stakeholders towards key questions addressed by this survey. Results were used by organisers of the first STOP stakeholder conference held in Brussels in September 2019, to prepare for the meeting with stakeholders and preparation of *the stakeholders dialogues scenario proposals*.

Agreement charts are graphical representations of distances among stakeholders according to their responses to questions on the successfulness of selected policies, measures and activities broadly presented in Section 3.2. The same distances are additionally used to assign stakeholders to (2-3) clusters, which are described according set of basic descriptive variables.

It is important to notice that due to small number of cases, some of the descriptions of obtained clusters are only informative. This is the consequence to data splitting and survey design focused on participation of stakeholders on specific topics.

Presentation of agreement chart interpretation can be found for the example of food taxation (Section 3.4.1) which is one of the items in a section addressing reformulation, taxation, labeling and food marketing (WP4). Agreement charts with descriptive diagrams of obtained clusters for remaining items are available in Annex D.

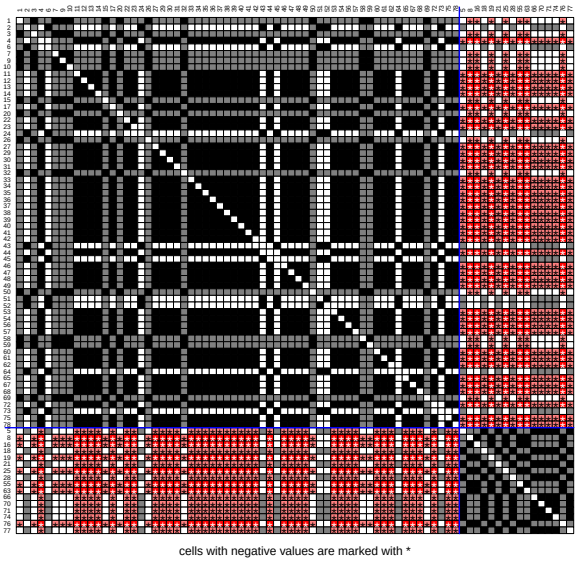
The following subsections represent results of the stakeholders survey with clustering of stakeholders by topics. Clustering is based on a question discussed in Chapter 3.

3.4.1 WP4 – Regulation and Fiscal Policies: Food taxation

Agreement chart

Figure 23 is based on attitudes of stakeholders towards succesfulness of *food taxation* as measure against childhood obesity. Stakeholders are clustered in two clusters. Cluster 1 consists of 62 stakeholders agreeing with the statement with average response of 4,5. On the other hand, in Cluster 2, there is 16 stakeholders, with average response of 1,6 (Table 59). In matrix representation, each row and each column represents a stakeholder, the (dis)similarity of responses of two stakeholders (x_i and x_j) is represented on the crossing of rows i and j. Black colour on the crossing indicates high level of agreement, while red colour indicate disagreement on the topic. Shades indicate the strength of (dis)agreement.

Figure 23: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Food taxation



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Description of obtained clusters

Table 59: Description of clusters

	Cluster 1	Cluster 2
Average response	4.5	1.6
Number of org.	62	16

Table 60: Coverage according to welfare triangle

			Cluster 1	Cluster 2
Public	Profit	Formal	2	0
Private	Profit	Formal	7	3
Public-private	Profit	Formal	0	1
Public	No-nprofit	Formal	30	3
Private	No-nprofit	Formal	14	5
Public-private	No-nprofit	Formal	6	4
Public	Profit	Informal	0	0
Private	Profit	Informal	0	0
Public-private	Profit	Informal	0	0
Public	No-nprofit	Informal	1	0
Private	No-nprofit	Informal	0	0
Public-private	No-nprofit	Informal	0	0

Table 61: Coverage according to sector

	Cluster 1	Cluster 2
Sector		
Research	15	0
Health	30	7
Education	6	1
Agri-food chain	2	5
Social affairs	3	0
Environment	0	0
Transport	2	1
Built environment	0	0
Physical activity and sports	2	0
Finance or banking investment	0	0
Labour	0	0
Other:	2	2

Table 60 represents the coverage of the stakeholders according to welfare triangle. It shows that a majority of respondents are from public, non-profit and formal organisations. From the sector point of view (Table 61) the majority of organisations operate in Health, Research and Education/Agri-food chain (equally). In Research sector we could see that respondents have the same opinion. On the other hand, this is not true in Health and Agri-food chain. Furthermore, figure below shows us average responses to selected questions by cluster members (Figure 24). Question (Q38) refers to the importance of the following attributes of multi-stakeholder collaboration in decreasing childhood obesity. The only statistically significant difference between clusters - *readiness to collaborate with other stakeholders* - is marked with asterisk.

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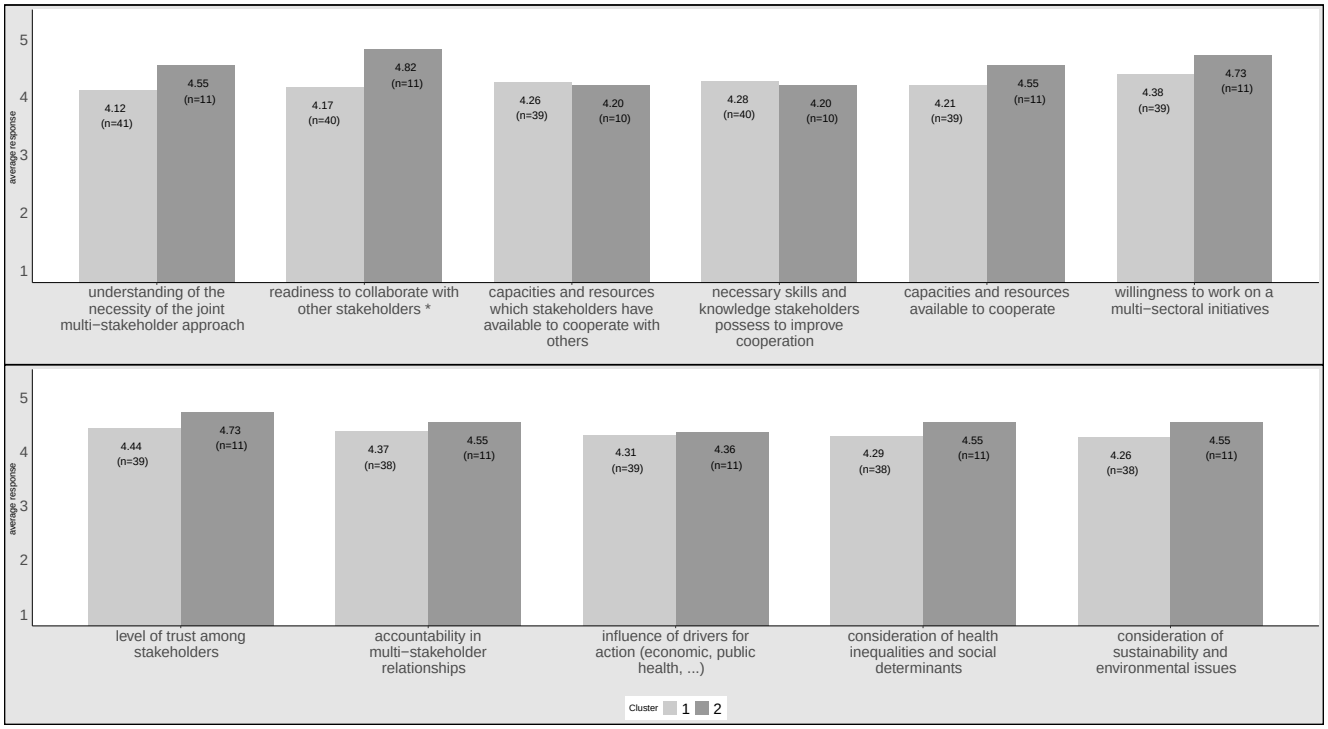
Figure 24: For your organisation, how important are the following attributes of multi-stakeholder collaboration in decreasing childhood obesity?



Next set of figures (25 –27) refer to questions Q35-Q37 which measure two levels of facing challenges (most promising means, commonly used methods).

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Figure 25: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

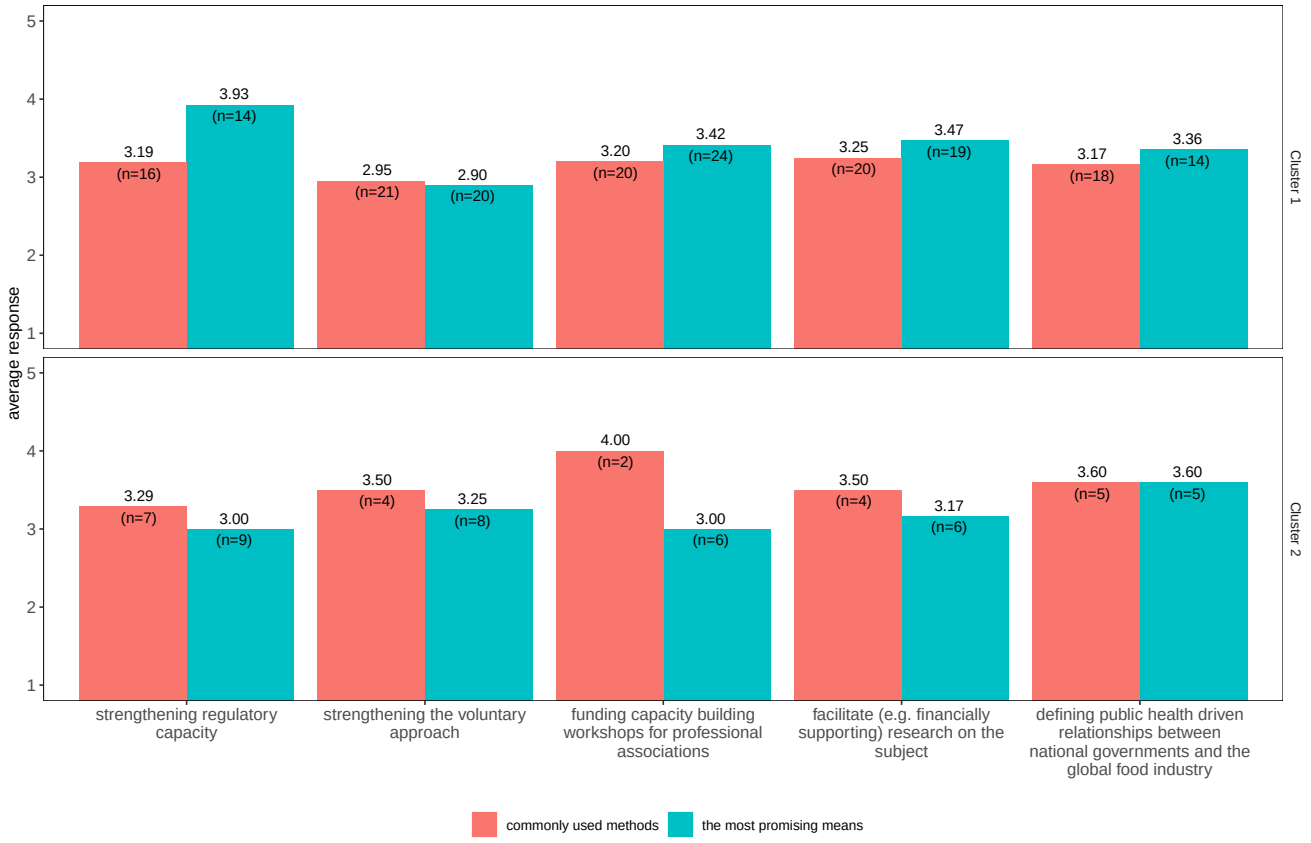

Figure 26: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

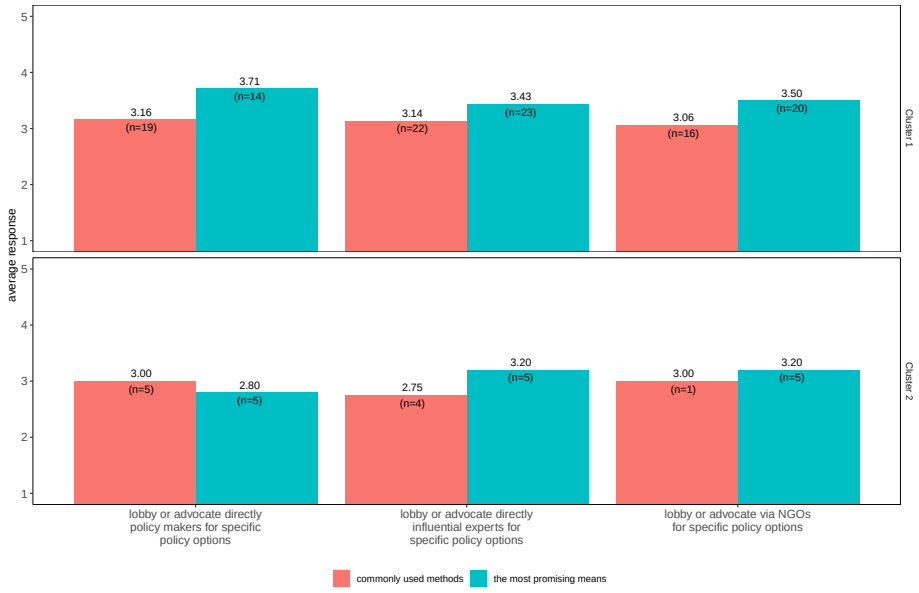

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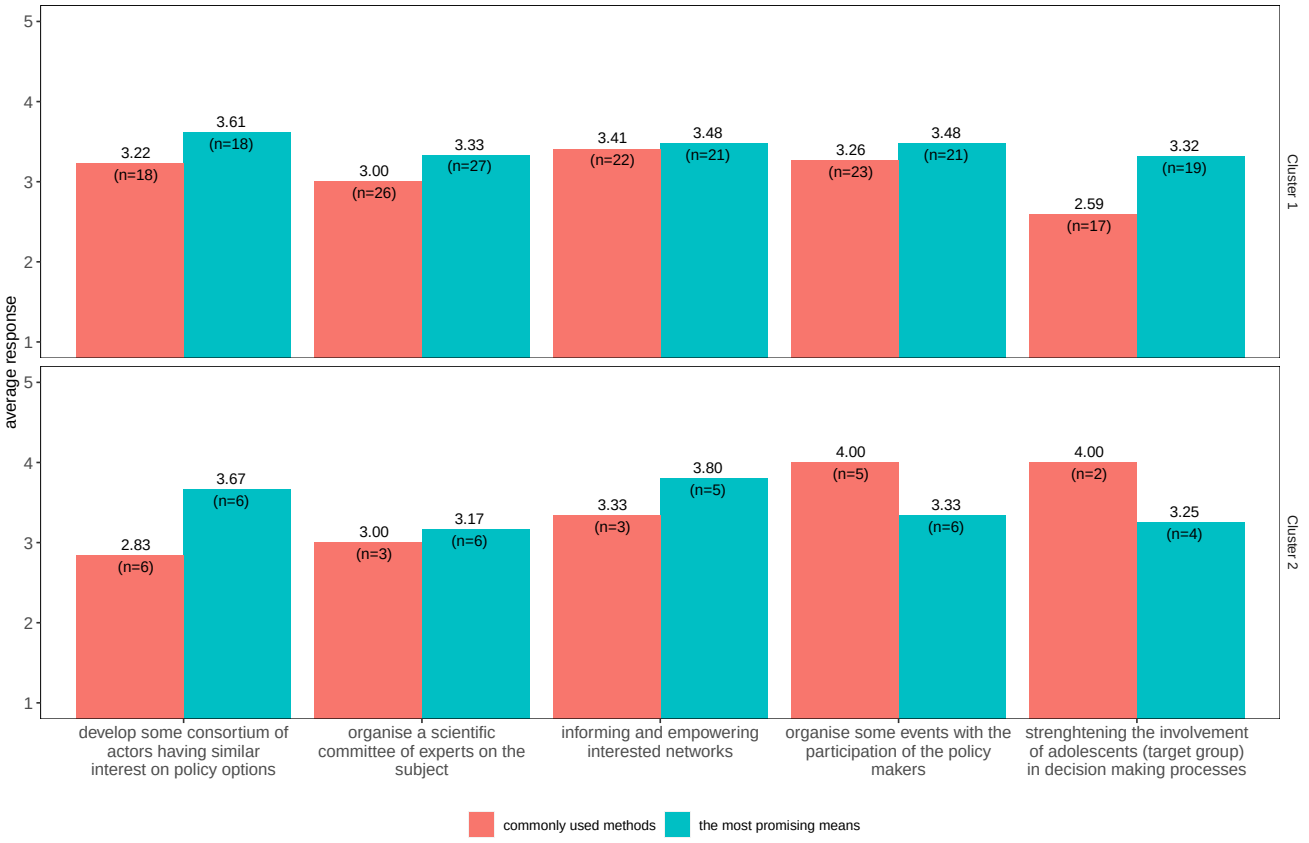
Figure 27: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?



In table below, we can see how stakeholders perceive the power position of their organisation in the policy decision-making processes regarding childhood obesity. In general, we could see that they perceive the power of their organisation at lower levels. Perceived power decreased with increase of the level of engagement. The difference is only that in Cluster 1 do stakeholders perceive more power of their organisation at national level than at regional level.

Table 62: How powerful do you perceive the position of your organisation in the policy decision-making processes regarding childhood obesity?

Cluster 1

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	27%	27%	35%	11%	3%	37
National level	14%	35%	32%	16%	5%	37
European level	36%	39%	19%	6%	0%	36
International/Global level	50%	33%	11%	6%	0%	36

Cluster 2

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	27%	36%	18%	18%	9%	11
National level	30%	40%	20%	0%	10%	10
European level	27%	55%	18%	0%	0%	11
International/Global level	36%	55%	9%	0%	0%	11

3.4.2 WP4 – Regulation and Fiscal Policies: Food labeling

If we look at the picture below, we could see that in food labeling there are three clusters of stakeholders. In Cluster 1 there are 13 stakeholders who agree with the below statement with an average response of 2,5. In Cluster

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2, there are 16 stakeholders, with an average response 4 and in Cluster 3 there are 46 stakeholders with an average response 5.

Figure 28: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Food labeling

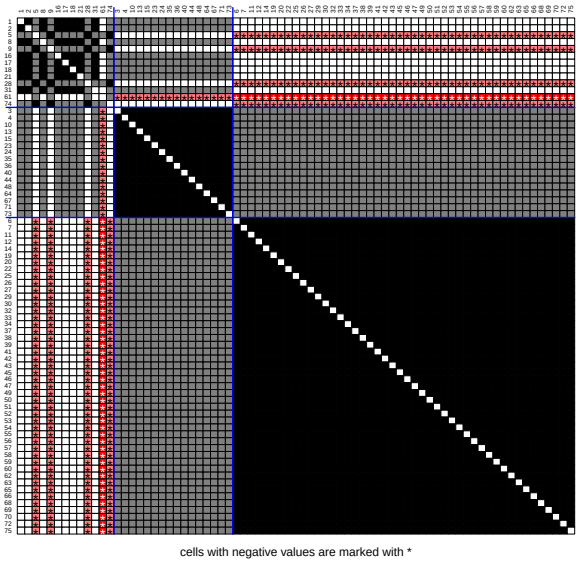

Table 64 shows us coverage of the respondents according to welfare triangle. We see that a majority are from public, non profit and formal organizations. From a sectoral perspective, the majority of organizations operate in the health and secondly in research. In the health sector we could see, that respondents have differing opinions.

Table 63: Description of clusters

	Cluster 1	Cluster 2	Cluster 3
Average response	2.5	4	5
Number of org.	13	16	46

Table 64: Coverage according to welfare triangle

			Cluster 1	Cluster 2	Cluster 3
Public	Profit	Formal	0	0	1
Private	Profit	Formal	2	2	6
Public-private	Profit	Formal	1	0	0
Public	No-nprofit	Formal	2	11	18
Private	No-nprofit	Formal	4	2	13
Public-private	No-nprofit	Formal	3	1	6
Public	Profit	Informal	0	0	0
Private	Profit	Informal	0	0	0
Public-private	Profit	Informal	0	0	0
Public	No-nprofit	Informal	1	0	0
Private	No-nprofit	Informal	0	0	0
Public-private	No-nprofit	Informal	0	0	0

Table 65: Coverage according to sector

	Cluster 1	Cluster 2	Cluster 3
Sector			
Research	1	6	8
Health	8	5	23
Education	1	1	5
Agri-food chain	3	1	3
Social affairs	0	1	2
Environment	0	0	0
Transport	0	1	1
Built environment	0	0	0
Physical activity and sports	0	0	1
Finance or banking investment	0	0	0
Labour	0	0	0
Other:	0	1	3

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3.4.3 WP4 – Regulation and Fiscal Policies: Reformulation

If we look at the picture below, we see that reformulation includes three clusters of stakeholders. In Cluster 1 there are 23 stakeholders which agree with th statement with an average response of 4. In Cluster 2, there are 12 stakeholders with an average response of 2,7 and in Cluster 3 there are 37 stakeholders with average response of 5.

Figure 29: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Reformulation

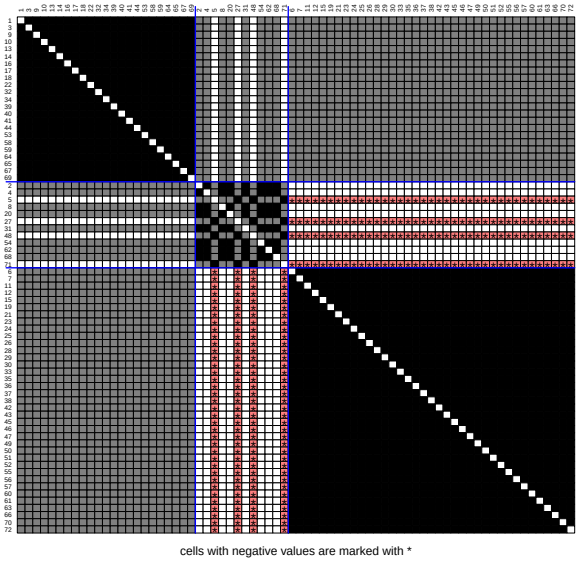

Table 67 shows us coverage of the respondents according to welfare triangle. We see that a majority are from public, non profit and formal organizations. From a sectoral perspective, the majority of organizations operate in the health and secondly in the research sphere. In the health sector we could see, that respondents have different opinions.

Table 66: Description of clusters

	Cluster 1	Cluster 2	Cluster 3
Average response	4	2.7	5
Number of org.	23	12	37

Table 67: Coverage according to welfare triangle

			Cluster 1	Cluster 2	Cluster 3
Public	Profit	Formal	1	0	0
Private	Profit	Formal	2	1	6
Public-private	Profit	Formal	0	1	0
Public	No-nprofit	Formal	9	4	18
Private	No-nprofit	Formal	6	3	9
Public-private	No-nprofit	Formal	5	2	3
Public	Profit	Informal	0	0	0
Private	Profit	Informal	0	0	0
Public-private	Profit	Informal	0	0	0
Public	No-nprofit	Informal	0	1	0
Private	No-nprofit	Informal	0	0	0
Public-private	No-nprofit	Informal	0	0	0

Table 68: Coverage according to sector

	Cluster 1	Cluster 2	Cluster 3
Sector			
Research	4	0	11
Health	10	8	18
Education	2	2	3
Agri-food chain	4	1	2
Social affairs	1	0	1
Environment	0	0	0
Transport	1	1	0
Built environment	0	0	0
Physical activity and sports	1	0	0
Finance or banking investment	0	0	0
Labour	0	0	0
Other:	0	0	2

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3.4.4 WP4 – Regulation and Fiscal Policies: Food marketing

If we look at the picture below, we could see that in reformulation there are three clusters of stakeholders. In Cluster 1 there are 48 stakeholders who agree with statement with an average response of 5. In Cluster 2, there are 20 stakeholders with an average response of 3,7 and in Cluster 3 there are 8 stakeholders with an average response of 1,5.

Figure 30: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Food marketing

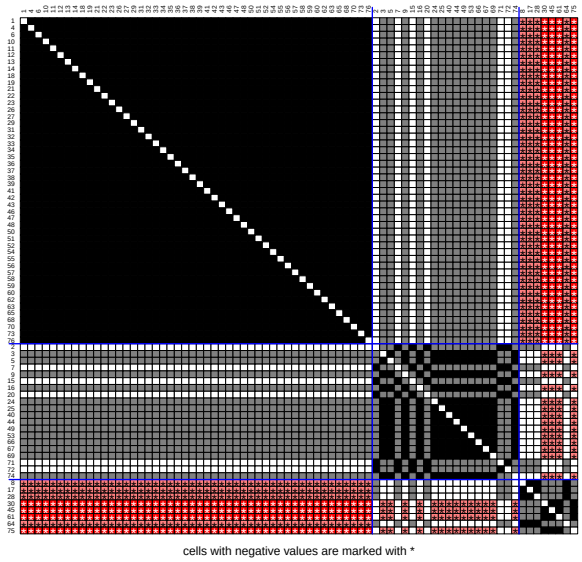

Table 70 shows us coverage of the respondents according to the welfare triangle. We see that a majority are from public, non profit and formal organizations, and private, non profit and formal organisations follow. From a sectoral perspective, the majority of organizations operate in the health and secondly in the research sector. In the health sector we could see that respondents do not have a same opinion.

Table 69: Description of clusters

	Cluster 1	Cluster 2	Cluster 3
Average response	5	3.7	1.5
Number of org.	48	20	8

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Table 70: Coverage according to welfare triangle

			Cluster 1	Cluster 2	Cluster 3
Public	Profit	Formal	1	1	0
Private	Profit	Formal	5	3	2
Public-private	Profit	Formal	1	0	0
Public	No-nprofit	Formal	23	8	1
Private	No-nprofit	Formal	12	4	3
Public-private	No-nprofit	Formal	4	3	2
Public	Profit	Informal	0	0	0
Private	Profit	Informal	0	0	0
Public-private	Profit	Informal	0	0	0
Public	No-nprofit	Informal	0	1	0
Private	No-nprofit	Informal	0	0	0
Public-private	No-nprofit	Informal	0	0	0

Table 71: Coverage according to sector

	Cluster 1	Cluster 2	Cluster 3
Sector			
Research	11	5	0
Health	26	4	7
Education	5	2	0
Agri-food chain	1	5	1
Social affairs	2	1	0
Environment	0	0	0
Transport	1	2	0
Built environment	0	0	0
Physical activity and sports	0	0	0
Finance or banking investment	0	0	0
Labour	0	0	0
Other:	2	1	0

3.4.5 WP5 – Consumer Behaviour: Creating Demand for Healthy Lifestyles

Figure below, shows us that in social marketing campains there are three clusters of stakeholders. In Cluster 1 there are 27 stakeholders who agree with the statement with an average response of 4,0. In Cluster 2, there are 21 stakeholders with average response of 2,5 and in Cluster 3 there are 44 stakeholders with an average response of 5,0.

Figure 31: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Social marketing campains

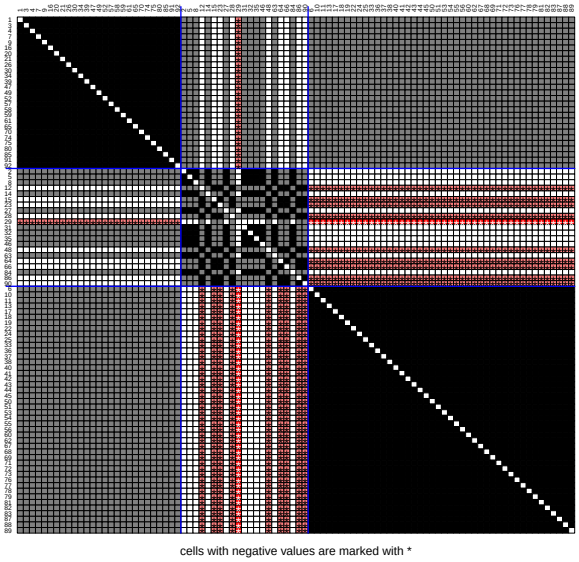

Table 73 shows us coverage of the respondents according to welfare triangle. We see that a majority are from public, non profit and formal organizations; private, non profit and formal organisations follow. From a sectoral perspective, organizations operate in health, research and education. Furthermore, in all the represented sectors we could see that respondents do not have a same opinion. Especially, the health sector had differing opinions.

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Table 72: Description of clusters

	Cluster 1	Cluster 2	Cluster 3
Average response	4	2.5	5
Number of org.	27	21	44

Table 73: Coverage according to welfare triangle

			Cluster 1	Cluster 2	Cluster 3
Public	Profit	Formal	1	0	1
Private	Profit	Formal	3	3	5
Public-private	Profit	Formal	0	0	1
Public	No-nprofit	Formal	12	10	21
Private	No-nprofit	Formal	8	5	10
Public-private	No-nprofit	Formal	3	2	5
Public	Profit	Informal	0	0	0
Private	Profit	Informal	0	0	0
Public-private	Profit	Informal	0	0	0
Public	No-nprofit	Informal	0	1	0
Private	No-nprofit	Informal	0	0	0
Public-private	No-nprofit	Informal	0	0	0

Table 74: Coverage according to sector

	Cluster 1	Cluster 2	Cluster 3
Sector			
Research	4	4	8
Health	13	12	18
Education	5	2	3
Agri-food chain	2	2	3
Social affairs	1	0	3
Environment	0	0	0
Transport	2	1	2
Built environment	0	0	1
Physical activity and sports	0	0	1
Finance or banking investment	0	0	0
Labour	0	0	0
Other:	0	0	5

3.4.6 WP6 – Healthy food and food choice environments: Monitoring business actions and performance

Figure 32 shows us that in healthy food and food choice environments, there are three clusters of stakeholders. In Cluster 1 there are 37 stakeholders who agree with statement with an average response of 3,6. In Cluster 2, there are 6 stakeholders with an average response of 1,5 and in Cluster 3 there are 34 stakeholders with an average response of 5,0.

Figure 32: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Monitoring business actions and performance

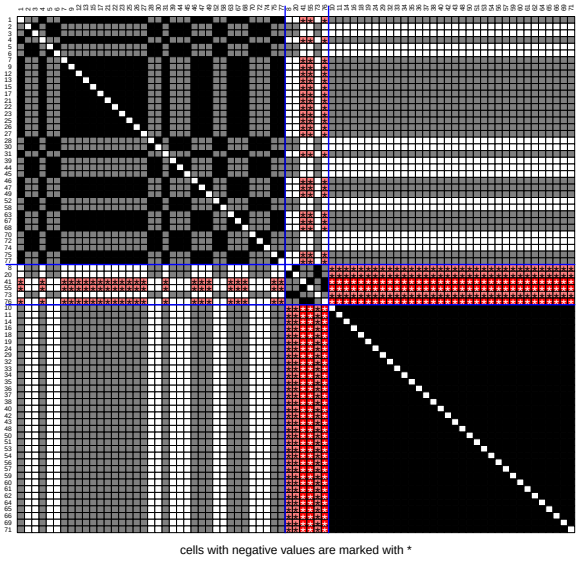

Table 76 shows the coverage respondents according to the welfare triangle. We see that majority are from public, non profit and formal organizations; private, non profit and formal organisations. Public-private (non profit,

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formal) organisations are also represented. From a sectoral perspective, the majority of organizations operate in health, research and education sectors. Other sectors were also answering this question (eg. agri-food chain, social affairs, transport, physical activity and sports). Furthermore, in the health, research and agri-food chain sectors we could see that respondents do not have a same opinion. This is particularly striking with the health sector.

Table 75: Description of clusters

	Cluster 1	Cluster 2	Cluster 3
Average response	3.6	1.5	5
Number of org.	37	6	34

Table 76: Coverage according to welfare triangle

			Cluster 1	Cluster 2	Cluster 3
Public	Profit	Formal	0	2	1
Private	Profit	Formal	2	2	4
Public-private	Profit	Formal	1	0	0
Public	No-nprofit	Formal	20	1	14
Private	No-nprofit	Formal	7	0	10
Public-private	No-nprofit	Formal	6	1	3
Public	Profit	Informal	0	0	0
Private	Profit	Informal	0	0	0
Public-private	Profit	Informal	0	0	0
Public	No-nprofit	Informal	1	0	0
Private	No-nprofit	Informal	0	0	0
Public-private	No-nprofit	Informal	0	0	0

Table 77: Coverage according to sector

	Cluster 1	Cluster 2	Cluster 3
Sector			
Research	7	2	6
Health	14	3	17
Education	6	0	2
Agri-food chain	3	1	2
Social affairs	2	0	2
Environment	0	0	0
Transport	2	0	1
Built environment	1	0	0
Physical activity and sports	0	0	2
Finance or banking investment	0	0	0
Labour	0	0	0
Other:	2	0	2

3.4.7 WP7 – Physical activity: Fiscal measures to promote physical activity

Figure 33 indicates that in fiscal measures to promote physical activity there are three clusters of stakeholders. In Cluster 1 there are 44 stakeholders who agree with the statement with average response of 3,6. In Cluster 2, there are 42 stakeholders with an average response of 5,0 and in Cluster 3 there are 9 stakeholders with an average response of 1,6.

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Figure 33: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Fiscal measures to promote physical activity

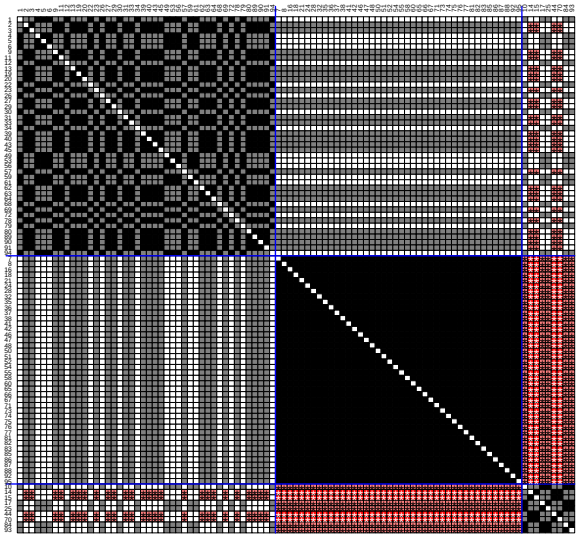

Table 79 shows the coverage of respondents according to the welfare triangle. We see that a majority are from public, non profit and formal organizations; private, non profit and formal organisations follow. Public-private (non profit, formal) organisations are also represented. From a sectoral perspective, a majority of organizations operate in the health, research and education sectors. Other sectors were also answering this question (eg. agri-food chain, social affairs, transport, physical activity and sports). Furthermore, the health, research and agri-food chain sectors highlight that respondents do not have the same opinion. The health sector had the most drastic different perspective. On the other hand, the physical activity and sports sectors completely agree with the statement.

Table 78: Description of clusters

	Cluster 1	Cluster 2	Cluster 3
Average response	3.6	5	1.6
Number of org.	44	42	9

Table 79: Coverage according to welfare triangle

			Cluster 1	Cluster 2	Cluster 3
Public	Profit	Formal	2	0	1
Private	Profit	Formal	3	3	2
Public-private	Profit	Formal	0	1	0
Public	No-nprofit	Formal	24	22	0
Private	No-nprofit	Formal	9	12	2
Public-private	No-nprofit	Formal	5	3	3
Public	Profit	Informal	0	0	0
Private	Profit	Informal	0	0	0
Public-private	Profit	Informal	0	0	0
Public	No-nprofit	Informal	0	0	0
Private	No-nprofit	Informal	0	0	0
Public-private	No-nprofit	Informal	0	0	1

Table 80: Coverage according to sector

	Cluster 1	Cluster 2	Cluster 3
Sector			
Research	8	5	1
Health	22	20	6
Education	7	5	1
Agri-food chain	4	0	1
Social affairs	1	3	0
Environment	0	0	0
Transport	2	2	0
Built environment	0	1	0
Physical activity and sports	0	2	0
Finance or banking investment	0	0	0
Labour	0	0	0
Other:	0	4	0

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3.4.8 WP7 – Physical activity: Measures to promote physical activity in schools

Figure 34 shows us that in measures to promote physical activity in schools there are three clusters of stakeholders. In Cluster 1 there are 17 stakeholders who agree with statement with an average response of 4,0. In Cluster 2, there are 64 stakeholders with an average response of 5,0 and in Cluster 3 there are 9 stakeholders with an average response of 2,6. This indicates a majority of stakeholders agree on successfulness of policies, measures and activities in childhood obesity prevention regarding promotion physical activity in schools.

Figure 34: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Measures to promote physical activity in schools

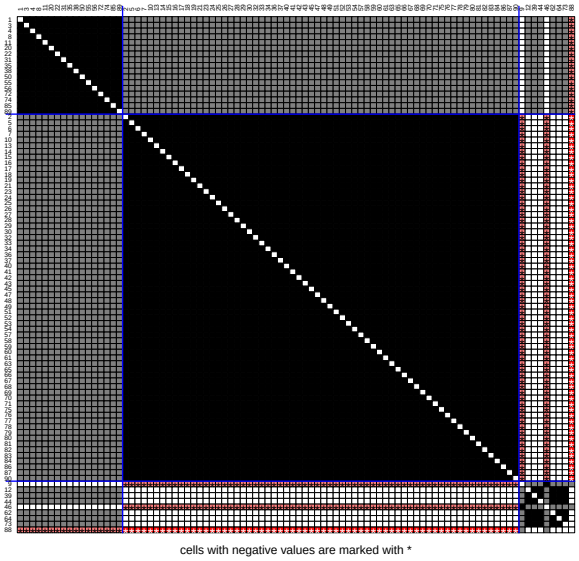

Table 82 shows coverage of respondents according to the welfare triangle. We see that majority are from public, non profit and formal organizations; private, non profit and formal organisations follow. Public-private (non profit, formal) organisations and private, profit, formal organisations are also represented. Most of the stakeholders are in Cluster 1 and 2. From a sectoral perspective, the majority of organizations operate in the health, research and education sectors. Other sectors were also answering this question (eg. agri-food chain, social affairs, transport, physical activity and sports, built environment, other). There was only one stakeholder from the physical activity sector.

Table 81: Description of clusters

	Cluster 1	Cluster 2	Cluster 3
Average response	4	5	2.6
Number of org.	17	64	9

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Table 82: Coverage according to welfare triangle

			Cluster 1	Cluster 2	Cluster 3
Public	Profit	Formal	0	1	0
Private	Profit	Formal	3	4	1
Public-private	Profit	Formal	0	1	0
Public	No-nprofit	Formal	7	35	4
Private	No-nprofit	Formal	5	17	0
Public-private	No-nprofit	Formal	2	5	2
Public	Profit	Informal	0	0	0
Private	Profit	Informal	0	0	0
Public-private	Profit	Informal	0	0	0
Public	No-nprofit	Informal	0	0	0
Private	No-nprofit	Informal	0	0	0
Public-private	No-nprofit	Informal	0	0	1

Table 83: Coverage according to sector

	Cluster 1	Cluster 2	Cluster 3
Sector			
Research	3	8	1
Health	8	33	7
Education	3	8	1
Agri-food chain	2	2	0
Social affairs	1	3	0
Environment	0	0	0
Transport	0	4	0
Built environment	0	1	0
Physical activity and sports	0	1	0
Finance or banking investment	0	0	0
Labour	0	0	0
Other:	0	4	0

3.4.9 WP7 – Physical activity: Measures to promote active transport among children

Figure 35 shows us that in measures to promote active transport among children there are three clusters of stakeholders. In Cluster 1 there are 61 stakeholders who agree with statement with an average response of 5,0. In Cluster 2, there are 22 stakeholders with an average response of 3,7 and in Cluster 3 there are 7 stakeholders with an average response of 1,7.

Figure 35: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Measures to promote active transport among children

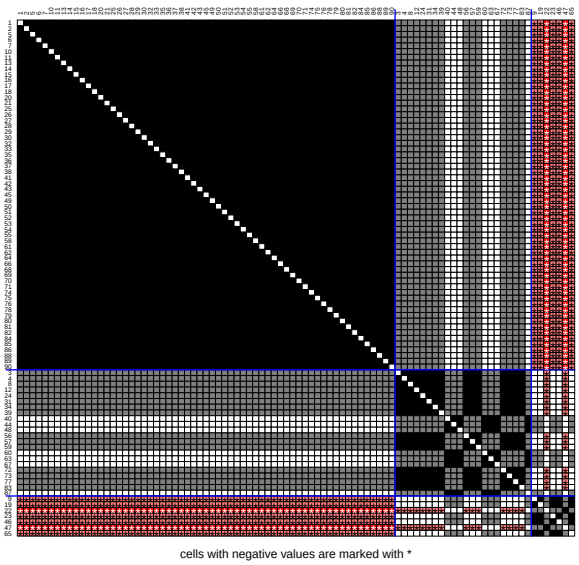

Table 85 shows coverage of respondents according to the welfare triangle. We see that a majority are from public, non profit and formal organizations; private, non profit and formal organisations. Public-private (non profit, formal) and private, profit, formal organisations are also represented. Most of the stakeholders are in Cluster 1 and 2. From sectoral perspective, the majority of organizations operate in the health, research and education sectors. Other sectors were also answering this question (eg. agri-food chain, social affairs, transport, physical activity and sports, built environment, other). There was only one stakeholder from the physical activity sector.

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Table 84: Description of clusters

	Cluster 1	Cluster 2	Cluster 3
Average response	5	3.7	1.7
Number of org.	61	22	7

Table 85: Coverage according to welfare triangle

			Cluster 1	Cluster 2	Cluster 3
Public	Profit	Formal	0	2	0
Private	Profit	Formal	5	2	1
Public-private	Profit	Formal	1	0	0
Public	No-nprofit	Formal	35	9	2
Private	No-nprofit	Formal	17	2	3
Public-private	No-nprofit	Formal	3	5	1
Public	Profit	Informal	0	0	0
Private	Profit	Informal	0	0	0
Public-private	Profit	Informal	0	0	0
Public	No-nprofit	Informal	0	0	0
Private	No-nprofit	Informal	0	0	0
Public-private	No-nprofit	Informal	0	1	0

Table 86: Coverage according to sector

	Cluster 1	Cluster 2	Cluster 3
Sector			
Research	9	2	1
Health	30	14	4
Education	6	3	2
Agri-food chain	4	0	0
Social affairs	3	1	0
Environment	0	0	0
Transport	3	1	0
Built environment	2	0	0
Physical activity and sports	1	0	0
Finance or banking investment	0	0	0
Labour	0	0	0
Other:	3	1	0

3.4.10 WP8 – Health Care: Capacity building for the implementation of programs

Figure 36 shows us that in questions related to capacity building for the implementation of programs, there are two clusters of stakeholders. In Cluster 1 there are 65 stakeholders who agree with statement with an average response of 4,8. In Cluster 2, there are 14 stakeholders with an average response of 2,6.

Figure 36: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Measures to promote active transport among children

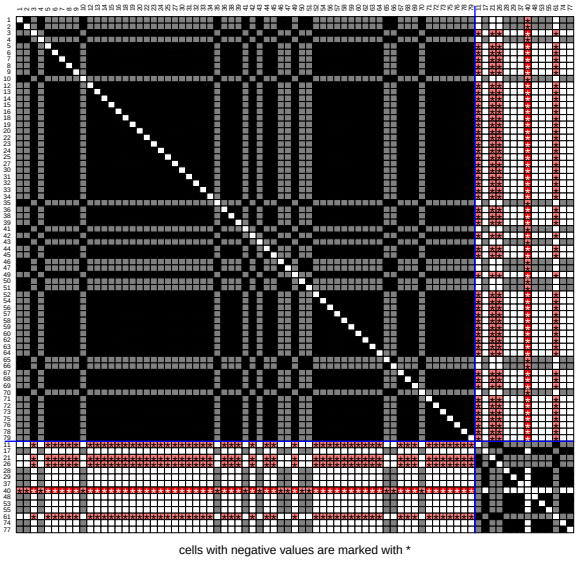

Table 88 shows the coverage of respondents according to the welfare triangle. We see that a majority are from public, non profit and formal organizations; private, non profit and formal organisations. Public-private (non profit, formal) and private, profit, formal organisations are also represented. From a sectoral perspective, the

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majority of organizations operate in the health, research and education sectors. Other sectors were also answering this question (eg. agri-food chain, social affairs, transport, physical activity and sports, built environment, other). Even though the statement is related to health care, we see that the health care sector has differing opinions.

Table 87: Description of clusters

	Cluster 1	Cluster 2
Average response	4.8	2.6
Number of org.	65	14

Table 88: Coverage according to welfare triangle

			Cluster 1	Cluster 2
Public	Profit	Formal	1	1
Private	Profit	Formal	3	3
Public-private	Profit	Formal	1	0
Public	No-nprofit	Formal	36	4
Private	No-nprofit	Formal	14	4
Public-private	No-nprofit	Formal	7	2
Public	Profit	Informal	0	0
Private	Profit	Informal	0	0
Public-private	Profit	Informal	0	0
Public	No-nprofit	Informal	0	0
Private	No-nprofit	Informal	0	0
Public-private	No-nprofit	Informal	1	0

Table 89: Coverage according to sector

	Cluster 1	Cluster 2
Sector		
Research	11	2
Health	31	10
Education	10	1
Agri-food chain	3	0
Social affairs	4	0
Environment	0	0
Transport	1	1
Built environment	1	0
Physical activity and sports	1	0
Finance or banking investment	0	0
Labour	0	0
Other:	3	0

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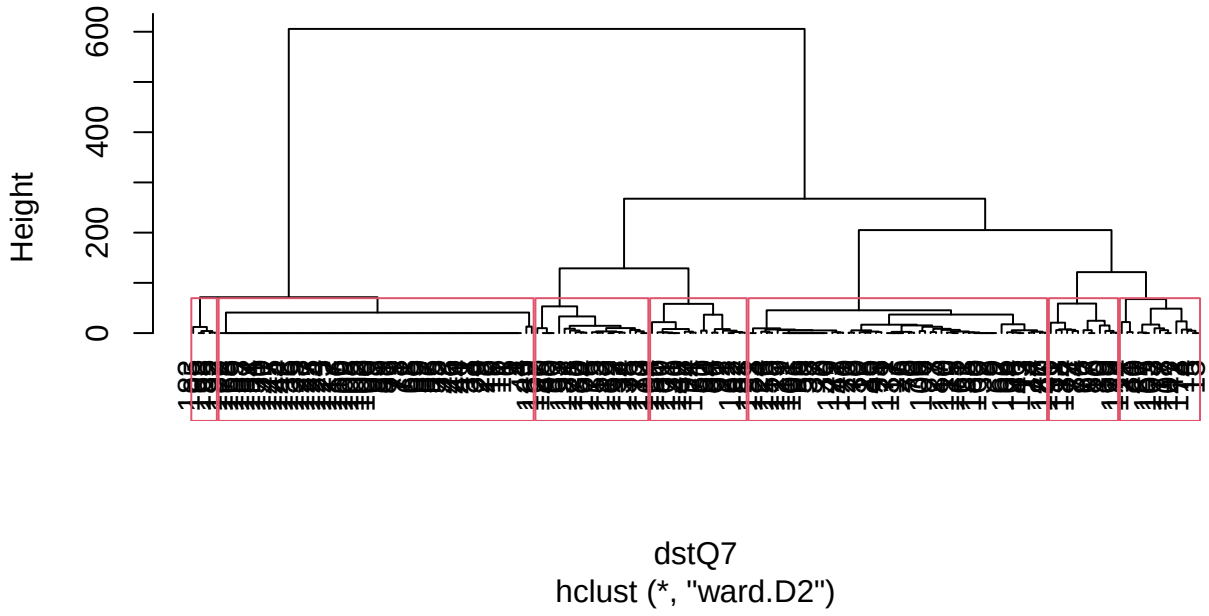
3.5 Clustering of stakeholders according to the relevance of the STOP policies (regulation and fiscal policies, social marketing campaigns, measures in private sector to contribute to tackling childhood obesity, measures to increase physical activity and measures to treat childhood obesity in health sector)

To give another perspective to the results discussed in the above chapters we are presenting the clustering of stakeholders according to the survey question 7 - STOP policies (regulation and fiscal policies, social marketing campaigns, measures in private sector to contribute to tackling childhood obesity, measures to increase physical activity and measures to treat childhood obesity in health sector), where we were seeking for the relevance of the STOP policies to the responding stakeholders.
To simplify the obtained results, the responses of stakeholders indicating specific areas irrelevant (1) or of low relevance (2) were treated as missing values. After calculating similarity of stakeholders according to their responses (using squared euclidean distance) and performing clustering procedure (Correced Wards algorithm), we obtained 7 clusters. The number of clusters was decided upon Cluster Dendrogram.

Figure 37: Cluster dendrogram.



3.5.1 Cluster 0

Figure 38: Cluster 0

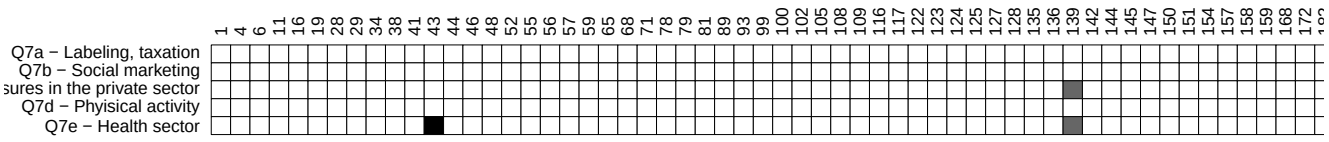


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Table 90: Cluster 0 - not being involved

			freq	% of all
Pub	Prof	Form	2	29
Priv	Prof	Form	3	19
Pub-Ppriv	Prof	Form	1	50
Pub	Non-prof	Form	22	26
Priv	Non-prof	Form	7	22
Pub-Ppriv	Non-prof	Form	6	30
Pub	Prof	Inform	0	0
Priv	Prof	Inform	0	0
Pub-Ppriv	Prof	Inform	0	0
Pub	Non-prof	Inform	0	0
Priv	Non-prof	Inform	0	0
Pub-Ppriv	Non-prof	Inform	0	0

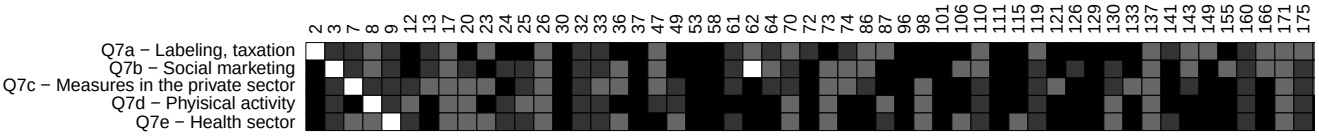
Table 91: Cluster 0 - not being involved

response	freq	% of all
Research	11	31
Health	35	37
Education	5	28
Agri-food chain	2	20
Social affairs	0	0
Environment	0	0
Transport	0	0
Built environment	0	0
Physical activity and sports	0	0
Finance or banking investment	0	0
Labour	0	0
Other:	4	33

Cluster zero (Figure 38) is the reference cluster where we could notice that only few stakeholders are linked to the STOP policies and were identified by chance. Several stakeholders were involved only partially in the STOP policies, in comparison to the Cluster 1 (Figure 39) where we could observe the stakeholders who are fully engaged to all of the STOP policy areas.

3.5.2 Cluster 1 - fully involved

Figure 39: Cluster 1



As seen in following table, the majority of the cluster 1 members are from public, non-profit organizations. Furthermore, according to distribution by sector, the majority are from health sector. In sectoral and welfare triangle distribution, obtained cluster is similar to Custer 0.

Table 92: Cluster 1 - fully involved

			freq	% of all
Pub	Prof	Form	1	14
Priv	Prof	Form	4	25
Pub-Ppriv	Prof	Form	1	50
Pub	Non-prof	Form	23	27
Priv	Non-prof	Form	14	44
Pub-Ppriv	Non-prof	Form	10	50
Pub	Prof	Inform	0	0
Priv	Prof	Inform	0	0
Pub-Ppriv	Prof	Inform	0	0
Pub	Non-prof	Inform	1	100
Priv	Non-prof	Inform	0	0
Pub-Ppriv	Non-prof	Inform	0	0

Table 93: Cluster 1 - fully involved

response	freq	% of all
Research	9	26
Health	30	32
Education	5	28
Agri-food chain	3	30
Social affairs	3	75
Environment	0	0
Transport	2	40
Built environment	0	0
Physical activity and sports	1	33
Finance or banking investment	0	0
Labour	0	0
Other:	2	17

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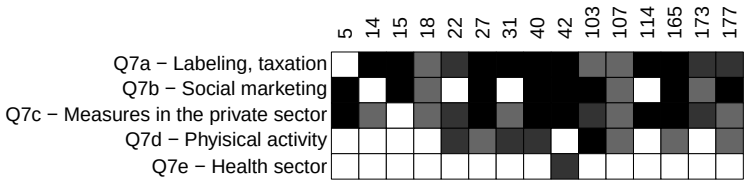
3.5.3 Cluster 2 - The agrifood chain

Figure 40: Cluster 2



In Cluster 2 we could observe the stakeholders that are coming from agri food chain. The majority of the members are from private or public-private organisations. We could notice that members of the cluster are involved especially in the field of: labelling, taxation, social marketing and measures in the private sector. They were the least involved in health sector. However, there are some members from health sector represented in that cluster (see Table 94).

Table 94: Cluster 2 - The agrifood chain

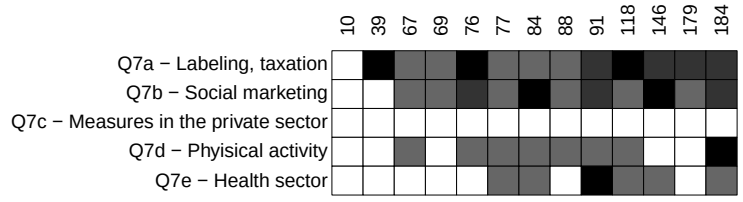
			freq	% of all
Pub	Prof	Form	2	29
Priv	Prof	Form	5	31
Pub-Ppriv	Prof	Form	0	0
Pub	Non-prof	Form	4	5
Priv	Non-prof	Form	1	3
Pub-Ppriv	Non-prof	Form	2	10
Pub	Prof	Inform	0	0
Priv	Prof	Inform	0	0
Pub-Ppriv	Prof	Inform	0	0
Pub	Non-prof	Inform	0	0
Priv	Non-prof	Inform	0	0
Pub-Ppriv	Non-prof	Inform	0	0

Table 95: Cluster 2 - The agrifood chain

response	freq	% of all
Research	4	11
Health	3	3
Education	0	0
Agri-food chain	5	50
Social affairs	0	0
Environment	0	0
Transport	1	20
Built environment	0	0
Physical activity and sports	1	33
Finance or banking investment	0	0
Labour	0	0
Other:	1	8

3.5.4 Cluster 3 - Public Non-profit/health

Figure 41: Cluster 3



Cluster 3 presents stakeholders, comming mainly from public, non profit organizations. Majority of members are from health sector. We could notice that the members of the clusters are involved in all policies except policies regarding measures in the private sector (see figure above).

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Table 96: Cluster 3 - Public Non-profit/health

			freq	% of all
Pub	Prof	Form	0	0
Priv	Prof	Form	2	12
Pub-Ppriv	Prof	Form	0	0
Pub	Non-prof	Form	8	9
Priv	Non-prof	Form	3	9
Pub-Ppriv	Non-prof	Form	0	0
Pub	Prof	Inform	0	0
Priv	Prof	Inform	0	0
Pub-Ppriv	Prof	Inform	0	0
Pub	Non-prof	Inform	0	0
Priv	Non-prof	Inform	0	0
Pub-Ppriv	Non-prof	Inform	0	0

Table 97: Cluster 3 - Public Non-profit/health

response	freq	% of all
Research	3	9
Health	6	6
Education	2	11
Agri-food chain	0	0
Social affairs	0	0
Environment	0	0
Transport	0	0
Built environment	0	0
Physical activity and sports	0	0
Finance or banking investment	0	0
Labour	0	0
Other:	2	17

3.5.5 Cluster 4 - Public Non-profit/other (& some health)

In Cluster 4 we could observe the majority of stakeholders are from public non profit organizations. We could notice that members of the cluster eare involved especially in the field of: physical activity and health sector. They are not involved in policies regarding social marketing and they showed low level involvement in labelling and taxation areas (see figure below).

Figure 42: Cluster 4

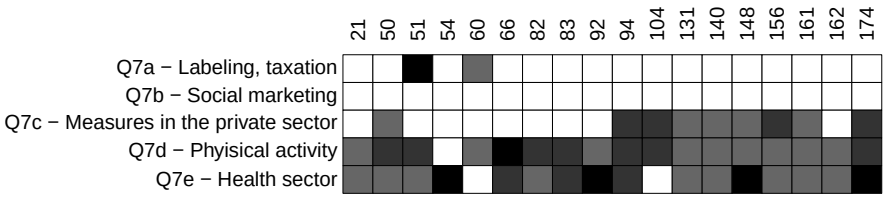

Table 98: Cluster 4 - Public Non-profit/other (& some health)

			freq	% of all
Pub	Prof	Form	1	14
Priv	Prof	Form	0	0
Pub-Ppriv	Prof	Form	0	0
Pub	Non-prof	Form	13	15
Priv	Non-prof	Form	2	6
Pub-Ppriv	Non-prof	Form	0	0
Pub	Prof	Inform	0	0
Priv	Prof	Inform	0	0
Pub-Ppriv	Prof	Inform	0	0
Pub	Non-prof	Inform	0	0
Priv	Non-prof	Inform	0	0
Pub-Ppriv	Non-prof	Inform	1	100

Table 99: Cluster 4 - Public Non-profit/other (& some health)

response	freq	% of all
Research	3	9
Health	11	12
Education	3	17
Agri-food chain	0	0
Social affairs	0	0
Environment	0	0
Transport	0	0
Built environment	0	0
Physical activity and sports	0	0
Finance or banking investment	0	0
Labour	0	0
Other:	1	8

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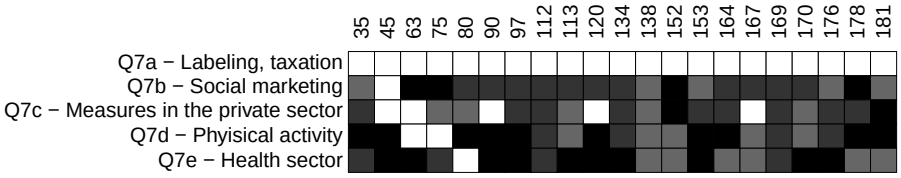
3.5.6 Cluster 5 - Private&Public Non-profit (health, research and education)

Figure 43: Cluster 5



In Cluster 5 we could observe the stakeholders from private and public non profit organizations. The majority of the members are from health sector. We could notice that members of the cluster are involved in all topic, except labelling and taxation.

Table 100: Cluster 5 - Private&Public Non-profit (health, research and education)

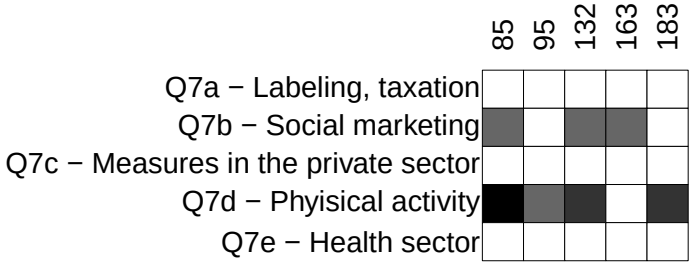
			freq	% of all
Pub	Prof	Form	1	14
Priv	Prof	Form	2	12
Pub-Ppriv	Prof	Form	0	0
Pub	Non-prof	Form	13	15
Priv	Non-prof	Form	4	12
Pub-Ppriv	Non-prof	Form	1	5
Pub	Prof	Inform	0	0
Priv	Prof	Inform	0	0
Pub-Ppriv	Prof	Inform	0	0
Pub	Non-prof	Inform	0	0
Priv	Non-prof	Inform	0	0
Pub-Ppriv	Non-prof	Inform	0	0

Table 101: Cluster 5 - Private&Public Non-profit (health, research and education)

response	freq	% of all
Research	5	14
Health	8	8
Education	2	11
Agri-food chain	0	0
Social affairs	1	25
Environment	0	0
Transport	1	20
Built environment	1	50
Physical activity and sports	1	33
Finance or banking investment	0	0
Labour	0	0
Other:	2	17

3.5.7 Cluster 6 - Private&Public Non-profit (health, research and education)

Figure 44: Cluster 6



Cluster 6 is the smallest cluster of all. However, we could observe the stakeholders from private and public non profit organizations (health, research and education). We could notice that members of the cluster were involved especially in the field of: physical activity and also in social marketing field. They are not involved in other sectors (see figure above).

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Table 102: Cluster 6 - Private&Public Non-profit (health, research and education)

			freq	% of all
Pub	Prof	Form	0	0
Priv	Prof	Form	0	0
Pub-Ppriv	Prof	Form	0	0
Pub	Non-prof	Form	3	3
Priv	Non-prof	Form	1	3
Pub-Ppriv	Non-prof	Form	1	5
Pub	Prof	Inform	0	0
Priv	Prof	Inform	0	0
Pub-Ppriv	Prof	Inform	0	0
Pub	Non-prof	Inform	0	0
Priv	Non-prof	Inform	0	0
Pub-Ppriv	Non-prof	Inform	0	0

Table 103: Cluster 6 - Private&Public Non-profit (health, research and education)

response	freq	% of all
Research	0	0
Health	2	2
Education	1	6
Agri-food chain	0	0
Social affairs	0	0
Environment	0	0
Transport	1	20
Built environment	1	50
Physical activity and sports	0	0
Finance or banking investment	0	0
Labour	0	0
Other:	0	0

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4 Conclusions and main findings

The STOP project *"aims at expanding and consolidating the* **multi-disciplinary evidence base** *upon* **which effective and sustainable policies** *can be built to prevent and manage childhood obesity. STOP also aims at creating the conditions for* **evidence to translate into policy** *and for* **policy to translate into impacts** *on the ground."*[a]

[a]STOP - Science and Technology in childhood Obesity Policy (SFS-39-2017), project submission (page 1)

To achieve the project aim within STOP, the multi-disciplinary and multi-stakeholder nature of the Consortium is enabling partners to develop interdisciplinary research approaches to study both, the determinants of childhood obesity at one side and the attitudes of different stakeholders towards different policy approaches designed to address it at the other. To this end, the project has a dedicated work package (WP10) to run a public health driven multi-stakeholder work with the aim to facilitate the engagement of multiple, diverse stakeholders around specific policy issues and to address cognitive dissonance, through extensive work with relevant stakeholders in the area of childhood obesity at the EU level.
Logical frameworks of welfare mix triangle and obesity diagram were used to identify as wide range of stakeholders as possible to the STOP stakeholders network. Different approaches and tools are employed in the stakeholders work, such as stakeholders survey with social network analysis and stakeholders dialogues, fostering participatory and inclusive public health driven multi-actor engagement.
Vast majority of project partners participated in stakeholders work, supporting the identification of the topics of interest for stakeholders engagement, feeding into the stakeholders research process and participating in the interpretation of results and in translating the research information in active dialogues with stakeholders at the first stakeholders conference. The reverse feed back information flow from WP10 to the STOP policy work packages (WPs 4 – 8) and to WPs 3, 9 and 11 is also essential.
The intention of the WP10 first round of the stakeholders survey in year 1 was to collect the information on the STOP relevant stakeholders landscape, supporting the identification of the facilitating and inhibitory factors for stakeholder's engagement and activation in potential public health driven stakeholders action to prevent and manage childhood obesity in EU. The second round of the web questionnaire with the comparative report to detect possible changes is foreseen for the year 4 of the project, at the same time aiming at the strengthening of the STOP interdisciplinary research approaches.
The survey aimed at building argumentation for understanding the urgent need for change of the complex obesitogenic environments via different policy measures to prevent and manage childhood obesity, among all groups of stakeholders. On the other hand, the participatory engaged stakeholders will hopefully more actively participate in the STOP project´s future steps in the public health driven formulation, implementation and use of the effective and sustainable policies, recommended by the STOP consortium.
The report is building on diversifying statements in the stakeholders questionnaire (Annex B). Diversifying statements aimed to obtain better and more in-depth understanding of different positions of stakeholders. At the same time, they were aimed at exploring and possibly giving the ground for overcoming the present positive or negative attitudes towards specific "obesogenic" issues among stakeholders groups. Stakeholder's answers are enabling STOP partners to better understand, how the alliances among stakeholders towards specific statements are composed, according to their individual or group position and attitude toward a specific statement.
Different statistical methods were employed. The descriptive component of the analysis identifies the stakeholders organisations' focal interests, characteristics of the decision making processes in reversing obesogenic environments, agreement charts and clustering of the stakeholders/interest groups, by the area of interest (regulation and fiscal policies, consumer behaviour, health food and food choice environments, physical activity and health care in childhood obesity treatment). Among others, clustering of stakeholders allows for the insights how the alliances among stakeholders are composed, based on specific diversifying statements.
The following subchapters represent main findings of the stakeholder survey by work package areas.

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4.1 WP4 – Regulation and fiscal policies

Table 104: Main findings for WP4.

Most promising approaches, **as perceived by the surveyed stakeholders**, for successful implementation of the policies, measures and activities, in changing the obesogenic environment to prevent childhood obesity	
Food taxation	Most promising approach perceived by stakeholders is legislation
Food labeling	Most promising approach perceived by stakeholders is legislation
Food reformulation	Establishing guidelines or standards are most promising approaches perceived by stakeholders
Food marketing	Most promising approach perceived by stakeholders is legislation
Labeling	Stakeholders perceive labels providing an overall nutritional grade more effective than labels providing nutrient-specific information in *supporting healthier consumer choice*. They believed labels with nutrient specific information in encouraging companies price reactions and in *encouraging companies to reformulate products* are slightly more effective than the ones previously mentioned.
Marketing	Almost half of the respondents believed that marketing of food high in fat, sugar and salt, targeted to children should be restricted to children up to 18 years. 7% believed that marketing should be restricted to children up to 8 years old.
Taxation	Stakeholders perceive tax proportional to the nutrient content of a product as being more effective than a tax based on the value of a product (*to support consumers in purchasing healthier options, to encourage companies price reactions and to encourage companies to reformulate product*).
Agreement charts	
Food taxation	In food taxation agreement chart we could observe the clearest differences in opinions along stakeholder group lines, although a sizeable minority in both health and agrifood groups have a different opinion within a group;
Food labeling	We could observe a widespread agreement with no major differences among three clusters of stakeholders; two of the groups are uniformly supportive to the regulation with minor differences in positions, and slight differences are obserged in relation to the third, minor stakeholders group (composed of some health and agri-food chain representatives)
Food reformulation	We could observe a widespread agreement with no major differences among two bigger clusters of stakeholders which seems to uniformly support the regulation with minor differences in positions; some differences are obserged in relation to the third, minor stakeholders group (composed again of some health and no research representatives)
Food marketing	We could observe differences in opinions. There is a large group very much supporting, a middle-sized (quite small) group rather positive, and a very small group (again composed mainly from stakeholders perceiving themselves as health stakeholders) is clearly against regulation of food marketing to children.

The initial analysis of included stakeholders revealed that reformulation, taxation, labeling and food marketing were the lowest area of interest for the included stakeholders and their organisations (Figure 4). Despite being quite a low-focus area for the engaged stakeholders, they nevertheless overarchingly agreed with regards to the implementation method of such policies (Table 104). On the other hand, low expressed interest may result from the fact that organizations are not focusing on these points.
Their feedback indicates that the implementation of some regulation and fiscal policies we have put forward in the survey would receive some opposition from the participating stakeholders. On the other hand, more than half of the stakeholders were convinced that these policies are capable of changing obesogenic environments. Among the suggested policy options (food taxation, food labeling, food reformulation and food marketing), food labeling and food marketing were perceived by stakeholders as the most promising in changing obesogenic environments and might be promising starting points for building agreement among stakeholders.
On the other hand, food taxation, in spite of being still well rated, was perceived as the least promising among stakeholders (Table 4). Stakeholders identified legislation as the most promising approach for successful implementation of the food taxation (by nature), food labeling and food marketing policies. For successful implementation of the food reformulation policies, establishing guidelines or standards were perceived as the most successful ap-

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proach. Furthermore, when exploring stakeholders by Welfare triangle categories, public-private organizations showed slightly less enthusiasm for food taxation policies compared to either private or public institutions, in spite all of them being well supportive to that policy action. Non-for profit stakeholders are more supportive to food taxation than for-profit stakeholders (Table 5).

Regarding **labelling policies**, stakeholders perceive labels providing an overall nutritional grade more effective than labels providing nutrient-specific information in *supporting healthier consumer choice*. In the future stakeholders dialogues, we will explore if that kind of labels encourage firms to reformulate. Furthermore, stakeholders agreed that labelling systems should include recommended portion sizes. However, high-quality information provision with respect to portion sizes is a minimal yet crucial aspect of a healthy nutrition environment[13]. Improved health literacy would be beneficial as support for more effective food labelling policies.

Regarding **marketing**, almost half of the stakeholders believed that **marketing** of food high in fat, sugar and salt, targeted to children should be restricted to children up to 18 years. As public policy should target marketing practices and **taxation**, the school environment remains a promising target for policy[14].

In the food taxation area, stakeholders in general perceived a tax proportional to the nutrient content of a product as being more effective than a tax based on the value of a product. Conveniently, this is in line with the comments from stakeholders, that tax should be inversely proportional to the nutrient content. When examining more closely the potential antagonism regarding regulation and fiscal policies, the agreement analyses showed that around 20% of stakeholders firmly disagreed that **food taxation** has the potential to significantly change obesogenic environments. The majority of the negative attitudes came from a part of the health and from Agri-food chain sector. A similar trend is being suggested in **food labelling** and **marketing**. Furthermore, some negative attitudes towards **reformulation** were detected in health and research, but not in Agri-food chain sector.

Regarding possible policy actions towards enhancing regulation and fiscal measures, the stakeholders emphasised the need to consider these policies simultaneously with other policies (e.g.: school policy). Furthermore, the need to develop approaches that contribute to reduce social inequities are emerging, as health benefits are likely to accrue to individual low-income consumers, due to their stronger response to price changes[15]. In addition, we need to invest some efforts in advocating regulation and fiscal policies to health care and Agri-food chain sector. For further steps, more attention might be given to some specific issues such as the nutrient profiling systems, the power of marketing, the types of media.

[13]Vermeer WM, Steenhuis IH, Poelman MP. Small, medium, large or supersize? the development and evaluation of interventions targeted at portion size. Int J Obes (Lond). 2014;38 Suppl 1:S13–8.

[14]Moise, N., Cifuentes, E., Orozco, E. et al. Limiting the consumption of sugar sweetened beverages in Mexico's obesogenic environment: A qualitative policy review and stakeholder analysis. J Public Health Pol 32, 458–475 (2011). https://doi.org/10.1057/jphp.2011.39

[15]F. Sassi et al. Equity impacts of price policies to promote healthy behaviours. Lancet. 2018 May 19; 391(10134): 2059–2070.

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4.2 WP5 – Consumer behavior – Creating demand for healthy lifestyles

Table 105: Main findings for WP5.

The most promising approaches, **as perceived by the surveyed stakeholders**, for successful implementation of the policies, measures and activities, in changing the obesogenic environment to prevent childhood obesity	Supporting collaborative action
Social marketing campaigns	Stakeholders agree that social marketing campaigns are successful, as part of a comprehensive approach, in changing obesogenic environments to prevent childhood obesity. The most promising approach for successful implementation of the social marketing campaigns, in changing the obesogenic environment to prevent childhood obesity is supporting collaborative action. Stakeholders thought that social marketing campaigns to reduce childhood obesity are more successful if they first target physical activity options in the environment and then target the marketing of improved nutrition behaviors and approaches.
Agreement charts	We could observe three different clusters regarding social marketing. Two clusters are strongly in favour to social marketing, with minor differences in positions. One smaller cluster is in average attitude towards social marketing potentials, and it is composed mainly of health and research stakeholders.

More than a half of the organisations who participated in this survey expressed their relevance in the area of social marketing campaigns. From their feedback, we detected that the implementation of social marketing activities we have put forward in the survey would receive little opposition (disagree and somewhat disagree = 12%) from the stakeholder network involved in this research.
Regarding social marketing campaigns, more than half of the stakeholders believed that these activities are successful in changing obesogenic environment to prevent childhood obesity, as a part of comprehensive approach. In relation to that, more than a half of the stakeholders who expressed their relevance in the area of social marketing are convinced that supporting collaborative action is the most promising approach for successful implementation. That may be useful to know in terms of establishing collaborations for research and/or dissemination of results. Furthermore, stakeholders believed that social marketing campaigns targetting physical activity options in the environment are the most successful and the least successful on the other hand, if they target portion size. When targeting portion sizes, we found some differences when exploring stakeholders by Welfare triangle categories, as private organisations showed less enthusiasm compared to public institutions (Table 18). In general, the non-for profit sector showed less support in all actions we have put forward in the survey. In addition, respondents also highlighted the need for different approaches, depending on the target audience.
When examining more closely the potential antagonism regarding social marketing campaigns, we found out that only 12% of stakeholders firmly disagree with the social marketing campaigns, denying it has the potential to significantly change obesogenic environments. Moreover, cluster analysis showed that one cluster expressed lower support for social marketing campaigns. The majority of the negative attitudes came from the health sector stakeholders, and some negative attitudes were also from research sector.
When pointing out other possible policy actions towards enhancing social marketing campaigns not covered in the survey, the stakeholders emphasised the involvement of family and also the need for nutrition education. Furthermore, the contextual analysis revealed that Cluster No. 3 is the one most interested in social marketing campaigns. The three findings from this cluster that we found interesting include: 1) the cluster appears to consist primarily of for-profit organisations; 2) the cluster appears to exclude research institutions; and 3) the cluster also seems to have support for active transport as an approach for addressing childhood obesity.
In conclusion, there is already a high level of acceptance of various social marketing related actions across the different types of stakeholders. Additional efforts need to be invested in advocating social marketing to health care and research sector to explore their thoughts toward social marketing campaigns. This could be achieved by

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consulting with stakeholders on the focal issue to enable joint action inspired by new insights[16] and to prepare a sustainable plan for further engagement. Furthermore, we must ensure that all potential stakeholders who may be affected, involved or have a partial responsibility to act are considered in future surveys[17]. To conclude, we need to define the role of health promotion campaigns in comparison to social marketing campaigns and consider which social marketing channels we use for public health. That should be possible if social marketers collaborate with public health researchers to identify and ameliorate the environmental determinants of risk behaviour and create a context where downstream interventions may flourish. Across the literature, it has been argued that upstream measures necessary to shape supportive environments should be regarded not as constraints diminishing voluntary behaviour, but instead as the pre-requisites enabling full and free choices[18].

4.3 WP6 – Healthy food and food choice envronments

Table 106: Main findings for WP6.

Most promising approaches,**as perceived by the surveyed stakeholders**, for successful implementation of the policies, measures and activities, in changing the obesogenic environment to prevent childhood obesity	Legislation
Monitoring business action and performance	Stakeholders most agree that business impact assessment of actions supporting the creation of healthy food environments should concentrate most on evaluating the transparency of actions and operations and less agree to use performance indicators for businesses. Most stakeholders opted for the *engagement of industry in obesity prevention* as role of food industry.
Agreement charts	We could observe differences in opinions, but not necessarily along stakeholder group lines. Two big clusters are supportive or very supportive to the monitoring business action and performance. One smaller cluster is agains the discussed policy, composed of the health and research stakeholders representatives.

Almost half of the stakeholders believed that the *monitoring business actions and performance* is, as part of a comprehensive approach, a successful way to change obesogenic environments to prevent childhood obesity. It is interesting that around 20% of the respondents had a neutral opinion. While stakeholders had different opinions about the most promising approaches for successful implementation of monitoring business actions and performance, legislation was perceived as the most encouraging one. Furthermore, when exploring stakeholders by Welfare triangle categories, public-private organisations showed slightly less enthusiasm for *monitoring business actions and performance policies* compared to private institutions. On the other hand, it seems like public-private partnerships are raising interest among health policymakers[19]. Some view them as an opportunity to create publicly available outputs, and innovate to add value to research, knowledge translation and direct-service programmes for communities[20]. However, it is also important to consider some of the challenges associated with such partnerships and the need to establish and monitor them carefully to ensure their ultimate output remains public health driven. Stakeholders were also asked to express their opinion with regards to conducting business impact assessments. Most agreed that business impact assessment of actions supporting the creation of healthy food environments should concentrate most to the transparency of actions and operations. At the same time, they identified the importance of involving the food industry in obesity-related interventions. Nevertheless, stakeholders also alluded to the fact that due to conflict of interests, the food industry is often excluded from research and /or education programmes.

[16] Brown, L. D. (1983). Organising participatory research: Interfaces for joint inquiry and organisational change. Journal of Occupational Behaviour, 4, 9–19.

[17] Bryson, J. M. (2004). What to do when stakeholders matter? Public Management Review, 6, 21–53.

[18] Hoek, J. and Jones, S.C. (2011), "Regulation, public health and social marketing: a behaviour change trinity", Journal of Social Marketing, Vol. 1 No. 1, pp. 32-44.

[19] Kraak VI , Swinburn B , Lawrence M , Harrison P . An accountability framework to promote healthy food environments . Public Health Nutr . 2014 ; 17 (11): 2467 – 83 .

[20] Kraak VI, Story M. Guiding principles and a decision-making framework for stakeholders pursuing healthy food environments. Health Aff (Millwood). 2015;34(11):1972–8.

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In addition, the agreement analyses showed that less than 10% of stakeholders disagreed with the need to monitor business actions and performance policy areas as an approach that could significantly change obesogenic environments. Furthermore, in the health, research and agri-food chain sectors we saw that respondents had differing opinions. This is particularly seen within the health sector.
To conclude, stakeholders also identified other concepts regarding monitoring business actions and performance policies that were not included in the survey. For example, they noted that these actions should not prevent the adoption of stricter legislations, especially given that self-commitments by industry are not effective. They believed that the role of the food industry is to produce products which consumers want and need, based also on the public health perspective. Through nutrition and consumer research, the food industry gains valuable insights on consumers' expectations regarding food, diet and health in order to ensure that both products and communications are motivating and relevant to consumers' lives[21], health benefits and well-being. On the other hand, individuals should be able to make healthier food choices, benefiting their health and without impacting their revenue.
It was also stressed that business and educational campaigns should be separated.

4.4 WP7 – Physical activity

Table 107: Main findings for WP7.

Most promising approaches, **as perceived by the surveyed stakeholders**, for successful implementation of the policies, measures and activities, in changing the obesogenic environment to prevent childhood obesity	
Fiscal measures to promote physical activity	Legislation
Measures to promote physical activity in schools	Establishing guidelines or standards
Measures to promote active transport among children	Supporting collaborative action
Fiscal measures to promote physical activity	The fiscal policy would be most successful if *schools should be aided by state and municipalities to improve their infrastructure for PA/sports.* Financial support from municipalities for sport-for-all programmes was identified as the second most popular approach.
Measures to promote physical activity in schools	All types of PA programmes set in schools received universally high support from all types of stakeholders involved (Providing active learning and active breaks during school time, free extracurricular PA offered to all children free of charge, introducing one hour of physical education per day or all children, throughout primary and secondary schools, short breaks in sitting, learning about PA benefits)
Measures to promote active transport among children	Stakeholders agree most with statement that active mobility should become a policy based on mobility and land use planning, especially in urban environments. Encouraging active commuting to school for children under 12 under adult supervision also received wide agreement.
Agreement charts	
Fiscal measures to promote physical activity	differences of opinion, some differences in health sector
Measures to promote physical activity in schools	no huge differences - seems there's widespread agreement
Measures to promote active transport among children	differences of opinion, but not necessarily along stakeholder group lines

A large part of organisations who participated in this survey are active in the area of physical activity (PA) promotion. Their feedback indicates that the implementation of some of the suggested PA policies in the survey would receive little opposition from the stakeholder network involved in this research. For all three PA policy areas proposed here, more than half of the stakeholders were convinced that these policies are capable of changing obesogenic environments. Among these three PA policy areas, stakeholders identified measures to promote PA

[21] Gassin AL (2001), Helping to promote healthy diets and lifestyles: the role of the food industry. Public Health Nutr. 2001 Dec;4(6A):1445-50.

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in schools as the most promising in changing obesogenic environments to prevent childhood obesity and were at the same time concordant in their opinion that it is the responsibility of the states and the municipalities to provide financial support to improve school infrastructure for PA and sports. All types of PA programmes set in schools received universally high support from all types of stakeholders involved, irrespective of their Welfare triangle category or profit making. With regards to the level of support they received, PA policies in schools were closely followed by strategies to promote active transport, while fiscal measures were deemed as the least promising approach (although still with a high level of support). Conveniently, this is in-line with the current existing body of evidence showing that strong evidence for the effectiveness in curbing obesity is available only for the school-based PA programmes but not for the ones from other environmental domains[22]. When exploring stakeholders by Welfare triangle categories, public-private organisations showed slightly less enthusiasm for PA policies compared to either private or public institutions. In addition, profit organisations are not likely to embrace fiscal measures to promote PA as they were shown to be much less inclined to this policy area compared to the non-profit sector. On the other hand, nearly all stakeholders strongly supported investing public money in both school and community PA programmes, and clearly communicating that the provision of PA as a public health measure is seen as the responsibility of the national and local governments.

When examining more closely the potential antagonism towards PA policies, the agreement analyses showed that only around 10% of stakeholders firmly disagreed for PA policy area to have the potential to significantly change obesogenic environments. The vast majority of the negative attitudes came from stakeholders in the health sector, which could present a possible challenge when implementing future PA policies. However, cluster analyses showed that the dissonance between clusters of stakeholders is smaller for PA policies than for any other policy area investigated. Nevertheless, two clusters that expressed lower than average support for PA policies were identified, especially regarding measures set around schools and active transport. Not surprisingly, one of these clusters involved stakeholders that are not active in the PA area. However, this cluster is very small and has reported to have little perceived influence on policy creation processes which undermines its relevance for the general acceptance of the future PA programmes. On the other hand, the other cluster is a bit larger and of much greater perceived influence. It includes mostly non-profit organisations from health and education sectors that endorse both regulatory and soft approaches to influence policy decisions. Interestingly, organisations included in this cluster have, on average, a rather negative attitude towards all examined policies except those targeting fiscal measures to promote PA.

When identifying other possible policy actions towards enhancing PA that were not covered in the survey, stakeholders emphasised the role of the school personnel, the focus on physical literacy, which is linked to improved quality of physical education teaching and provision of non-curricular school-based PA programmes, on the provision of special lessons, dedicated to healthy lifestyle that would help children to translate and integrate their physical literacy into everyday life in the form of regular physical activity, and on the transformation of the traditional learning environment towards physically active and playful learning environment[23].

In conclusion, although there is already a high level of acceptance of various PA-related policies across the different types of stakeholders, additional efforts need to be invested in advocating PA policies to health care sector and in improving their attitude towards PA-related measures if universal acceptance is to be achieved when implementing these policies on a population scale. Soft approaches in influencing policy decisions would probably gain wider acceptance from stakeholders.

[22] Wang, Youfa, et al. "What childhood obesity prevention programmes work? A systematic review and meta-analysis." Obesity reviews 16.7 (2015): 547-565. doi: 10.1111/obr.12277.

[23] S. Lundvall, Physical literacy in the field of physical education - A challenge and a possibility. Journal of Sport and Health Science 4 (2015) 113-118.

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4.5 WP8 – Health Care

Table 108: Main findings for WP8.

Most promising approaches, **as perceived by the surveyed stakeholders**, for successful implementation of the policies, measures, and activities, in changing the obesogenic environment to prevent childhood obesity	Supporting collaborative action
Capacity building for the implementation programmes for the treatment of childhood obesity in the health sector	If obesity in children is detected, the main challenges for appropriate treatment in health system are as follow: *lack of understanding of the need for team work, lack of education/knowledge of health professionals, lack of financial resources, lack of human resources and lack of time of health professionals.*
Agreement charts	There are only two clusters of stakeholders with regard to the treatment of childhood obesity, one big cluster being high in score of supporting the action and one smaller cluster bellow the average support (composed mainly of the stakeholders, perceiving themselves as being health stakeholders).

Based on the analysis of the included stakeholders, they identified health care as their second area of interest. They believed that measures to treat childhood obesity in the health sector are also successful in changing obesogenic environments to prevent childhood obesity as a part of comprehensive approach. Only 1% disagree with the previous claim.
It is interesting to learn that the main challenge in health systems regarding the appropriate treatment for childhood obesity identified was the lack of understanding of the need for team work, lack of education/knowledge of health professionals, lack of financial resources, lack of human resources and lack of time of health professionals. However, when stakeholders were then asked to what extent they agree on identifying the most promising approach to effectively manage obesity, most agreed that to establish a harmonised collaboration between the health care professionals and extended family was most the promising approach. This means that capacity building needs to be a core component of interventions focused on the treatment of childhood obesity in the health care sector, and we need to increase the collaboration between health care professionals and the extended family. This confirms earlier findings from this field [24][25]. Furthermore, when exploring stakeholders by Welfare triangle categories, we noticed that public-private organisations showed slightly less enthusiasm for "establishment harmonised collaboration of health professionals with kindergartens and schools" as the most promising approach to manage obesity, compared to either public institution.
Moreover, the agreement analyses showed that almost 20% of stakeholder disagree that *capacity building for the implementation of programs* have the potential to change obesogenic environments. Although the statement is related to health care, we have concluded that the health care sector has differing opinions.
The topic of effective management of childhood obesity in health sector provoked major written added responses of the participating stakeholders. To increase health workforce capacity, multi-disciplinary approach, establishment of a holistic view on the leading causes for obesity and breaking barriers between health professionals around roles and responsibilities were some of the added responses.

4.6 Conclusions linked to contextual analysis

Policy decision making processes are complex, with different means of influence. To understand the stakeholders perception of the most promising means and the most commonly used methods of influencing policy decision making processes among different groups of stakeholders, we extended the insights with more in-depth contextual analyses.
We have explored the **most promising means** and **most commonly used methods**, perceived as such by stakeholders, to influence the policy decisions in childhood obesity in depth by additional statistical analyses, reducing 13

[24] Van Gerwen M et al. Systematic review of primary care physicians' knowledge, attitudes, beliefs and practices regarding childhood obesity Obesity Reviews 2009. DOI: 10.1111/j.1467-789X.2008.00532.x
[25] Mazur A et al. Childhood obesity: knowledge, attitudes, and practices of European pediatric care providers. Pediatrics 2013. DOI: 10.1542/peds.2012-3239

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dimensions of means and methods to two dimensions, retaining by that 50% of variability.
For profit organizations tended to significantly less believe in both (Figure 17), either identified "advocating regulation of specific policy options" or identified "soft background mechanisms for health in all policies approach" in comparison to the non-for profit stakeholders. The identified lower belief of for-profit stakeholders in any kind of the most often used governance mechanisms could indicate there might be differences in perceptions in different stakeholders groups or that there might be more promising other means of influence in place for profit stakeholders we have not yet identified through the stakeholders survey. This warrants further exploration and discussions in future stakeholders dialogues.
Discussing perceived most promising means and most often used methods further, Fig. 18 represents the perceptions by sectors in which stakeholders operate. The highest believing into "advocating regulation of specific policy options" belongs to (two) stakeholders dealing with built environments and for "soft background mechanisms in health in all policies approach" was detected among (two) stakeholders dealing with physical activity and sports. Two categories of this variable significantly differ from others. The, first one is represented by (two) stakeholders active in social affairs with very low opinion towards soft mechanisms and the second one represented by (four) stakeholders from agri-food chain with decline in opinion on successfulness of regulatory measures. We assume small numbers in above mentioned categories could partly explain the detected variability.
The research, health and education stakeholders groups differ only to minor extent in beliefs about the means and methods potentials in the "soft background mechanisms for health in all policies" and the same is valid about the "advocating regulations for specific policy options".
One of the interesting findings out of that part of research, supported also with the descriptive analytical results, is the fact that stakeholders do not differ in perceiving the most promising means for influencing the policy decision making processes and slightly differ in practicing common used methods. A specific set of questions was dedicated to the characteristics of decision-making processes in preventing obesogenic environments, regarding most promising means and commonly used methods. There are no significant differences among public, private and public-private on one hand and between for profit and not-for profit organizations on the other, in most promising means for influencing the policy decision making processes. Regarding most commonly used means, we could observe the distinction among above listed stakeholders spheres (public, private and public-private) for strengthening the voluntary approach (higher rated by private and for profit stakeholders) and supporting professional associations or research (higher rated by public and public-private stakeholders). Similar distinction in the system-based options for influencing policy decision making processes we could observe between for profit and not-for profit organizations.
Results indicate that private and for-profit stakeholders are more keen to define specific relationships among stakeholders what also gives the potential for further stakeholders dialogues discussions.
The described difference will be further explored in future stakeholders´ dialogues and in the second iteration of STOP stakeholders survey in year 4.
We have also been exploring the attributes of the multi-stakeholder collaboration in decreasing childhood obesity. We were interested in understanding of necessity for the joint approach, readiness, capacities and resources, necessary skills and knowledge, willingness, level of trust and accountability for the joint multi-stakeholder approach, but also the importance of consideration of health inequalities and sustainability and environmental issues for such relationships (Table 45). It is obvious that more sensitive questions would be needed as almost all the responding stakeholders were convinced that the listed attributes are important or very important for a joint multi-stakeholders approach. For the second wave of surveys, additional efforts will be put into testing and piloting that set of questions to be able to harvest more significant differences among stakeholders.
As described above, the descriptive part of the analysis was supported by the contextual analysis (initial factor analyses), conceptualisation of the reporting focus was supported by the first stakeholders conference (September 2019)[26] outcomes. The principal component analysis yielded two new dimensions, "Soft background mechanisms for health in all policies approach" and "Advocating regulation for specific policy option". Five different clusters of stakeholders were obtained in the two new dimensions:

- **Cluster 1:** form large group of stakeholder (N= 24). It is positioned high above average in attitude towards regulative approaches and low below average in attitude towards soft approaches to influence policy decisions. The structure according to welfare triangle variables is similar to Custer 4 (the majority of stakeholders are from public sector. According to distribution of sectors, majority of stakeholders are from health sector. The general overview indicates that members of cluster are active in the topic of Reformulation, taxation, labelling, food marketing and do not deal with measures to treat childhood obesity in the health sector. Stakeholders in this cluster reported the highest level of perceived power at the national level. Members of

[26] M. Gabrijelčič et al (2020). First Childhood Obesity Stakeholder Conference and Dialogues – report [Documentation from STOP project].

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that cluster are relatively close regarding the opinion on the most promising means to shape policies, at the same time they are quite far apart on the topic of food taxation. Furthermore, they have high opinion in policies dealing with food marketing.

- **Cluster 2:** form mid-sized group of stakeholder (N=13). It is positioned high above average in both dimensions. They believe in both, regulative and soft approaches to influence policy decisions. Regarding sectoral structure, that cluster covers mostly health and education-oriented stakeholders. This is also the only cluster without representative of profit organizations. Furthermore, the majority of members are from health sector. The general overview indicates that members of the cluster are mainly active in measures to treat childhood obesity in health sector and are inactive in development of measures in the private sector to contribute to tackling childhood obesity. Moreover, members of the cluster perceived themselves as the most powerful at the national level. Members of cluster have in average very low opinion in all policies except those targeting fiscal measures to promote physical activity.

- **Cluster 3:** form relatively small group of stakeholder (N=7). Proportionally it is the cluster with highest level of profit organisations. At the same time, this is the only cluster with no representative among stakeholders operating as research organisations. It is positioned extremely low in attitude towards regulatory approaches and low (but close to average) in attitude towards soft background mechanisms. Members of cluster indicated low level of engagement in all areas, the highest reported engagement of the members is in development of measures in the private sector to contribute to tackling childhood obesity. Members reported the lowest level of perceived power among all. Regarding food taxation, the extremely negative value is reported by this cluster, with stakeholders being mainly profit organisations who also have very low opinion on regulative approaches in policy making. On the other hand, physical activity in schools and active transport policies have strong support in Cluster 3.Furthermore, cluster indicates positive attitudes towards the understanding the necessity of the joint multi-stakeholder approach and readiness to collaborate with other stakeholders and indicative negative attitude towards capacities and resources which stakeholders have available to cooperate with others.

- **Cluster 4:** form the largest group of stakeholders (N=25). It is positioned high above average in attitude towards soft approaches and low below average in attitude towards regulative approaches to influence policy decisions. The structure according to welfare triangle variables is the same as cluster No.1. Both clusters have similar representation of stakeholders from Research and Health sector, but cluster No.4 is more diverse: has higher number of stakeholders from Education and stakeholder from Physical activity and sports category which are not present in first cluster. Stakeholder from cluster No.4 engage on measures to increase physical activity in children and measures to treat childhood obesity in the health sector. Moreover, members of the cluster reported the highest level of perceived power on regional and international levels. Same as cluster No.1 their opinion are relatively close regarding the opinion on the most promising means to shape policies, they are quite far apart on the topic of food taxation. An indicative overview shows that cluster is close to average on all policies except those on capacity building in the health sector.

- **Cluster 5:** form the smallest group of stakeholders (N=4) with least belief in soft mechanisms used to influence the policy decisions on childhood obesity. The cluster is compound of two stakeholders from social affairs sector and other two from research and education sector. Members of cluster are active in the topics of social marketing campaigns and development of measures in private sector to contribute to tackling childhood obesity. That small marginal cluster reported the lowest level of perceived power among all clusters. Moreover, members of the cluster 5 have high opinion on policies regarding food labelling and food marketing and low beliefs in both types of policy measures, in physical activity and in strengthening health sector. In addition, cluster has stronger indicative negative attitudes on all attributes except one: consideration of health inequalities and social determinants.

Highlights about obtained clusters are represented in Tables 56 and 57. Furthermore Table 100 also indicates some areas we wish to explore further in the next STOP steps, regarding stakeholder engagement. With question "What do we want to explore further?" project partners are bringing focus back from the research to the work with stakeholders in the field. Research questions in the last column of Table 109 are relevant for guiding further explorations of the stakeholders network and providing evidence based explanations in the next STOP steps.

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Table 109: Possible further exploring regarding stakeholder engagement.

	Key characteristics	Highlights	What do we want to explore further?
Cluster 1 **"Prevention policy group"**	Mixed stakeholders	Favouring regulatory approaches, less soft mechanisms	Why favouring policies over soft mechanisms?
Cluster 2 **"Health sector treatment group"**	Purely non-profit; Treatment focused health sector	Positive attitude towards both regulatory and soft mechanisms	Why this cluster has unfavourable attitude towards labelling, marketing and physical activity policies, while it has positive attitude towards policies overall?
Cluster 3 **"Private sector group"**	Mixed stakeholders, but relatively large private sector	Low opinion on regulatory approaches; Extremely negative on food taxation	Being wary of regulatory policy is predictable when it comes to industry. But the cluster has many non-profit organisations as well. Why are some non-profit groups against? (or is it the case that within the cluster the non-profit groups are actually in favour of taxation but are clustered together on other grounds?) Why do private sector groupings have a low opinion of regulatory policies, and taxation especially?
Cluster 4 **"Soft approach group"**	Mixed stakeholders	Favouring soft mechanisms, less regulatory approaches.	Why favouring policies over soft mechanisms?
Cluster 5 **"Anti-soft measures group"**	Mixed stakeholders	Does not believe in soft measures, but engaged in social marketing and private sector contribution	What does a strong belief in social marketing reveal about attitudes towards tackling child obesity?

In general, if we look at one of the researched policy domain, **food taxation**, we could observe the clearest difference along stakeholder group lines, although a sizeable minority in both health and agri-food groups have a different opinion. In **food labelling**, there seems to be widespread agreement, and **food reformulation** follows a similar trend. In **food marketing**, we could observe differences of opinions, but not necessarily along stakeholder group lines. Considering the clear public health goals as the prerequisite, policy recommendations could build on the insights of the stakeholders' positions and there, where acceptable from the public health perspective, win-win situations could be recommended.
What is clear from the research results, health sector stakeholders do substantially differ in their views in almost all of the STOP policy fields. To clarify why and how to approach those differences is one of the main challenges of the further research in WP10.

4.7 Conclusions linked to key messages from First stakeholder meeting

Regardless of the WPs' area included in the stakeholder survey, we found some common findings between the survey and the dialogues held at the first STOP stakeholders meeting in Brussels in September 2019.
First, legislation and establishing guidelines or standards were found as the most promising approaches also by the attending stakeholders, for successful implementation of the policies, measures and activities to change obesogenic environments to prevent childhood obesity.
Furthermore, the agreement analyses showed that health sector stakeholders have different opinions in all areas, which was detected also at the STOP meeting. That is an interesting finding that deserves core attention in the follow-up work.
In addition, results of the stakeholders survey pinpoint a few challenges, including:

1. affordability and access to healthy foods throughout a social gradient and considering vulnerable groups,
2. systems-approach and multi-sector collaboration,
3. sustainability of the EU food and farming systems
4. EU-driven voluntary approach (in comparison) to the better regulation agenda and

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5. low or lack of digital and health literacy among children, with special respect to the social gradient.

In addition, the *first stakeholders dialogues* revealed another concepts to be analysed and discussed in depth in the next steps:

- concepts of power, including the perception of power, as one of the major determinants in policy decision making processes;
- importance of transparency and trust,
- importance of evidence (emphasis on having 'the right' evidence was highlighted from a number of different stakeholders groups as a promising staring point for dialog, with the challenge of overcoming the differences in interpretations of what is enough and 'the right' type of evidence for a certain policy intervention) and
- different definitions and perceptions of concepts, such as the evidence; concepts of political will and empowerment.

Main findings from the STOP First Childhood Obesity Stakeholder Conference and Dialog have confirmed results of stakeholder survey and add more thoughts to explore in the next steps (Table 110).

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Table 110: Main findings from first dialogues with stakeholders, regarding WP´s - first STOP stakeholders meeting, held in Brussels in September 2019

Title of the dialogue	Key outcome concepts and themes of the stakeholders dialogues
Health sector interventions for obesity treatment (linked to WP8)	• Importance of the equal engagement has to be highlighted • Holistic and interdisciplinary management of an issue is necessary • Social inequalities are the main inhibitor • Need to address the trust issue • Power of advocacy, • evaluation is particularly important, • Health training is needed across sectors in public administration
Social marketing (linked to WP5)	• Lack of trust (particularly in industry players leading to polarized views) • Competing policy priorities for government • Understand the problems and challenges to achieve common ground • Need of collaborative action • perceived power vs. real power
Food reformulation, food taxation, reducing marketing pressure of foods to children, labelling, businesses (linked to WP4 and WP6)	• Among industry itself there is no real dialog, there must be constructive dialog • no evidence needed for the formulation of the food – strong evidence is needed for reformulation of foods • need to identify stakeholders with unacceptable agendas • holistic and interdisciplinary management of an issue • lack of communication, question of trust, conflicts of interest, health literacy, involving public opinion • the concept and importance of evidence was especially mentioned in that specific dialog
Physical activity measures (linked to WP7)	• some questionable players among stakeholders • collaboration and more engagement with the right-holders • the role of parents engagement • improving physical culture • transparency and focus change • powerful social media marketing campaign that are transparent and responsible

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4.8 Future steps

Results of the stakeholders' survey will be used to transfer the STOP generated knowledge and innovation to relevant stakeholders by providing better insight and understanding of the stakeholders' landscape, which is the added value and innovative approach of the STOP project.
Knowledge on the stakeholders networks, alliances and positions will be the input for the stakeholders dialogues in STOP years 3 and 4. By that, the expected STOP impact would be supported in the dialogues with policy decision makers, public agencies, research community, health care system, civil society and private sector.
In the next follow-up survey, STOP partners will upgrade the present questionnaire and together with stakeholders explore opinions and perceptions about how certain policies are to be implemented (e.g. for reformulation: through taxation, or voluntary agreements, or legal standards for salt levels, or a policy mix, or other?). STOP partners might also explore what could make a certain stakeholders support a specific policy action. It might be also interesting to shed a light on the underlying motivations of different stakeholders for different policy options. By doing so, partners might be in a better position while recommending ways in which multi-stakeholder frameworks might be used constructively, not just exploring opinions by various stakeholders about different policies.
Common grounds for the sustainability plan for future stakeholders work will be established, using the results of the first and follow up (in year 4) stakeholders survey for answering the questions:

- How do we want to cooperate/collaborate with other stakeholders in the future?
- What do we need for that?
- Who can provide what is needed?

Due to the current COVID-19 situation and the impact it had in late winter 2019 and early spring 2020, we will try to adapt our plans for the stakeholders engagement and explore options of specified discussions with smaller groups of stakeholders.
Based on the existing evidence base regarding COVID-19,it seems that the pandemic will be followed by economic, social, cultural, environmental and other crises. Douglas et all[27] are exploring options of how to mitigate the wider health effect of the COVID-19 health response, considering the impact of upstream social and economic determinants of health, such as loss of income or loss of education, food affordability and accessibility, and levels of physical activity. Children are perceived as one of the sub-populations at risk, which is why a close monitoring of the situation is imperative.
Next steps in the framework of the STOP project, and the multi-stakeholder work package more particularly, will also be shaped by the important new policy developments taking place at the EU level.
First and foremost, on 20 May the European Commission published "A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system"[28]. Under this policy framework a range of regulatory and non-regulatory actions will be introduced over the next several years. Creating healthier food environments and tackling obesity are explicit aims of the plan. The implementation of both these actions and the overall strategy will be accompanied by multi-stakeholder consultation processes.
One especially interesting feature of the strategy is the action point to propose a "legislative framework for sustainable food systems" by 2023. It goes without saying that many lessons from the STOP project and the multi-stakeholder work will be important to inform the contents of this legislative framework.
Secondly, the European Commission intends to publish its flagship "Europe's Beating Cancer Plan" in the fourth quarter of 2020. This comprehensive plan to fight cancer will be based on several pillars including, prevention, early diagnosis, treatment, and follow-up care[29]. Preventing obesity should be seen as an important element of the prevention pillar of the plan. While not many details are available at the moment of writing, the Farm to Fork Strategy highlights that the plan will also include "the promotion of healthy diets as part of the actions for cancer prevention"[28].
The stakeholders dialogues will allow the space to explore the stakeholders views, together with the enablers and inhibitors, how to formulate a harmonised mandatory public health driven effective initiatives to stimulate reformulation of processed food, including the setting of maximum levels for certain HFSS nutrients.
Front of pack nutrition labeling is essential to enable consumers to make beneficial health food choices as easier choices. Stakeholders discussions and dialogues on that topic would be the next priority, defined and fine-tuned by the HLG. Restriction of the promotion of foods high in salt, sugars and/or fat, supported by nutrition profiling are the two next issues where we need to understand the drivers of change to a healthier solutions among stakeholders better. As indicated in the Green Deal, labeling and marketing initiatives will have not just effect in healthy choices

[27] doi: 10.1136/bmj.m1557
[28] https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590404602495&uri=CELEX:52020DC0381
[29] https://ec.europa.eu/health/non_communicable_diseases/cancer_en

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of consumers but could link different stakeholders interests, while heighten awareness of EU high standards, opening up additional economic opportunities. Linking STOP stakeholders initiatives broadly to different stakeholders groups could bring more different views at the table, with higher potentials to come to win-win solutions, driven by the public health interest. In the present Covid situation, outcomes, bringing societies to a healthier, green and adjust recovery, might stimulate solutions, driven by different new concepts, such as economy of wellbeing, where upstream determinants of childhood obesity are pressing less to unhealthy food choices and inactivity. Different health promotion methodologies and tools could be employed in searching for multistakeholders solutions, including fore sighting to understand and adapt for the future challenges.

To address the issue of nutrition, physical activity and childhood obesity EU and national stakeholders in the next two STOP years, links between Horizon 2020 research STOP project and DG Sante Joint Action Best-reMaP will be establish more intensively in the next steps. The Best ReMaP Joint Action (JA Best-ReMaP), as the implementation mechanisem of the EU Action plan on childhood obesity 2014-20 will build on the STOP processes, experiences and outcomes, including results of the multistakeholders work.

JA Best-ReMaP proposes actions to address objective 3.1 of the 2019 Annual work programme of DG Sante, that is increasing the offer of healthier options of processed food and/or reducing salt, sugar and saturated fat from the processed food available in EU (super)markets. Through the period of 3 years, JA Best ReMaP will implement three best practices, selected in a transparent process by the Steering Group on Promotion and Prevention (SGPP) and HLG on nutrition and physical activity: (1) on establishing standardised reformulation and processed food monitoring system based on the successful French/Joint Action on Nutrition and Physical Activity model (supporting the EU Framework for national reformulation initiatives), (2) on the framing of marketing aimed at children of foods and beverages high in fats, sugars or salt,; and (3) on public procurements of food for health in public institutions (kindergartens and schools). JA Best-ReMaP will use the STOP stakeholders approach, and will further build the established STOP multistakeholders framework.

STOP stakeholders conference and dialog will be organized back to back with the JA Best-ReMaP Mid-term Conference, in the time of the Slovene presidency of the EU Council, with participation of relevant identified stakeholders, such as the representatives of different relevant sectors, other interested EU and national stakeholders, representatives of other related projects (i.e. CO-CREATE) and initiatives. Such high level event should move the agenda on nutrition, physical activity and prevention of childhood obesity higher on the political agenda.

Stakeholders survey will be repeated at the end of STOP project, in year 4. STOP consortium will be carefully following societal and policy developments in the area of nutrition, physical activity and childhood obesity, with the aim to capture best differences in stakeholders views and possible changes in attitudes, positions and values. In the first round questionnaire we have found some interesting differences in the health community. Exploring differences between health organisations may add value to the STOP multi-stakeholder work.

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Appendices

A Annex A - STOP Stakeholders Contact Collection Protocol

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STOP STAKEHOLDERS

Contact collection protocol

Prepared by:
Mojca Gabrijelčič[1], Luka Kronegger[2], Mateja Juvan[1], Nina Scagnetti[1], Ingrid Sotlar[1], Nikolai Pushkarev[3], Jack Olney[4]

July 2018

1 NIJZ – National Institute of Public Health
2 UL-FSS - University of Ljubljana – Faculty of Social Sciences
3 EPHA – European Public Health Alliance
4 ICL – Imperial College London

Dear partners,

We are jointly composing the STOP stakeholders list. We would like to address as many relevant stakeholders as possible. We would like to explore not just the usual suspects but also those who are more *in the shadow*, or neglected at the moment. To achieve this, we are using structured approach, that identifies all potential main drivers of obesity on one hand and all the spheres of society on the other.

I. We are looking for the following **societal spheres**,[1] where an individual organisation acts as a (see Figure 1):

   1. Non-profit public formal organisations (e.g., National Institute of Public Health: 1)
   2. Profit making private formal organisations (we would not like to engage individual organisations but umbrella organisations like FoodDrinkEurope, which are borderline: 2, 4)
   3. Public private partnerships (like to some extent European Innovation Partnership – EIP FOOD: 3)
   4. Non-profit formal organisations (e.g., European Public Health Alliance: 4)
   5. Informal economy (e.g., Ombudsman: 5)
   6. Informal providers of different services (e.g., scouts: 6, 4)
   7. Non-profit informal networks (e.g., associations of parents in local communities: 7, 4)

   For more detailed descriptions of the societal spheres see the descriptions bellow.

II. The pool for searching the stakeholders/right-holders is based on **7 fields defined in the Obesity System Influence Diagram** (see Figure 2):

   a. Biology (research institutions and labs performing clinical studies, pharmaceutical industry, etc.)
   b. Food production (Agrifood chain)
   c. Food consumption (nutrition, dietetics, behavioural drivers, etc.)
   d. Individual activity (socialization & education, etc.)
   e. Activity environment (urban planning, facilities in communities, etc.)
   f. Individual psychology (psychology, psychiatry, patients NGOs, etc.)
   g. Societal influences (traditional and digital media, youth organisations, etc.)

[1] Some organisations are at the borderline of societal spheres. Thus, when we attribute them with the descriptive sphere, we could attribute them with more than one of the seven spheres (up to three).

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Protocol

1. Please, consider the contents of your respective work packages and choose the relevant fields from the Obesity System Influence Diagram (a-g).
2. By using the welfare mix (triangle), we are encouraging you to identify and add at least one potential stakeholder/right-holder per societal spheres (1-7).

If you chose one relevant field try to provide contact information for at least 7 stakeholders.

- We are encouraging you to enter as many stakeholders as possible into the form.
- Do not mind if the stakeholder contact is already listed in the spreadsheet. The data will be checked and cleaned by STOP staff.
- According to GDPR, the provided list of stakeholders should only include official contact information of institutions. Information on the existence of informal contact is provided in separate column. Informal contacts will be managed separately by work-package representatives.

By using this process we will try to engage stakeholders that are not the usual suspects to hopefully bring new views, ideas and solutions to childhood obesity policies and solutions.

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Entering the data

The data is entered into spreadsheet available on a Box platform of a STOP project
`https://imperialcollegelondon.box.com/s/vquuw0p6tgtorie39nz0wezbrsf165pb`

	About organisation							Contact						
Info provider - STOP partner	Acronym	Organisation name	Website	Address 1	Address 2	City	Country	First name	Surname	position	Email	Telephone number	Nonformal contact (yes/no)	societal spheres
WP10 – UL-FSS	NIJZ	National Institute Of Public Health	http://nijz.si	Trubarjeva 2		Ljubljana	Slovenia	Nina	Pirnat	director	info@nijz.si	+386 1 2441 400	Yes	1

We present an example of researcher from University of Ljubljana entering data of Slovenian National Institute of Public Health as relevant stakeholder:

Use the first column to identify yourself: enter the work package number which forms the base for the stakeholder identification and add additional identifiers so WP10 staff will be able to contact you if needed.

Info provider - STOP partner	About organisat	
	Acronym	Orgar
WP10 – UL-FSS	NIJZ	Nationa

Enter the information on stakeholder, Acronym, Name, Web-page, Address...

About organisation	
Acronym	Organisation name
NIJZ	National Institute Of Publ

Provide the contact information. To be GDPR compliant, provide only generic contact address of organisation (e.g. info@...), PR office or other office that is relevant and eligable to comunicate with STOP project. If you have informal contacts with organisation that could be used during the project please indicate this in a dedicated column. If we will need this contact in future (in line of GDPR), we will ask you for help.

Contact			
First name	Surname	position	Email
Nina	Pirnat	director	info@n

	Orc	
Telephone number	Nonformal contact (yes/no)	soc sph
+386 1 2441 400	Yes	

Considering chosen relevant field(s), enter the societal sphere(s) to which identified stakeholder belongs (1-7).

Nonformal contact (yes/no)	societal spheres
Yes	1

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Typology of STOP stakeholders and welfare mix

Welfare mix as a concept was developed to enable the identification differences among the groups of the welfare states (Esping-Andersen, 1990). Since then, welfare mix was used and upgraded for the needs of understanding of different spheres of society in different contexts. In the case of AHA.SI project (www.staranje.si) it was used to identify the project stakeholders, operating in social spheres in different areas of active and healthy ageing in Slovenia (Kobal Tomc, 2014). For the purposes of the STOP project, we are using the welfare mix for identification of as many relevant stakeholders in the area of obesity as possible, not just usual suspects but also those who are more "in the shadow" or neglected at the moment. To achieve this, we are using a structured approach, identifying all potential main drivers of obesity on one hand and all the spheres of society, defined by the welfare mix, on the other.

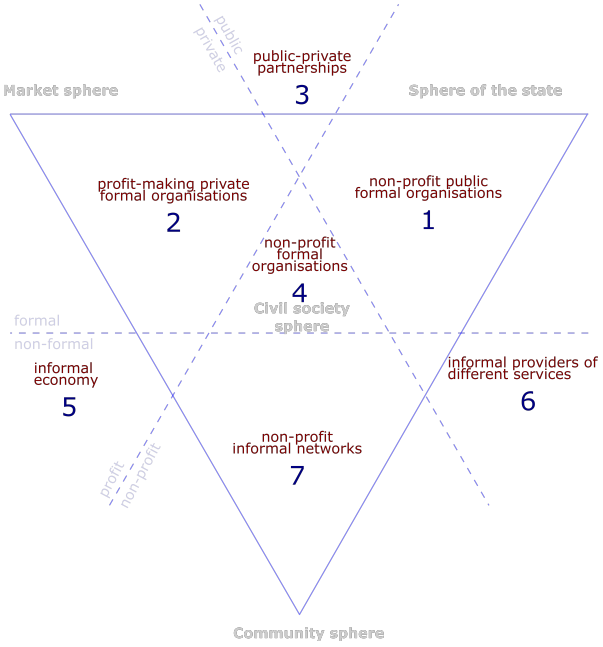

Figure 1: Welfare triangle (adapted from: Pestoff, 1992)

The typology:

1. **Non-profit public formal organisations**
   E.g., governmental sectors and structures, public institutes and universities, chambers, public companies, parties.
   Non-profit public formal organisations provide public service activities. They are regulated and appear in different legal forms (Pukšič, 2006), which conceptually covers the sphere of state, is based on a hierarchy in formal rights, it is financed from (predominantly) public resources (Kobal Tomc, 2014).

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Public provision of social welfare services depends upon political decision (Pestoff, 1992).

2. **Profit-making private formal organisations**
   E.g., food processing industry, leisure time industry, cooperatives.
   Profit-making private formal organisations which conceptually correspond to the market, are based on the search for profit and market prices. Profit-making private formal organisations are considering the economic power providing significant funding (WHO, 2001). Private provision is undertaken on an economical basis (Pestoff, 1992).

3. **Public-private partnership**
   Public-private partnerships can cover different types of long-term contracts with a wide range of risk allocations, funding arrangements and transparency requirements. Infrastructure public-private partnerships as a phenomenon can be understood at five different levels: as a particular project or activity, as a form of project delivery, as a statement of government policy, as a tool of government, or as a wider cultural phenomenon. Common themes of public-private partnerships are the sharing of risk and the development of innovative, long-term relationships between the public and private sectors (Pestoff, 1992). In the health sector, public-private partnership commonly refers to any partnership in (global) health involving government and/or inter-governmental institutions and industry (Asante and Zwi, 2007). The public private partnerships have to be public health driven, transparent, without conflict of interests and independently monitored.

4. **Non-profit formal organisations**
   E.g., professional associations and counselling, charitable organizations, faith-based organizations.
   Non-profit formal organisations are common concepts for public administration, for social activities and voluntary organizations, operating mainly by public funding without or with profits. They invest profits back into the business, for expanding or raising the quality of services. Non-profit formal organizations are goals oriented, social, open, dynamic and composite systems. Their role is to identify and meet the needs of various stakeholders (Evers, 1995), promoting accountability and transparency, raising awareness, building knowledge and other capacities, sharing good practices of experience shaped programmes, policies and strategies, incubating solutions, encouraging citizens engagement and representation of marginalized groups, including solidarity support (World Economic Forum, 2013).

5. **Informal economy**
   E.g., labour unions and labour organizations representing workers, different inspectorates, ombudsmans.
   From public health perspective informal economy has multiple damaging effects on individuals and families with children. (Precarious) workers have no formal contract with employers, no systematically formalized working conditions, gets irregularly and unevenly paid, have no forum to

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express their grievances, have less fixed hours of work and mostly earn hand to mouth, are not covered by any kind of social security system and have poor knowledge about the need to protect themselves socially and economically in the sense of health promotion and disease prevention (FundsforNGOs, 2018) .Thus, precarious workers with less formalised and less regular incomes stay in social distress of bad healthy habits, and if young parents, together with their children. Non formal economy players are difficult to address and engage, but there are a number of stakeholders which are dealing with informal economy challenges such as labour unions and labour organizations representing workers, different inspectorates, ombudsmans and possibly others.

6. **Informal providers of different services**
   E.g., entrepreneurs employing innovative and/or market-oriented approaches for social and environmental outcomes, grassroots associations and activities at local level, cooperatives owned and democratically controlled by their members, voluntary organisations.
   Informal providers of different services like alternative strands of organising life can be "organized" but do not necessarily have physical, legal or financial structures (WHO, 2001). They are not well setled and institutionalised, facing plurality of freely organised interests (Evers, 1995). For instance, there is a growing need for voluntary actions in daily life (Pestoff, 1992), including also the need for supporting parents and children, especially the parental role in first 1000 days, as one of the key drivers for decreasing the effects of obesogenic environment. In such cases, the success of voluntary organisations, incorporated into respective hierarchical social order and "mixed" economy depends on their capacity to bridge the different rationales of bureaucracies, market and economy (Evers, 1995). It might be the case that states or the private for-profit sector may play a key role in the establishment of some informal providers of different services or provide significant funding, which is calling into question their independence from the state and private sectors (WHO, 2001).

7. **Non-profit informal networks**
   E.g., informal social networks and community building, online groups and activities including social media communities, social movements of collective action and/or identity, which can be online or physical, personal relationships. (World Economic Forum, 2013)
   Networked citizens are increasingly involved in partnerships with governments and businesses, and are engaged in official consultation processes. They have started to change the interface and expectations of civil society empowerment. The scale of social networks and the speed of information transfer, through increasing access to the Internet, social media and mobile phone technology has shifted the paradigm of citizen expression (WHO, 2001). Informal networks and civil (resistance) movements, enabled by mobile and social technologies, signpost a new era of citizen engagement, traditional institutions of "organized" civil society have played critical roles as supporters, facilitators and funders. Development and implementation of technology became a social tool with different functions

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to express ideas and visions, for policy consultation and empowerment. Proliferation of voices online is a new way of raising knowledge, forming attitudes and initialising action and thus gains a major political, societal and technological / scientific impact (Danish Board of Technoology Foundation, 2018).

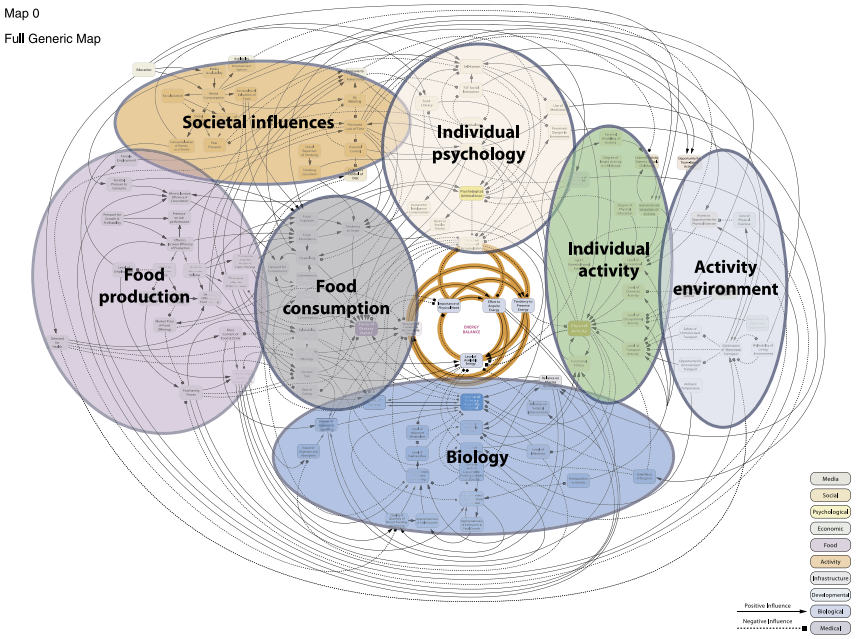

Figure 2: Obesity System Influence Diagram (FORESIGHT, 2007, page: 121)

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B Annex B - Defining STOP statements guideline

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DEFINING STOP STATEMENTS GUIDELINE

Prepared by:
Mojca Gabrijelčič[1], Luka Kronegger[2], Mateja Juvan[1]

July 2018

1 NIJZ – National Institute of Public Health
2 UL-FSS - University of Ljubljana – Faculty of Social Sciences

STOP WP10 statements/"claims"

In the STOP WP10 we are composing a list of STOP stakeholders (GDPR[1]). The protocol used for identification of stakeholders is used to engage stakeholders and right-holders which are, and those that may not be in the first plan, when discussing the drivers of childhood obesity.

We hope that a comprehensive list of STOP stakeholders would help us to identify a facilitatory and inhibitory factors for stakeholders engagement and activation. We would also like to increase our understanding of the need to change the paradigm on obesitogenic environment among stakeholders. The participatory engaged stakeholders might more actively participate in the formulation, implementation and use of a specific policy, since they might better embrace the policy cycle process.

After compiling the list, we are going to invite stakeholders to express their attitudes towards specific statements in the form of a questionnaire. We do not want to compose plain and straightforward statements, but would like to compose the statements, which would help us to better and more in depth understand different positions of stakeholders and overcome the present positive or negative attitudes towards specific "obesogenic" issues. Stakeholders answers will hopefully enable us to group stakeholders by their position and attitude toward a specific statement and will help us understand how the alliances among stakeholders and right-holders regarding a specific statement are composed.

We are asking partners of STOP WPs 4 – 8 to help us with formulation of these statements. The goal is to compose 2 – 3 statements per WP.

How to start?

As an example, here is a proposed claim for the WP4 topic on regulation and fiscal policies.

"It is important to maintain consumer's privilege to choose the differently sweet beverages."

This "indicative" statement for a WP4 is based on a set of identified incentives and dis-incentives, defined in a WHO document titled "Incentives and disincentives for reducing sugar in manufactured foods". The idea when searching for the statements is to find the *indicators* (or indicating positions towards a specific statement) that will help us at segmentation of the stakeholders.

The instruction for the stakeholder representative regarding the response will be formed in a following way:

Please, indicate whether the specific statement are relevant for your organization. If the statement is relevant, please assess the standpoint for your organization, on the scale from 1 to 5, where 1 represents strong disagreement and 5 strong agreement with the statement. Number 3 represents a neutral standpoint of your organisation towards a statement.

Bellow you could find a template for a structured response.

Not relevant for my organization	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Don't know
0	1	2	3	4	5	9

Dear colleague, if you wish to discuss the preparation of suitable statements, or need any kind of assistance on the task, do not hesitate to contact us at: mateja.juvan(at)nijz.si.

[1] In line with GDPR as described in the stakeholders identification protocol

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C Annex C - Stop stakeholder survey

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STOP stakeholder survey

Survey short title: STOP stakeholder survey - EU

Survey long title: STOP stakeholder survey

Question number: 43

Survey is closed.

Active from: 25.02.2019

Active until: 07.05.2019

Author: Ingrid Sotlar

Edited: Monika Robnik

Date: 31.01.2019

Date: 26.06.2019

Description: Kopija ankete: STOP stakeholder survey

Invitation to engage with the STOP project, aimed at halting childhood obesity in the EU
Your organisation has been identified as a key stakeholder and/or right-holder on the theme of childhood obesity. On behalf of the STOP project consortium, we would like to invite you to engage with us in a participatory process aimed at informatively exploring the most effective ways to tackle childhood obesity.
The STOP project (Science and Technology in childhood Obesity Policy) is a major initiative funded under the EU Horizon 2020 research programme launched this year (http://www.stopchildobesity.eu). The aim of the STOP project is to find the most successful and effective approaches to reduce the incidence of childhood obesity, while helping children already suffering the disease to get the best support. Benefits of engaging:

The current EU Action Plan on childhood obesity is set to expire in 2020, with the possibility for a new strategic framework to be defined. Lessons learned from the STOP project, including through the stakeholder engagement process, can be proposed as input for the EU's future strategic engagement in the area.
Likewise, good practice policies and actions identified under STOP may be shared through the Best Practice Portal, offering the possibility to propose your projects and activities for assessment and potential inclusion.
Joining the STOP stakeholders network will provide the opportunity to flexibly share your expertise and views on different areas relevant to fighting obesity as a multidimensional challenge, also by joining STOP conferences and events. You will also receive the latest, in-depth and practical insights on the topic of tackling childhood obesity, including with reference to the CO-CREATE project.
Invitation to participate in STOP questionnaire:
Your cooperation is really important, because views of your organisation can not be replaced by any other. By collaborating, you will make a significant contribution to the quality of the data collected and to the reliability of the results and applicability of the STOP recommendations. By thus you also contribute to the creation of arguments to achieve the goals of reducing childhood obesity in the EU.
In the questionnaire, we guarantee you complete anonymity of your answers. The personal data and the identification data on your organization are not collected in the questionnaire, and the IP address tracking is disabled.
All data collected with this survey will be used exclusively for the purposes of the STOP project. Your answers will be handled with care and confidentiality. The research reports will be presented to the stakeholders at different STOP events and published in summarized form at the NIJZ, ICL and project partners websites and in professional publications.

Each answer counts and will provide a more complete insight into the challenges of childhood obesity, so we would like to thank you very much for participating in the survey.
For further details on the project and stakeholder engagement process, please contact:
stop@nijz.si or stop-management@imperial.ac.uk
STOP Coordinator: Prof. Franco Sassi, Imperial College of Science Technology and Medicine (ICL)
STOP WP10 coordinator: Dr. Mojca Gabrijelčič, National Institute of Public Health Slovenia (NIJZ)

Q1 - Please indicate which sector your organisation mainly operates in

- ◯ Research
- ◯ Health
- ◯ Education
- ◯ Agri-food chain
- ◯ Social affairs
- ◯ Environment
- ◯ Transport
- ◯ Built environment
- ◯ Physical activity and sports

- ◯ Finance or banking investment
- ◯ Labour
- ◯ Other:

IF (1) Q1 = [4]

Q3 - Which sector of agri-food chain

- ◯ Primary agricultural production
- ◯ Food processing industry
- ◯ Retail
- ◯ Catering
- ◯ Other:

Q2 - Please indicate your main position in the organisation

- ◯ Managerial - Directorial post
- ◯ Professional post
- ◯ Administrative post
- ◯ Apprentice
- ◯ Other:

Q4 - How would you best define your organisation

- ◯ Public (whose founder or/and owner is the state)
- ◯ Private (whose founders and/or owners are private individuals or privat legal entities)
- ◯ Public-private

Q5 - How would you best define your organisation

- ◯ Formal (formal organizations have a founding act, operating rules)
- ◯ Informal (for example, Facebook community of breastfeeding mothers)

Q6 - How would you best define your organisation

○ Profit (profit oriented entities)

○ Non-profit (operating in the general good)

Q7 - Please, indicate the relevance of the following areas or activities, listed below, for your organisation. Some of the topics and statements might be irrelevant for your organisation, in such case please mark that option.

	Irrelevant	Of low relevance	Relevant to some extent	Relevant	Very relevant
Reformulation, taxation, labelling, food marketing:	○	○	○	○	○
Social marketing campaigns:	○	○	○	○	○
Development of measures in the private sector to contribute to tackling childhood obesity:	○	○	○	○	○
Measures to increase physical activity in children:	○	○	○	○	○
Measures to treat childhood obesity in the health sector:	○	○	○	○	○

Q8 - In the opinion of your organisation, how successful are the following policies, measures and activities in changing the obesogenic environment to prevent childhood obesity, as a part of comprehensive approach? Please, express your agreement:

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Don't know
Food taxation:	○	○	○	○	○	○
Food labelling:	○	○	○	○	○	○
Food reformulation:	○	○	○	○	○	○
Food marketing:	○	○	○	○	○	○
Social marketing campaigns:	○	○	○	○	○	○

Monitoring business actions and performance :	○	○	○	○	○	○
Fiscal measures to promote physical activity:	○	○	○	○	○	○
Measures to promote physical activity in schools:	○	○	○	○	○	○
Measures to promote active transport among children:	○	○	○	○	○	○
Capacity building for the implementation of programs for the treatment of childhood obesity in the health sector:	○	○	○	○	○	○

Q9 - According to your organisation, which of the following approaches would be most promising for successful implementation of the policies, measures and activities, listed below, in changing the obesogenic environment to prevent childhood obesity? You could choose more than one.

	Legislation	Establishing guidelines or standards	Supporting collaborative action	Fiscal measures	Additional research
Food taxation:	☐	☐	☐	☐	☐
Food labelling:	☐	☐	☐	☐	☐
Food reformulation:	☐	☐	☐	☐	☐
Food marketing:	☐	☐	☐	☐	☐
Social marketing campaigns:	☐	☐	☐	☐	☐

Monitoring business actions and performance :	☐	☐	☐	☐	☐
Fiscal measures to promote physical activity:	☐	☐	☐	☐	☐
Measures to promote physical activity in schools:	☐	☐	☐	☐	☐
Measures to promote active transport among children:	☐	☐	☐	☐	☐
Capacity building for the implementation of programs for the treatment of childhood obesity in the health sector:	☐	☐	☐	☐	☐

Q10 - Please, consider the following statements and indicate what the standpoint of your organisation is towards each specific statement.
Your organisation might disagree, somewhat disagree, is neutral, somewhat agree or agree with a specific statement.

BLOCK (2) (Regulation and fiscal policies (WP4))

IF (3) Q7a = [3, 4, 5]

Q11 - We are kindly asking you to express your organisation agreement with the following statements below, regarding reformulation, taxation, labelling and food marketing.

BLOCK (2) (Regulation and fiscal policies (WP4))

IF (4) Q7a = [3, 4, 5]

Q12 - Labels which provide an overall nutritional grade are more effective than labels which provide nutrient specific information in:

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree
supporting healthier consumer choice.	○	○	○	○	○
: encouraging companies' price reactions.	○	○	○	○	○
:					

in encouraging companies to reformulate product.	○	○	○	○	○

:

BLOCK (2) (Regulation and fiscal policies (WP4))

IF (5) Q7a = [3, 4, 5]

Q13 - Tax proportional to the nutrient content of product is more effective than the tax based on the value of product :

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree
to support consumers in purchasing healthier options.:	○	○	○	○	○
to encourage companies' price reactions.	○	○	○	○	○

:

to encourage companies to reformulate product.	○	○	○	○	○

:

BLOCK (2) (Regulation and fiscal policies (WP4))

IF (6) Q7a = [3, 4, 5]

Q14 - Labelling system should integrate recommended portion sizes.

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree

Vpišite besedilo odgovora 1:	○	○	○	○	○

BLOCK (2) (Regulation and fiscal policies (WP4))

IF (7) Q7a = [3, 4, 5]

Q15 - Marketing of food high in fat, sugar and salt, targeted to children should be restricted to children up to:

	18 years	16 years	14 years	12 years	10 years	8 years
Q15a:	○	○	○	○	○	○

BLOCK (2) (Regulation and fiscal policies (WP4))

IF (8) Q7a = [3, 4, 5]

Q16 - For food groups which are major contributors to population intakes, composition targets/standards, based on best practice, should be established for the content of:

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree
of saturated fat in certain foods.:	○	○	○	○	○
of sodium in certain foods.:	○	○	○	○	○
of added/free sugar in certain foods. :	○	○	○	○	○

BLOCK (2) (Regulation and fiscal policies (WP4))

IF (9) Q7a = [3, 4, 5]

Q17 - Would you like to highlight something else regarding reformulation, taxation, labelling and food marketing?

BLOCK (10) (Consumer Behaviour: Creating Demand for Healthy Lifestyles (WP5))

IF (11) Q7b = [3, 4, 5]

Q18 - We are kindly asking you to express your organisation agreement with the following statements below, regarding social marketing campaigns for reducing childhood obesity.

BLOCK (10) (Consumer Behaviour: Creating Demand for Healthy Lifestyles (WP5))

IF (12) Q7b = [3, 4, 5]

Q19 - Social marketing campaigns for reducing childhood obesity are more successful if they:

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree
target portion sizes.:	○	○	○	○	○
target nutrition composition of products.:	○	○	○	○	○
target physical activity options in the environments.:	○	○	○	○	○
target sleep patterns of children.:	○	○	○	○	○
target education programmes and approaches.:	○	○	○	○	○
target social media use among children.:	○	○	○	○	○
target self-confidence and body image.:	○	○	○	○	○

BLOCK (10) (Consumer Behaviour: Creating Demand for Healthy Lifestyles (WP5))

IF (13) Q7b = [3, 4, 5]

Q20 - Would you like to highlight something else regarding social marketing campaigns for reducing childhood obesity?

BLOCK (14) (Healthy food and food choice environments (WP6))

IF (15) Q7c = [3, 4, 5]

Q21 - We are kindly asking you to express your organisation agreement with the following statements below, regarding business impact assessment

BLOCK (14) (Healthy food and food choice environments (WP6))

IF (16) Q7d = [3, 4, 5]

Q22 - Entities in agri-food chain are performing different actions in supporting creation of healthy food environments. Business impact assessment of those actions should concentrate most to the:

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree
performance in core business indicators. :	○	○	○	○	○
established processes for implementing commitments. :	○	○	○	○	○
established monitoring and evaluation of commitments implementation.:	○	○	○	○	○
transparency of actions and operations.:	○	○	○	○	○

BLOCK (14) (Healthy food and food choice environments (WP6))

IF (17) Q7c = [3, 4, 5]

Q23 - The role of the food industry is

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree
to fund research on nutrition and health.:	○	○	○	○	○
to support professional and/or scientific events and awarding.:	○	○	○	○	○
to support nutrition education / healthy diet oriented programs.:	○	○	○	○	○
to support programs, activities and events in relation to physical activity or active living.:	○	○	○	○	○

to be involved in the development of nutrition, physical activity and/or obesity policies or regulations.:	○	○	○	○	○
to be engaged in obesity prevention.:	○	○	○	○	○

BLOCK (14) (Healthy food and food choice environments (WP6))

IF (18) Q7b = [3, 4, 5]

Q24 - Would you like to highlight something else regarding business impact assessment?

BLOCK (19) (Physical activity (WP7))

IF (20) Q7d = [3, 4, 5]

Q25 - We are kindly asking you to express your organisation agreement with the following statements below, regarding policy actions, enhancing physical activity in children.

BLOCK (19) (Physical activity (WP7))

IF (21) Q7d = [3, 4, 5]

Q26 - Following fiscal policy options are successful for supporting the increase of physical activity in children:

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree
Investments in youth physical activity should be subsidised.:	○	○	○	○	○
Reduced tax rates should be applied to equipment for exercise.:	○	○	○	○	○
Municipalities should financially support sport-for-all programmes.:	○	○	○	○	○

Schools should be aided by state and municipalities to improve their infrastructure for PA/sports.:	○	○	○	○	○

BLOCK (19) (Physical activity (WP7))

IF (22) Q7d = [3, 4, 5]

Q27 - Schools across EU could offer numerous opportunities for increasing physical activity in children:

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree
Extracurricular physical activity should be offered to all children free of charge within the obligatory school curricula.:	○	○	○	○	○
One hour of physical education per day should be mandatory for all children throughout primary and secondary school.:	○	○	○	○	○
Schools should provide active learning and active breaks during school time.:	○	○	○	○	○
Obligatory short breaks in sitting should be introduced throughout primary and secondary school.:	○	○	○	○	○
School curricula need to include lessons about the benefits of PA (outside physical education lessons).:	○	○	○	○	○

BLOCK (19) (Physical activity (WP7))

IF (23) Q7d = [3, 4, 5]

Q28 - Active transport is offering children numerous opportunities for being physically active, with clear responsibilities for different sectors, levels or stakeholders:

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree
Active mobility should become a policy beacon in mobility and land use planning, especially in urban environments. :	○	○	○	○	○
Active commuting to school for children under 12 should be encouraged under supervision by adults.:	○	○	○	○	○
Promotion and implementation of active transport to school should be made obligatory for schools.:	○	○	○	○	○

BLOCK (19) (Physical activity (WP7))

IF (24) Q7d = [3, 4, 5]

Q29 - Would you like to highlight something else regarding policy actions, enhancing physical activity in children?

BLOCK (25) (Health Care (WP8))

IF (26) Q7e = [3, 4, 5]

Q30 - We are kindly asking you to express your organisation agreement with the following statements below, regarding measures to treat childhood obesity in the health sector

BLOCK (25) (Health Care (WP8))

IF (27) Q7e = [3, 4, 5]

Q31 - If obesity in child is detected, the main challenge for appropriate treatment in health system is:

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree
lack of time of health professionals.:	○	○	○	○	○
lack of human resources.:	○	○	○	○	○
lack of financial resources.:	○	○	○	○	○
lack of education/knowledge of health professionals.:	○	○	○	○	○
lack of understanding of the need for team work.:	○	○	○	○	○

BLOCK (25) (Health Care (WP8))

IF (28) Q7e = [3, 4, 5]

Q32 - If we want to manage obesity effective, the most promising approach is:

	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree
to establish common standards for managing obesity in health sector:	○	○	○	○	○
to increase general knowledge among all healthcare professionals.:	○	○	○	○	○
to provide the obesity specialisation of dedicated healthcare professionals.:	○	○	○	○	○
to establish harmonized collaboration among family doctor/GP and specialistic level :	○	○	○	○	○

to establish harmonized collaboration of health professionals with kindergartens and schools:	○	○	○	○	○
Other::	○	○	○	○	○
to establish harmonized collaboration among health professionals and extended family:	○	○	○	○	○

BLOCK (25) (Health Care (WP8))

IF (29) Q7e = [3, 4, 5]

Q33 - Would you like to highlight something else regarding measures to treat childhood obesity in the health sector?

BLOCK (30) (Characteristics of decision – making processes in reverting obesogenic environments)

Q34 - Policy decision making processes are complex, with different means of influence. We are kindly asking you to express your organisation views on the means of influence in the policy decision making processes in childhood obesity.

BLOCK (30) (Characteristics of decision – making processes in reverting obesogenic environments)

Q35 -

According to your organisation what are the most promising means to influence the policy decisions in childhood obesity?	What methods does your organisation most commonly use to influence the policy decisions in childhood obesity?

	Least 1	2	3	4	Most5	Don't know	Least 1	2	3	4	Most5	Don't know
strengthening regulatory capacity	○	○	○	○	○	○	○	○	○	○	○	○
strengthening the voluntary approach	○	○	○	○	○	○	○	○	○	○	○	○
funding capacity building workshops for professional associations	○	○	○	○	○	○	○	○	○	○	○	○
facilitate (e.g. financially supporting) research on the subject	○	○	○	○	○	○	○	○	○	○	○	○
defining public health driven relationships between national governments and the global food industry	○	○	○	○	○	○	○	○	○	○	○	○

BLOCK (30) (Characteristics of decision – making processes in reverting obesogenic environments)

Q36 -

	According to your organisation what are the most promising means to influence the policy decisions in childhood obesity?						Which means does your organisation uses most often to influence the policy decisions in childhood obesity?					
	Least1	2	3	4		Don't know	Least1	2	3	4		Don't know
lobby or advocate directly policy makers for specific policy options	○	○	○	○	○ Most 5	○	○	○	○	○	○ Most 5	○

lobby or advocate directly influential experts for specific policy options	○	○	○	○	○	○	○	○	○	○	○	○
lobby or advocate via NGO's for specific policy options	○	○	○	○	○	○	○	○	○	○	○	○

BLOCK (30) (Characteristics of decision – making processes in reverting obesogenic environments)

Q37 -

	What are in your organisation opinion the most promising means to influence the policy decisions in childhood obesity?						Which means your organisation uses most often to influence the policy decisions in childhood obesity?					
	Least 1	2	3	4	Most 5	Don't know	Least 1	2	3	4	Most 5	Don't know
develop some "consortium" of actors having similar interest on policy options	○	○	○	○	○	○	○	○	○	○	○	○
organise a scientific committee of experts on the subject	○	○	○	○	○	○	○	○	○	○	○	○
informing and empowering interested networks	○	○	○	○	○	○	○	○	○	○	○	○
organise some events with the participation of the policy makers	○	○	○	○	○	○	○	○	○	○	○	○

strenghtening the involvement of adolescents (target group) in decision making processes	○	○	○	○	○	○	○	○	○	○	○	○

BLOCK (30) (Characteristics of decision – making processes in reverting obesogenic environments)

Q38 - For your organisation, how important are the following attributes of multi-stakeholder collaboration in decreasing childhood obesity?

	Not important at all	Not important	Neutral	Important	Very important
understanding of the necessity of the joint multi-stakeholder approach:	○	○	○	○	○
readiness to collaborate with other stakeholders:	○	○	○	○	○
capacities and resources which stakeholders have available to cooperate with others:	○	○	○	○	○
necessary skills and knowledge stakeholders possess to improve cooperation:	○	○	○	○	○
capacities and resources available to cooperate :	○	○	○	○	○
willingness to work on a multi-sectoral initiatives :	○	○	○	○	○
level of trust among stakeholders:	○	○	○	○	○
accountability in multi-stakeholder relationships:	○	○	○	○	○

influence of drivers for action (economic, public health, ...):	○	○	○	○	○
consideration of health inequalities and social determinants :	○	○	○	○	○
consideration of sustainability and environmental issues :	○	○	○	○	○

BLOCK (30) (Characteristics of decision – making processes in reverting obesogenic environments)

Q39 - What, in the opinion of your organisation, are the main challenges in providing healthy food, regular physical activity and low levels of sedentary behaviour for children and adolescent?
(Please, list your organisation priority challenges, with key words or in a few short sentences)

BLOCK (30) (Characteristics of decision – making processes in reverting obesogenic environments)

Q40 - Would you like to highlight something else regarding childhood obesity?

BLOCK (30) (Characteristics of decision – making processes in reverting obesogenic environments)

Q41 - How powerful do you perceive the position of your organisation in the policy decision-making processes regarding childhood obesity?
Multiple answers are possible

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful
Regional level:	☐	☐	☐	☐	☐
National level:	☐	☐	☐	☐	☐
European level :	☐	☐	☐	☐	☐
International/Global level:	☐	☐	☐	☐	☐

D Annex D - Agreement charts and cluster descriptions

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AGREEMENT CHARTS OVERVIEW

STOP, WP10, D10.2 - annex D

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Contents

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1 Introduction

Agreement charts were introduced as a tool for sounding the attitudes of stakeholders towards key questions addressed by STOP survey. Results were used by organisers of the First STOP stakeholder conference held in Brussels in September 2019, to prepare for the confrontations of stakeholders and preparation of *the stakeholders dialogues scenario proposals*.

Agreement charts are graphical representations of distances among stakeholders according to their responses to questions on successfulness of selected policies, measures and activities broadly presented in Section 3.2 of the main survay report. The same distances are additionally used to assign stakeholders to (2-3) clusters, which are described according set of basic descriptive variables.

Presentation of agreement chart interpretation can be found for the example of food taxation (Figure 1) which is one of the items in a section addressing reformulation, taxation, labeling and food marketing (WP4). For other charts only descriptive diagrams of obtained clusters are avaliable.

Due to small number of cases, some of the descriptions of obtained clusters are only informative. This is the consequence to data splitting and survey design focused on participation of stakeholders on specific topics.

2 WP4 – Regulation and Fiscal Policies

Food Taxation

Figure 1 is based on attitudes of stakeholders towards succesfulness of *food taxation* as measure against childhood obesity. Stakeholders are clustered in two clusters. Cluster 1 consists of 62 stakeholders agreeing with the statement with average response of 4,5. On the other hand, in Cluster 2, there is 16 stakeholders, with average response of 1,6 (Table 1). In matrix representation, each row and each column represents a stakeholder, the (dis)similarity of responses of two stakeholders (x_i and x_j) is represented on the crossing of rows i and j. Black colour on the crossing indicates high level of agreement, while red colour indicate disagreement on the topic. Shades indicate the strength of (dis)agreement.

Figure 1: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Food taxation

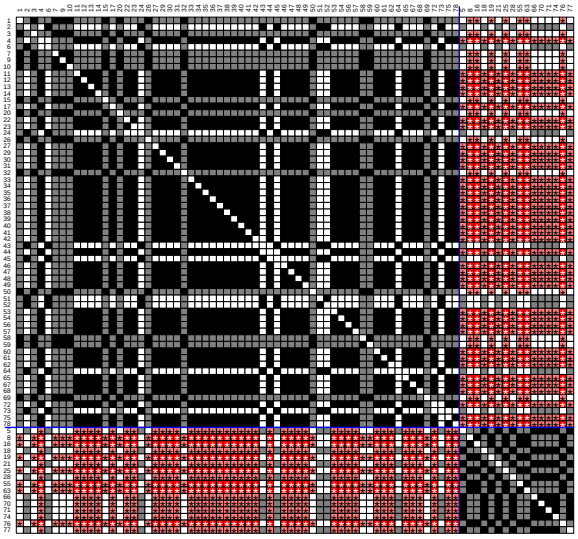

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Table 1: Description of clusters

	Cluster 1	Cluster 2
Average response	4.5	1.6
Number of org.	62	16

Table 2: Coverage according to welfare triangle

			Cluster 1	Cluster 2
Public	Profit	Formal	2	0
Private	Profit	Formal	7	3
Public-private	Profit	Formal	0	1
Public	No-nprofit	Formal	30	3
Private	No-nprofit	Formal	14	5
Public-private	No-nprofit	Formal	6	4
Public	Profit	Informal	0	0
Private	Profit	Informal	0	0
Public-private	Profit	Informal	0	0
Public	No-nprofit	Informal	1	0
Private	No-nprofit	Informal	0	0
Public-private	No-nprofit	Informal	0	0

Table 3: Coverage according to sector

	Cluster 1	Cluster 2
Sector		
Research	15	0
Health	30	7
Education	6	1
Agri-food chain	2	5
Social affairs	3	0
Environment	0	0
Transport	2	1
Built environment	0	0
Physical activity and sports	2	0
Finance or banking investment	0	0
Labour	0	0
Other:	2	2

Table 2 represents the coverage of the stakeholders according to welfare triangle. It can be seen that a majority of respondents are from public, non-profit and formal organizations. From the sector point of view (Table 3) the majority of organizations operate in Health, Research and Education/Agri-food chain (equally). In Research sector we could see that respondents have a same opinion. On the other hand, that is not true in Health and Agri-food chain. Furthermore, figure below shows us average responses to selected questions by cluster members (Figure2). Question (Q38) refers to the importance of the following attributes of multi-stakeholder collaboration in decreasing childhood obesity. The only statistically significant difference between clusters - *readiness to collaborate with other stakeholders* - is marked with asterisk.

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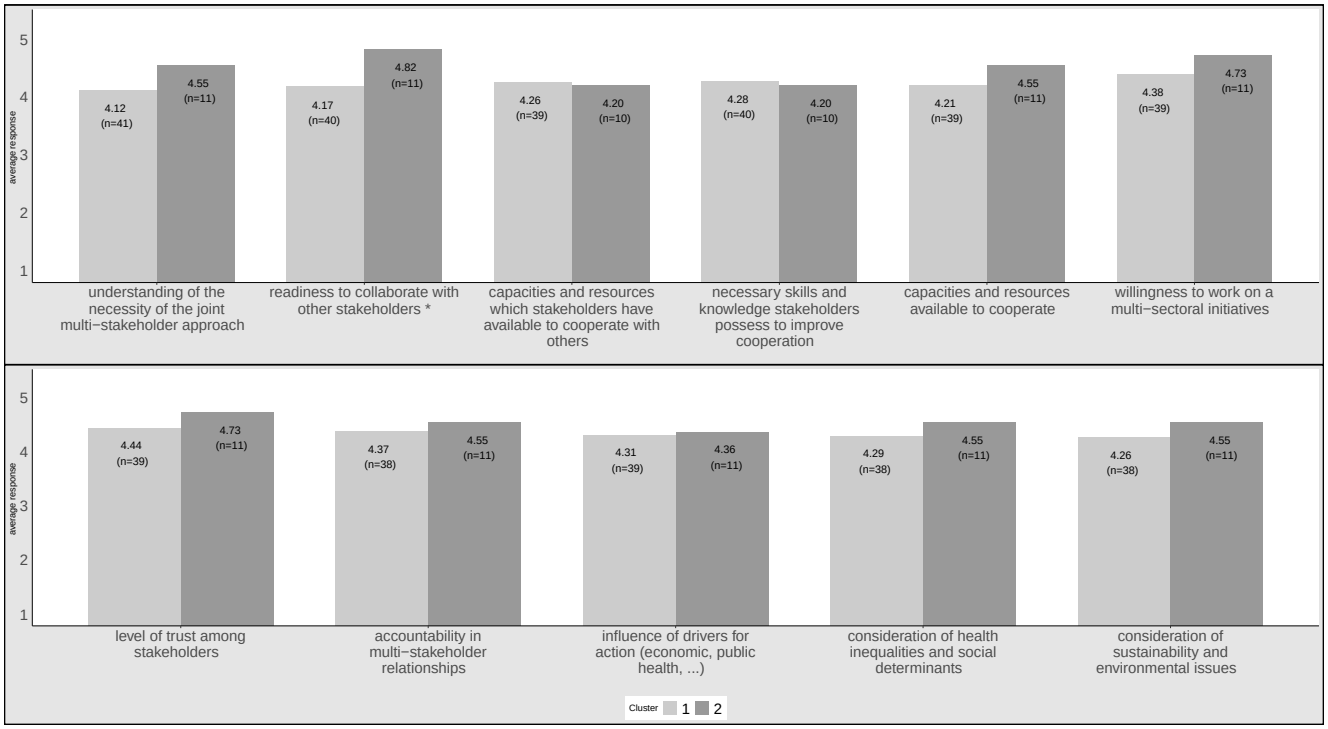
Figure 2: For your organisation, how important are the following attributes of multi-stakeholder collaboration in decreasing childhood obesity?



Next set of figures (3 –5) refer to questions Q35-Q37 which measure two levels of facing challenges (most promising means, commonly used methods).

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Figure 3: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

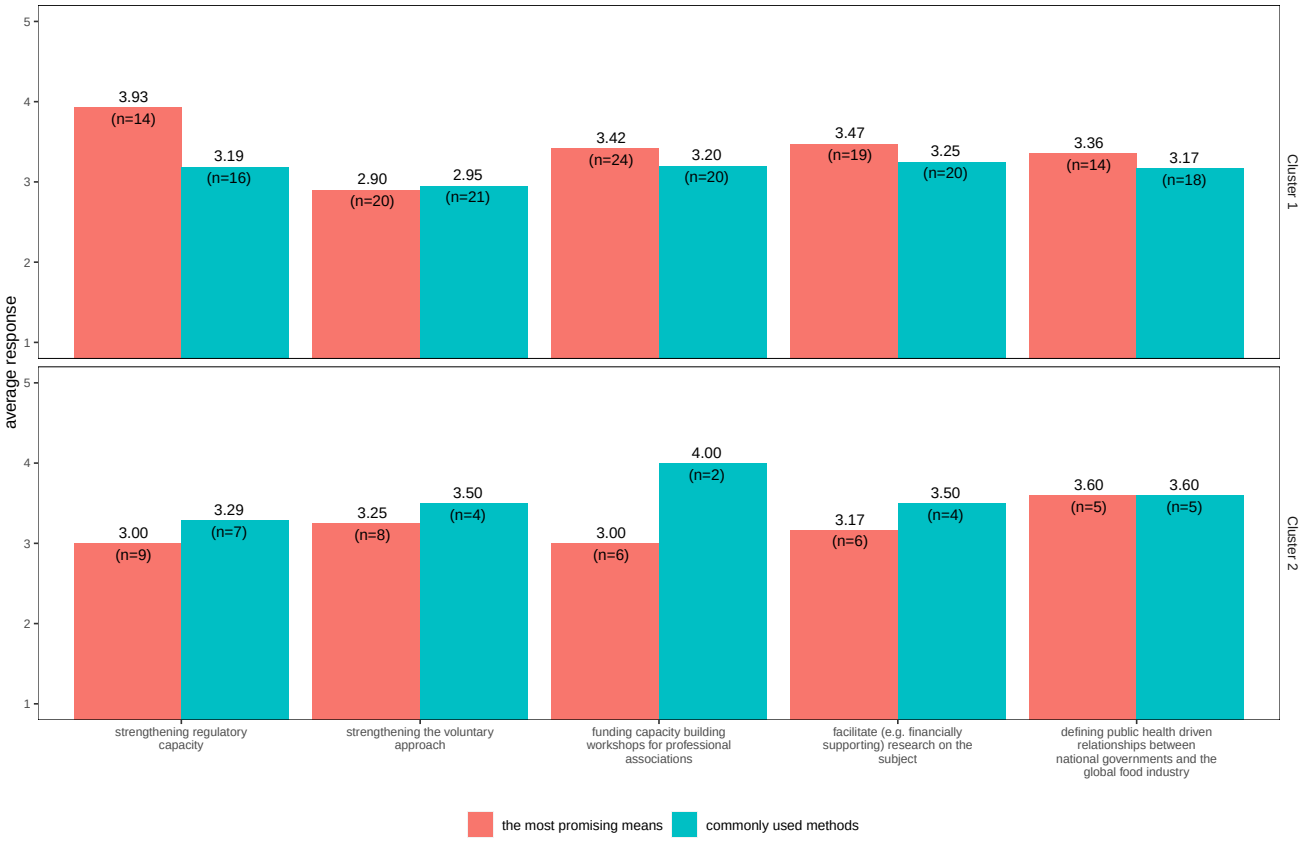

Figure 4: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

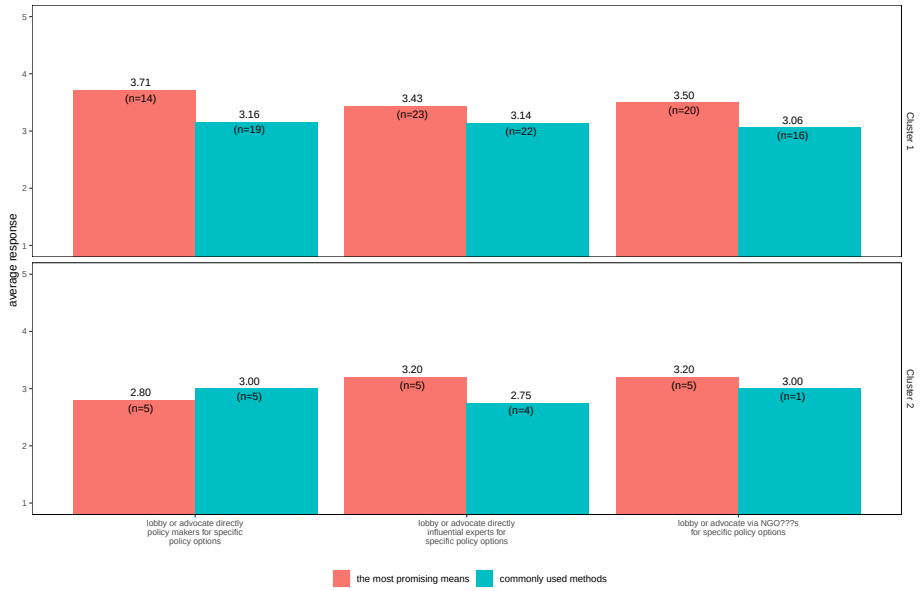

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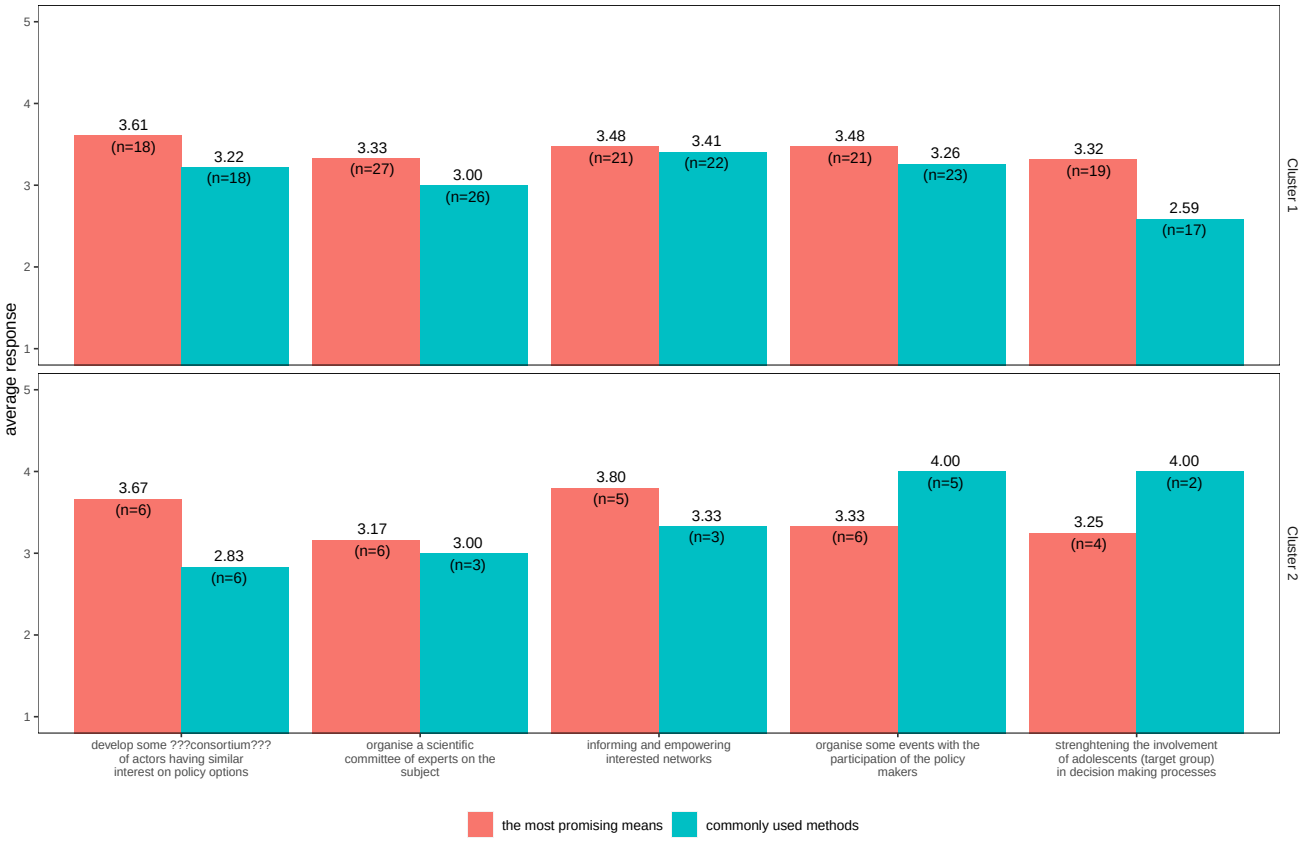
Figure 5: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?



In table below we could see how stakeholders perceive the power position of their organization in the policy decision-making processes regarding childhood obesity. In general, we could see that they perceive the power of their organisation at lower levels. Perceived power decreased with increase of the engagement level. The difference is only that in Cluster 1 stakeholders perceive more power of their organization at national level than at regional level.

Table 4: How powerful do you perceive the position of your organisation in the policy decision-making processes regarding childhood obesity?

Cluster 1

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	27%	27%	35%	11%	3%	37
National level	14%	35%	32%	16%	5%	37
European level	36%	39%	19%	6%	0%	36
International/Global level	50%	33%	11%	6%	0%	36

Cluster 2

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	27%	36%	18%	18%	9%	11
National level	30%	40%	20%	0%	10%	10
European level	27%	55%	18%	0%	0%	11
International/Global level	36%	55%	9%	0%	0%	11

Food labeling

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Figure 6: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Food labeling

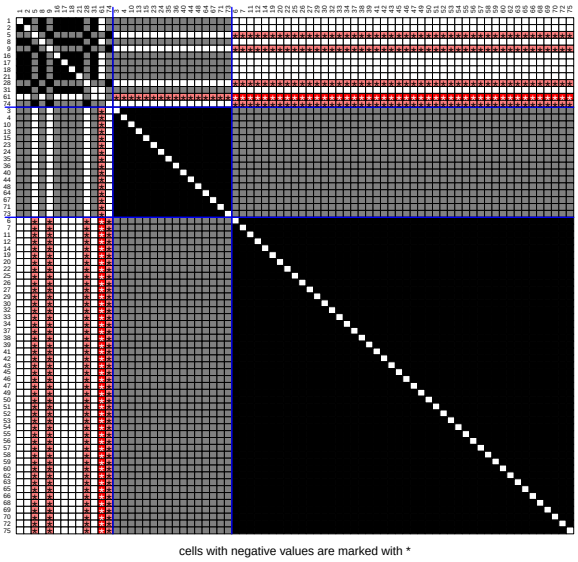

Table 5: Description of clusters

	Cluster 1	Cluster 2	Cluster 3
Average response	2.5	4	5
Number of org.	13	16	46

Table 6: Coverage according to welfare triangle

			Cluster 1	Cluster 2	Cluster 3
Public	Profit	Formal	0	0	1
Private	Profit	Formal	2	2	6
Public-private	Profit	Formal	1	0	0
Public	No-nprofit	Formal	2	11	18
Private	No-nprofit	Formal	4	2	13
Public-private	No-nprofit	Formal	3	1	6
Public	Profit	Informal	0	0	0
Private	Profit	Informal	0	0	0
Public-private	Profit	Informal	0	0	0
Public	No-nprofit	Informal	1	0	0
Private	No-nprofit	Informal	0	0	0
Public-private	No-nprofit	Informal	0	0	0

Table 7: Coverage according to sector

	Cluster 1	Cluster 2	Cluster 3
Sector			
Research	1	6	8
Health	8	5	23
Education	1	1	5
Agri-food chain	3	1	3
Social affairs	0	1	2
Environment	0	0	0
Transport	0	1	1
Built environment	0	0	0
Physical activity and sports	0	0	1
Finance or banking investment	0	0	0
Labour	0	0	0
Other:	0	1	3

Figure 7: For your organisation, how important are the following attributes of multi-stakeholder collaboration in decreasing childhood obesity?

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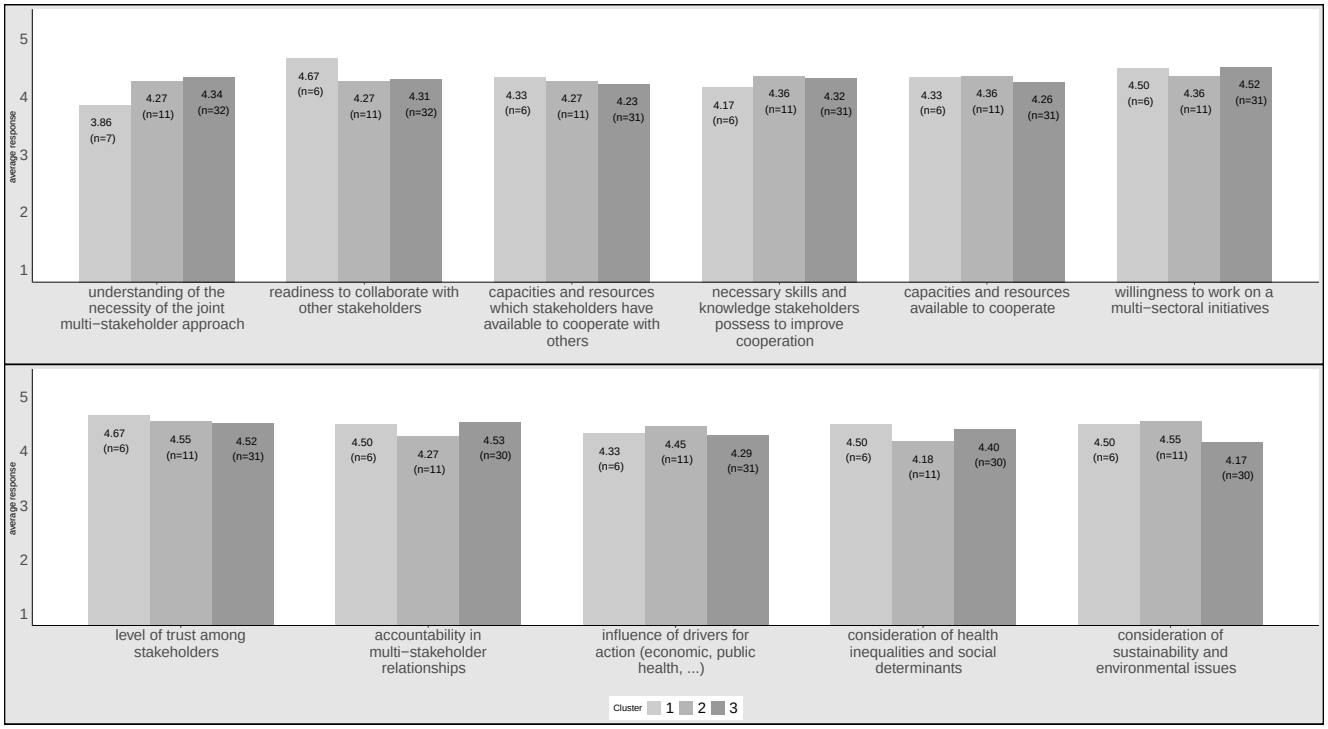

Figure 8: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

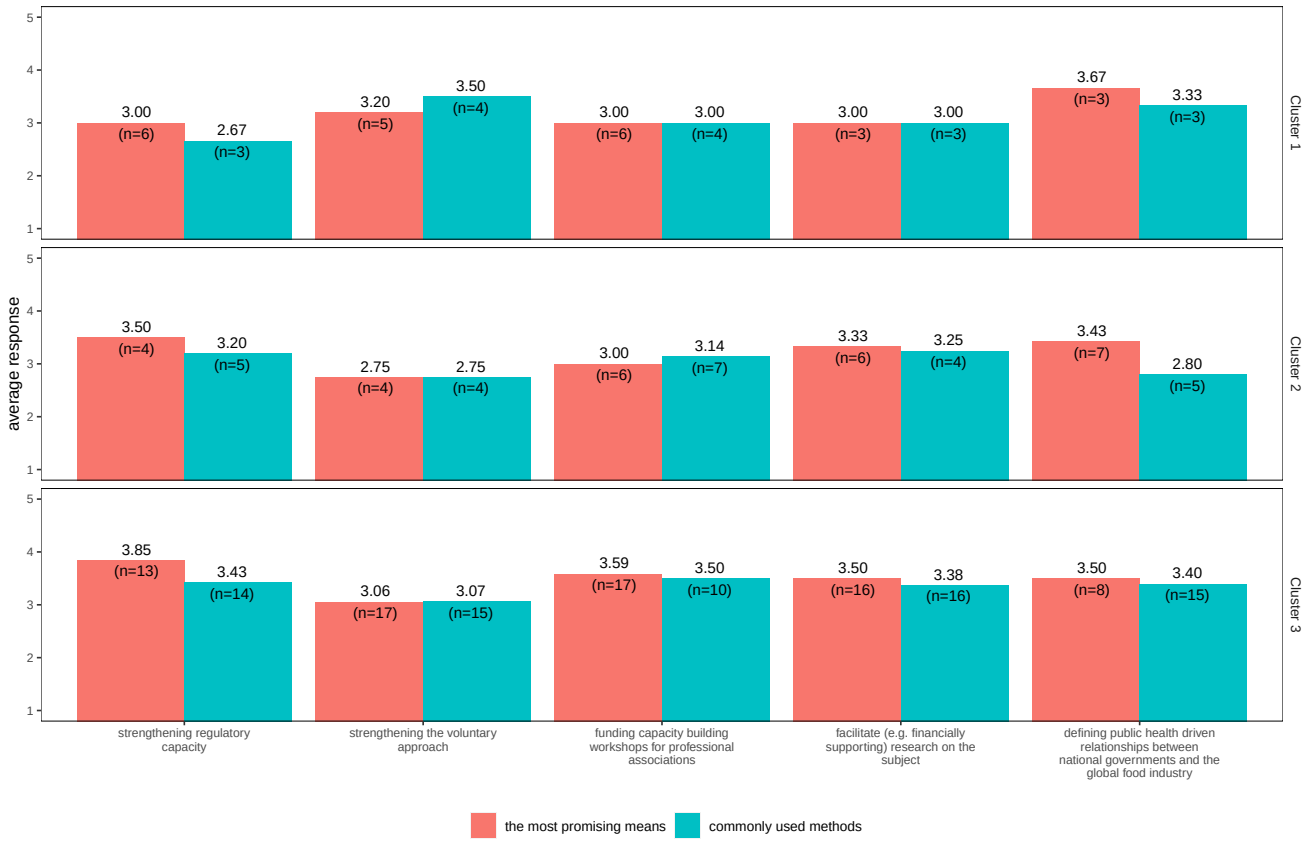

Figure 9: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

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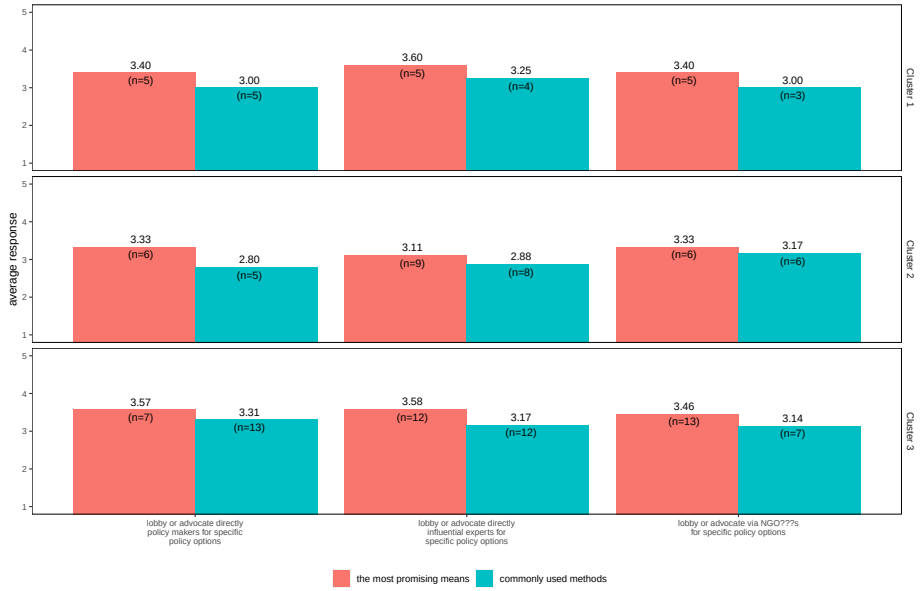

Figure 10: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

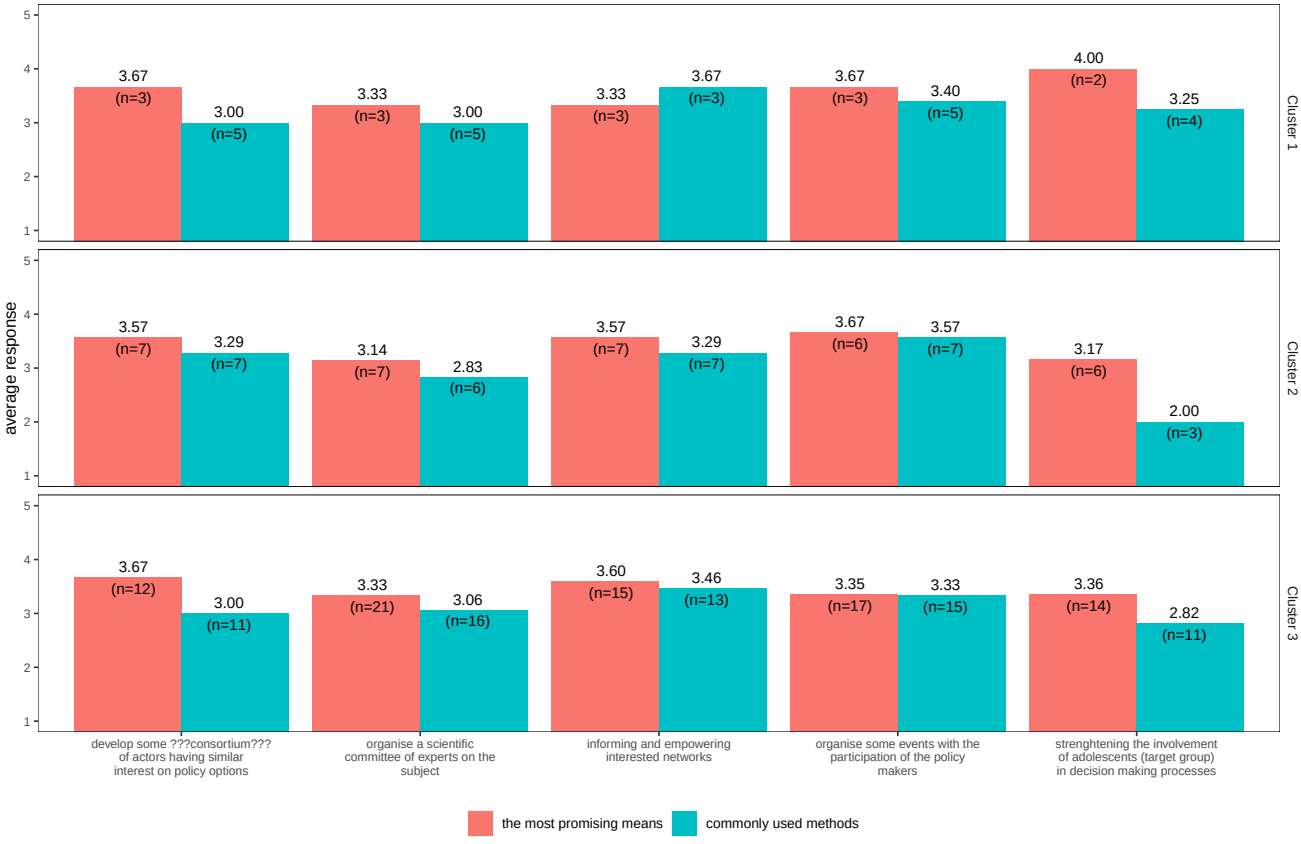

Table 8: How powerful do you perceive the position of your organisation in the policy decision-making processes regarding childhood obesity?

Cluster 1

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	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	67%	33%	0%	0%	17%	6
National level	17%	67%	0%	0%	17%	6
European level	33%	67%	0%	0%	0%	6
International/Global level	33%	67%	0%	0%	0%	6

Cluster 2

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	36%	18%	45%	0%	0%	11
National level	27%	36%	27%	9%	0%	11
European level	45%	27%	27%	0%	0%	11
International/Global level	64%	27%	9%	0%	0%	11

Cluster 3

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	17%	33%	30%	20%	3%	30
National level	14%	31%	34%	17%	7%	29
European level	31%	41%	21%	7%	0%	29
International/Global level	41%	38%	14%	7%	0%	29

Reformulation

Figure 11: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Reformulation

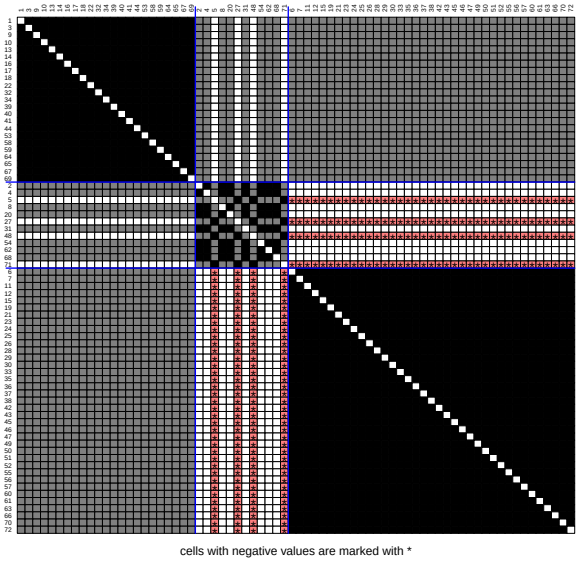

Table 9: Description of clusters

	Cluster 1	Cluster 2	Cluster 3
Average response	4	2.7	5
Number of org.	23	12	37

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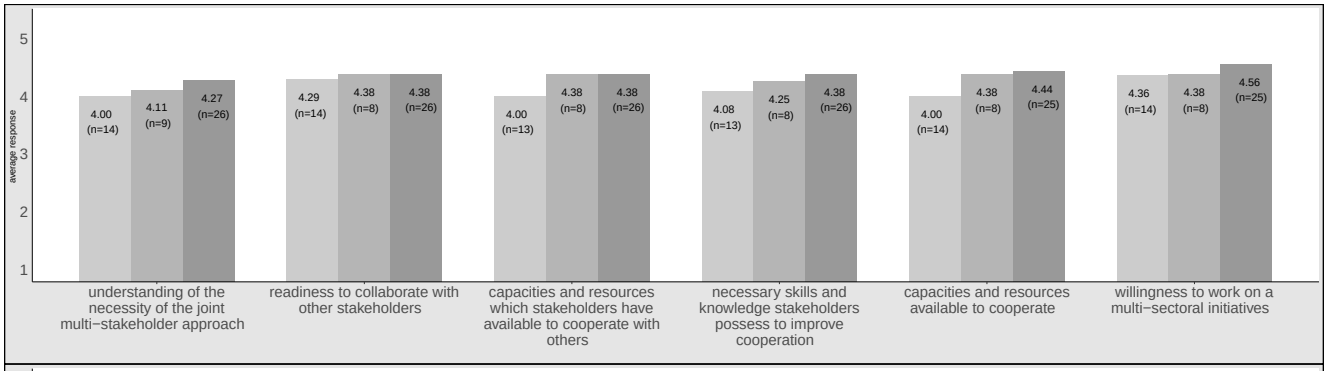
Table 10: Coverage according to welfare triangle

			Cluster 1	Cluster 2	Cluster 3
Public	Profit	Formal	1	0	0
Private	Profit	Formal	2	1	6
Public-private	Profit	Formal	0	1	0
Public	No-nprofit	Formal	9	4	18
Private	No-nprofit	Formal	6	3	9
Public-private	No-nprofit	Formal	5	2	3
Public	Profit	Informal	0	0	0
Private	Profit	Informal	0	0	0
Public-private	Profit	Informal	0	0	0
Public	No-nprofit	Informal	0	1	0
Private	No-nprofit	Informal	0	0	0
Public-private	No-nprofit	Informal	0	0	0

Table 11: Coverage according to sector

	Cluster 1	Cluster 2	Cluster 3
Sector			
Research	4	0	11
Health	10	8	18
Education	2	2	3
Agri-food chain	4	1	2
Social affairs	1	0	1
Environment	0	0	0
Transport	1	1	0
Built environment	0	0	0
Physical activity and sports	1	0	0
Finance or banking investment	0	0	0
Labour	0	0	0
Other:	0	0	2

Figure 12: For your organisation, how important are the following attributes of multi-stakeholder collaboration in decreasing childhood obesity?



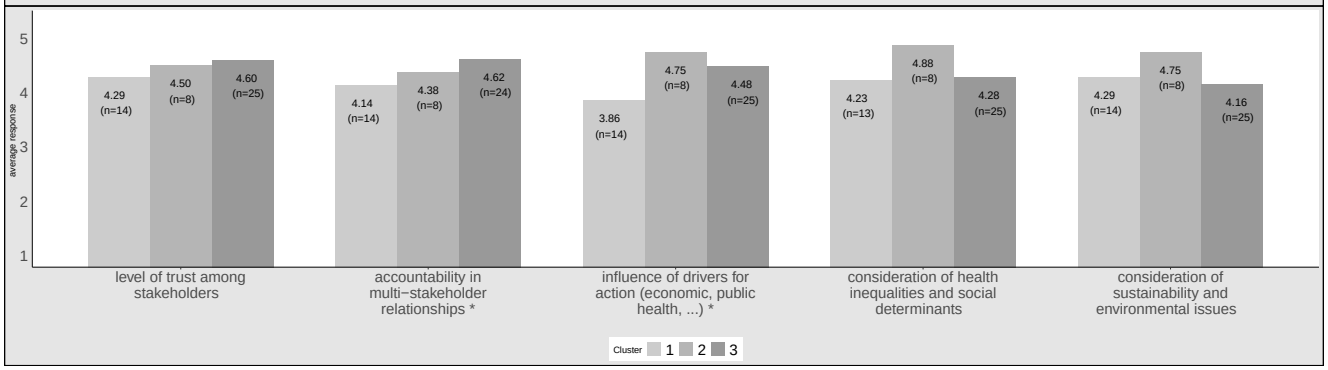


Figure 13: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

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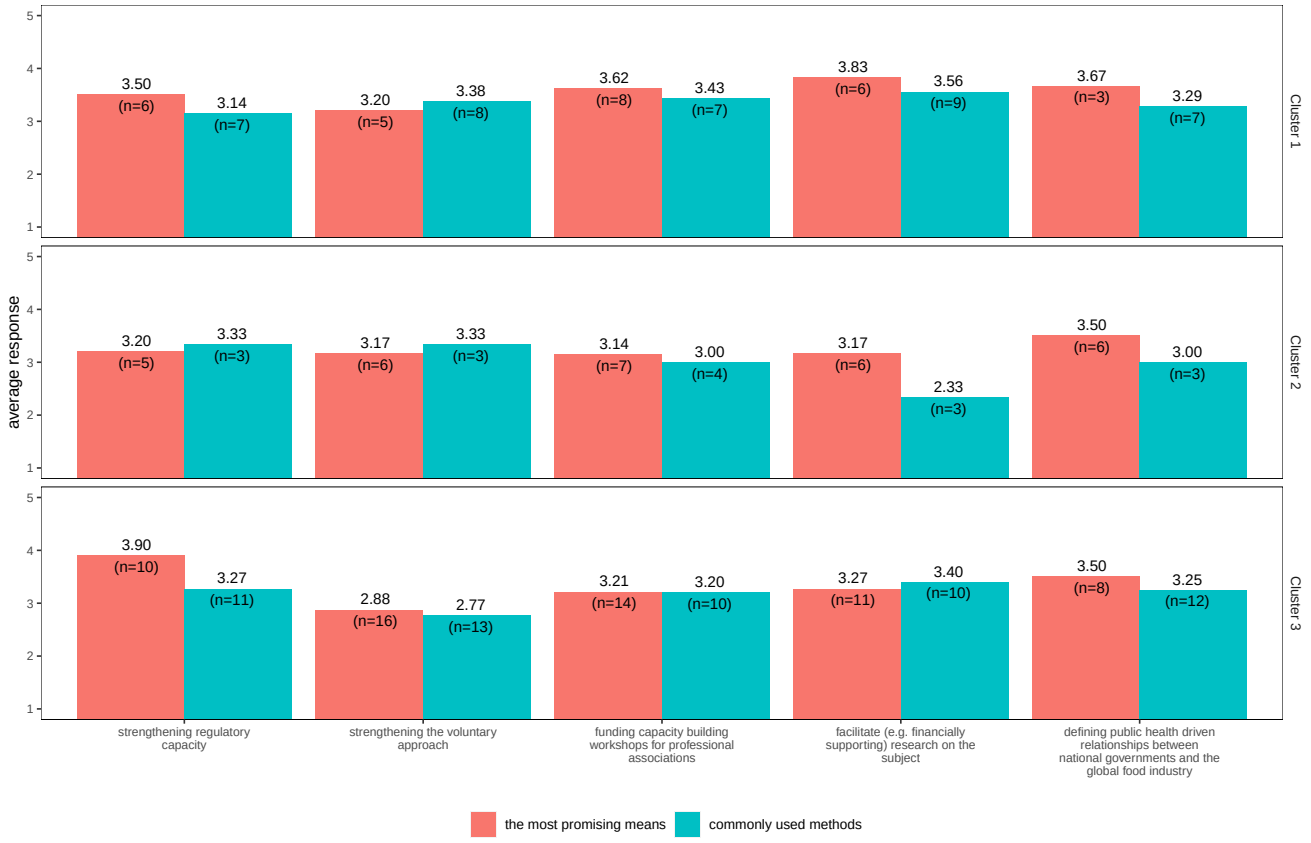

Figure 14: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

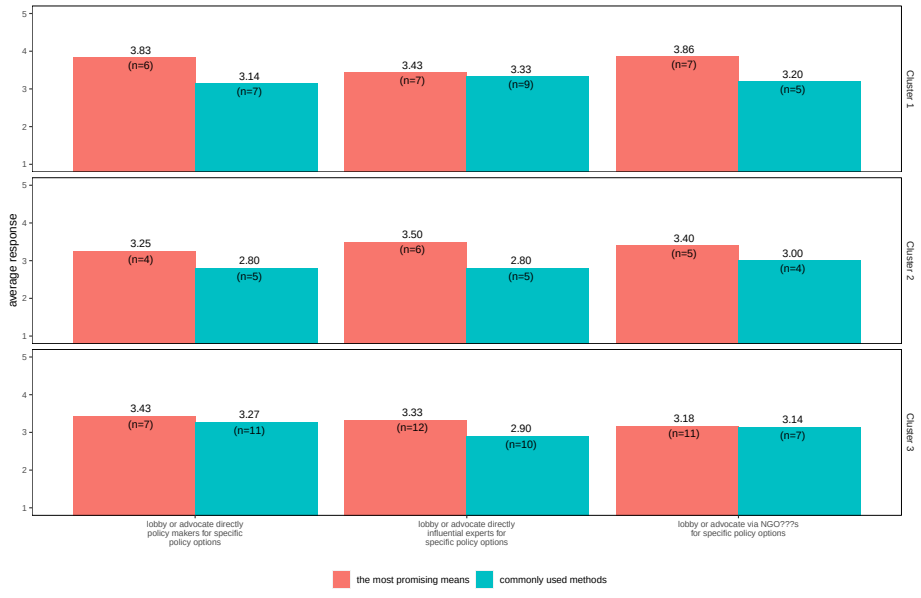

Figure 15: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

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Table 12: How powerful do you perceive the position of your organisation in the policy decision-making processes regarding childhood obesity?

Cluster 1

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	38%	23%	23%	23%	0%	13
National level	8%	42%	25%	25%	8%	12
European level	21%	64%	14%	0%	0%	14
International/Global level	46%	46%	8%	0%	0%	13

Cluster 2

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	25%	38%	25%	0%	12%	8
National level	38%	38%	12%	0%	12%	8
European level	50%	25%	25%	0%	0%	8
International/Global level	75%	25%	0%	0%	0%	8

Cluster 3

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	25%	33%	29%	12%	4%	24
National level	17%	33%	33%	12%	4%	24
European level	39%	30%	22%	9%	0%	23
International/Global level	39%	35%	17%	9%	0%	23

Food marketing

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Figure 16: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Food marketing

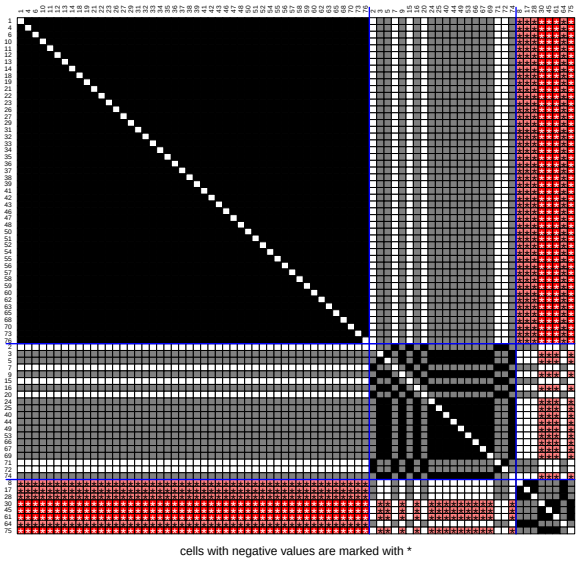

Table 13: Description of clusters

	Cluster 1	Cluster 2	Cluster 3
Average response	5	3.7	1.5
Number of org.	48	20	8

Table 14: Coverage according to welfare triangle

			Cluster 1	Cluster 2	Cluster 3
Public	Profit	Formal	1	1	0
Private	Profit	Formal	5	3	2
Public-private	Profit	Formal	1	0	0
Public	No-nprofit	Formal	23	8	1
Private	No-nprofit	Formal	12	4	3
Public-private	No-nprofit	Formal	4	3	2
Public	Profit	Informal	0	0	0
Private	Profit	Informal	0	0	0
Public-private	Profit	Informal	0	0	0
Public	No-nprofit	Informal	0	1	0
Private	No-nprofit	Informal	0	0	0
Public-private	No-nprofit	Informal	0	0	0

Table 15: Coverage according to sector

	Cluster 1	Cluster 2	Cluster 3
Sector			
Research	11	5	0
Health	26	4	7
Education	5	2	0
Agri-food chain	1	5	1
Social affairs	2	1	0
Environment	0	0	0
Transport	1	2	0
Built environment	0	0	0
Physical activity and sports	0	0	0
Finance or banking investment	0	0	0
Labour	0	0	0
Other:	2	1	0

Figure 17: For your organisation, how important are the following attributes of multi-stakeholder collaboration in decreasing childhood obesity?

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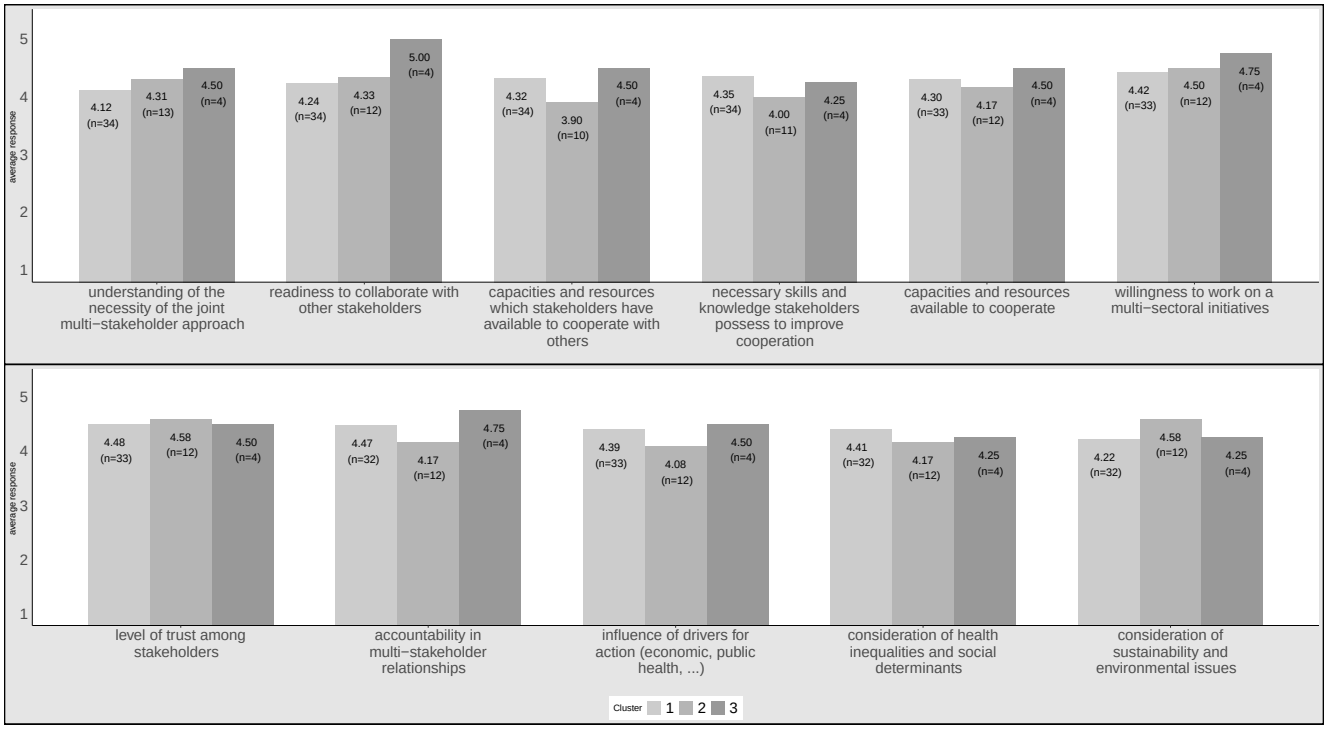

Description of clusters for variables on (the most promising and commonly used) means to influence the policy decisions in childhood obesity are omitted due to small number of units in the clusters.

Table 16: How powerful do you perceive the position of your organisation in the policy decision-making processes regarding childhood obesity?

Cluster 1

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	23%	35%	29%	10%	3%	31
National level	13%	39%	39%	10%	0%	31
European level	40%	33%	23%	3%	0%	30
International/Global level	47%	40%	13%	0%	0%	30

Cluster 2

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	42%	8%	42%	8%	0%	12
National level	27%	36%	18%	18%	9%	11
European level	33%	50%	8%	8%	0%	12
International/Global level	50%	33%	8%	8%	0%	12

Cluster 3

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	25%	50%	25%	25%	25%	4
National level	25%	25%	0%	0%	50%	4
European level	0%	75%	25%	0%	0%	4
International/Global level	25%	50%	0%	25%	0%	4

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3 WP5 – Consumer Behaviour: Creating Demand for Healthy Lifestyles

Social marketing campains

Figure 18: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Social marketing campains

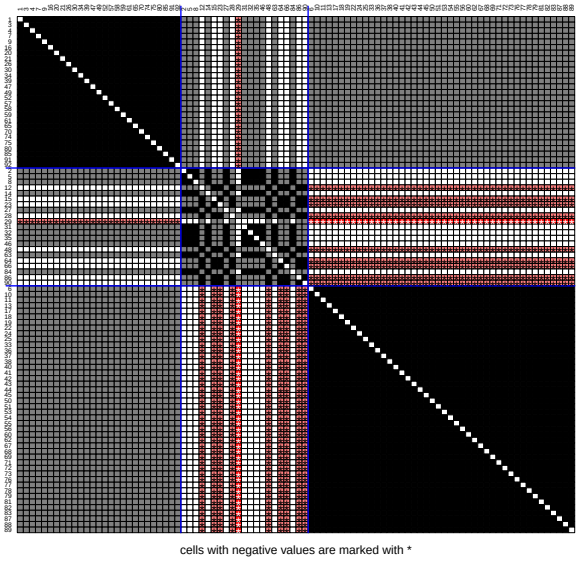

Table 17: Description of clusters

	Cluster 1	Cluster 2	Cluster 3
Average response	4	2.5	5
Number of org.	27	21	44

Table 18: Coverage according to welfare triangle

			Cluster 1	Cluster 2	Cluster 3
Public	Profit	Formal	1	0	1
Private	Profit	Formal	3	3	5
Public-private	Profit	Formal	0	0	1
Public	No-nprofit	Formal	12	10	21
Private	No-nprofit	Formal	8	5	10
Public-private	No-nprofit	Formal	3	2	5
Public	Profit	Informal	0	0	0
Private	Profit	Informal	0	0	0
Public-private	Profit	Informal	0	0	0
Public	No-nprofit	Informal	0	1	0
Private	No-nprofit	Informal	0	0	0
Public-private	No-nprofit	Informal	0	0	0

Table 19: Coverage according to sector

	Cluster 1	Cluster 2	Cluster 3
Sector			
Research	4	4	8
Health	13	12	18
Education	5	2	3
Agri-food chain	2	2	3
Social affairs	1	0	3
Environment	0	0	0
Transport	2	1	2
Built environment	0	0	1
Physical activity and sports	0	0	1
Finance or banking investment	0	0	0
Labour	0	0	0
Other:	0	0	5

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Figure 19: For your organisation, how important are the following attributes of multi-stakeholder collaboration in decreasing childhood obesity?

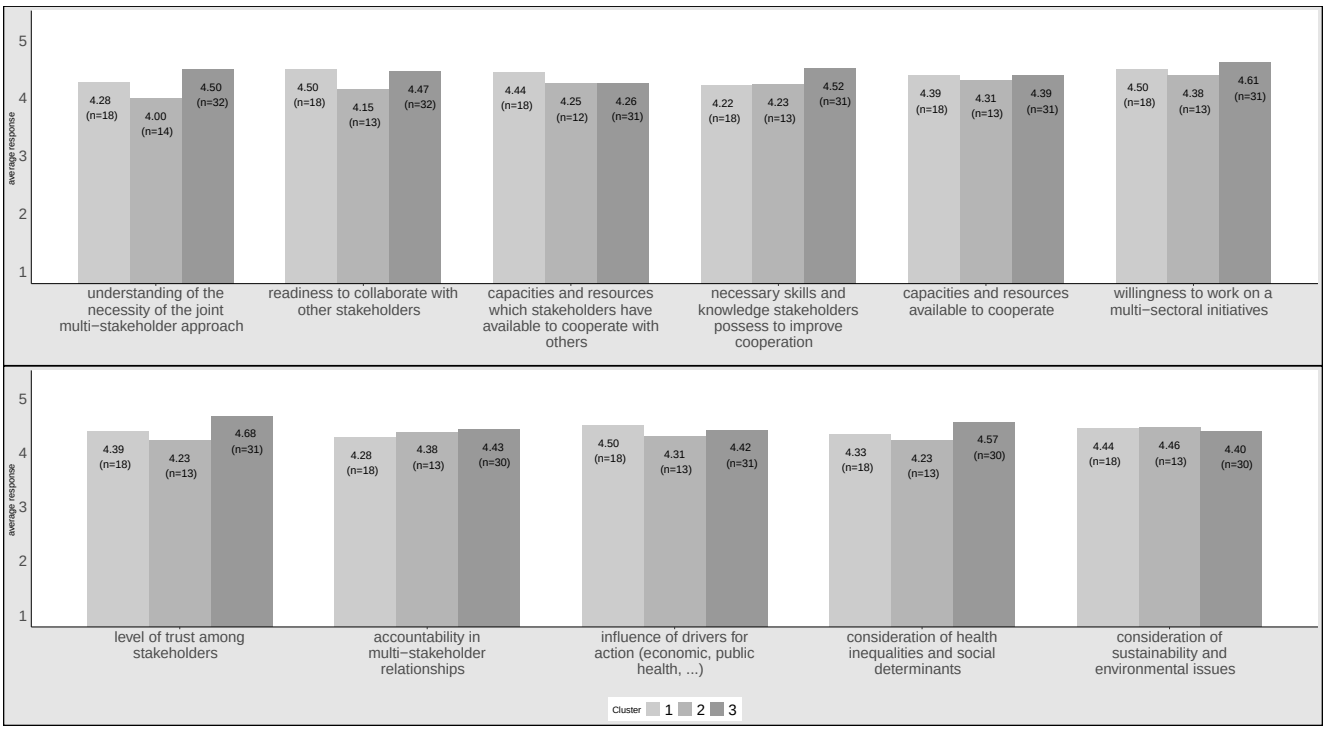

Figure 20: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

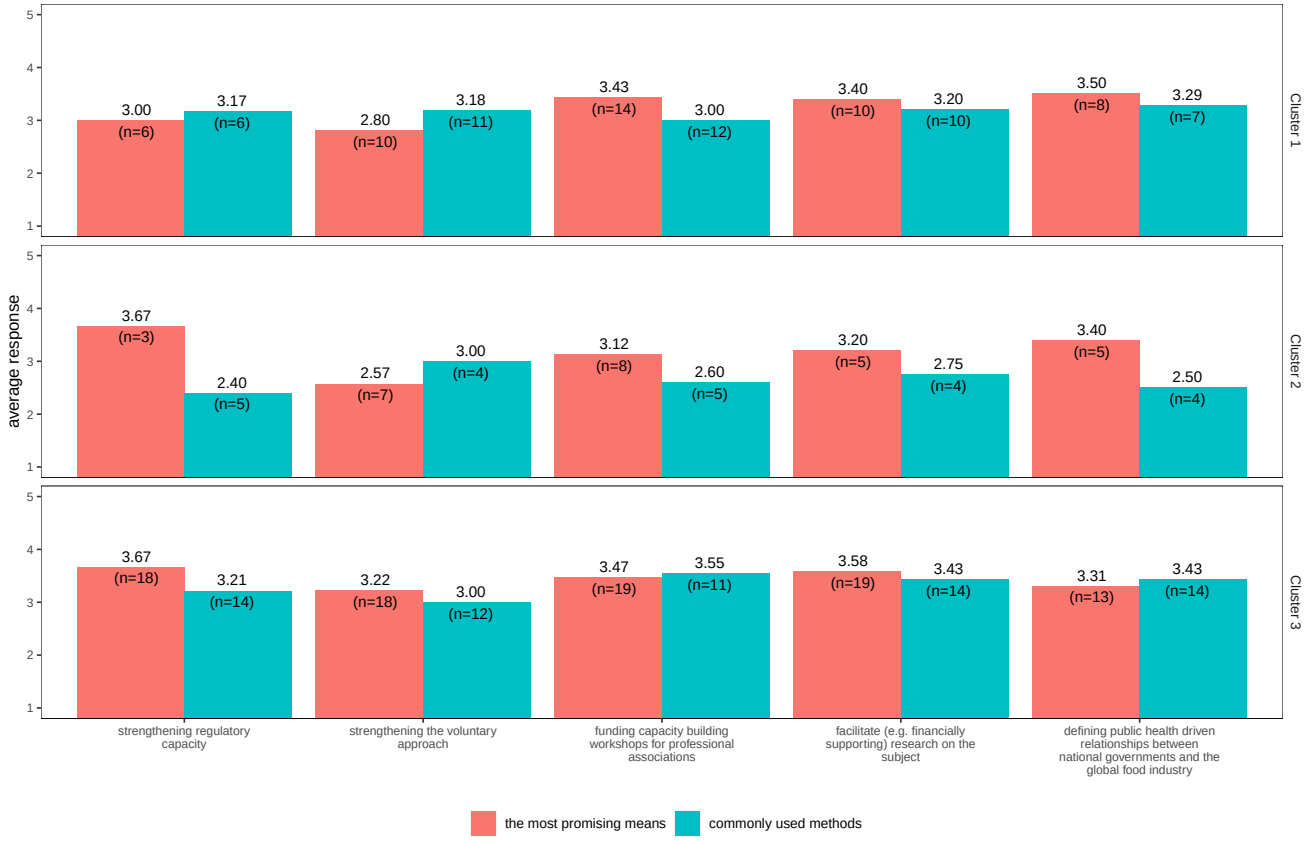

Figure 21: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

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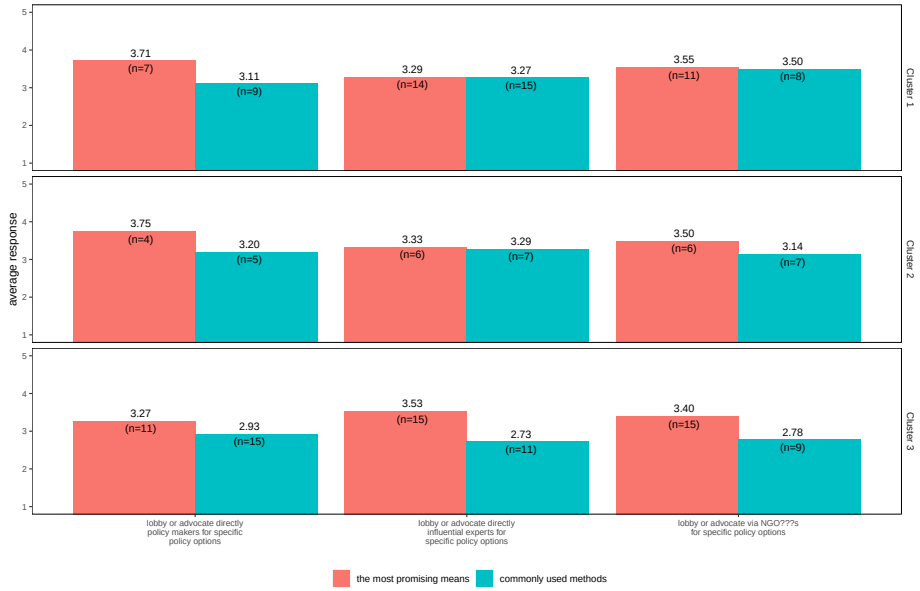

Figure 22: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

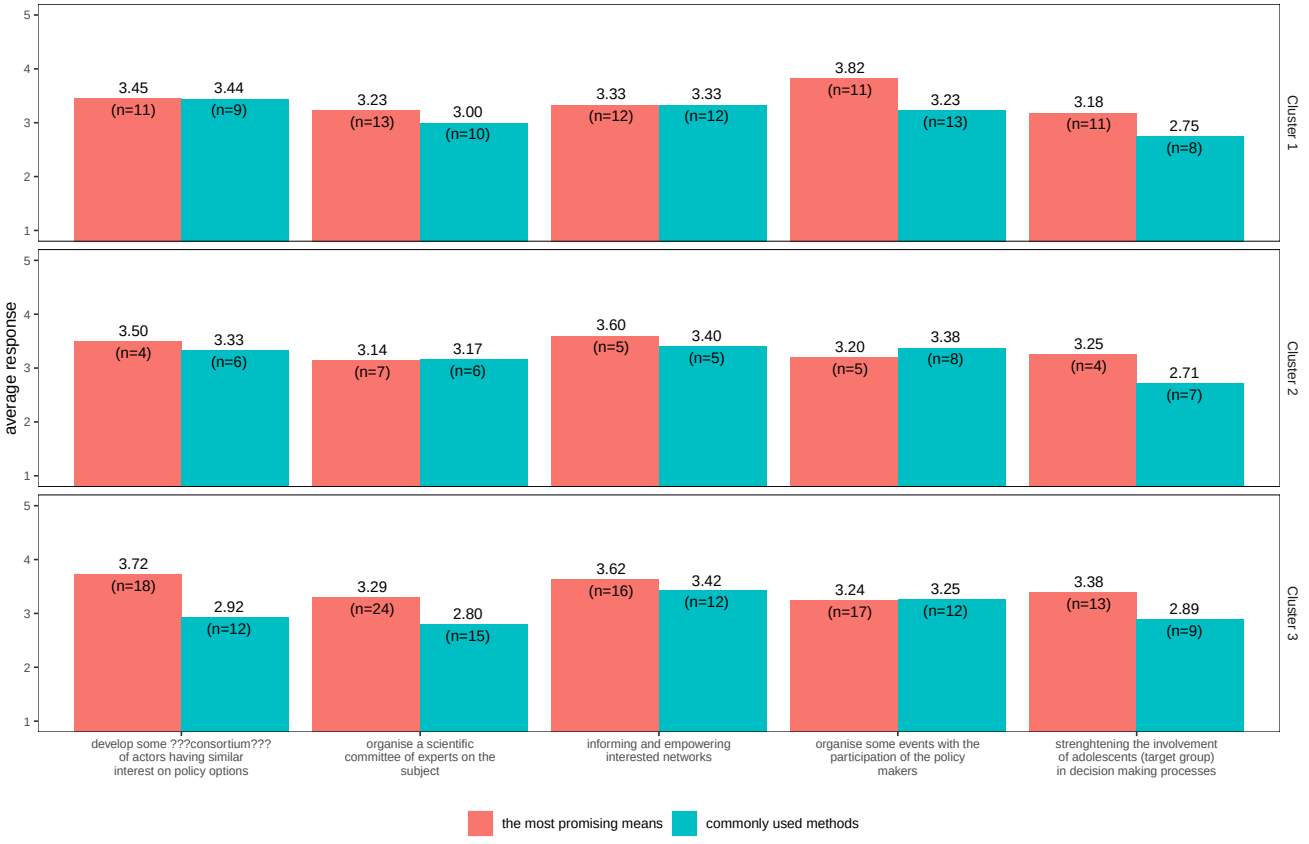

Table 20: How powerful do you perceive the position of your organisation in the policy decision-making processes regarding childhood obesity?

Cluster 1

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	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	22%	44%	33%	6%	0%	18
National level	29%	47%	12%	12%	6%	17
European level	41%	41%	12%	6%	0%	17
International/Global level	65%	24%	6%	6%	0%	17

Cluster 2

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	33%	8%	33%	17%	17%	12
National level	8%	33%	25%	8%	25%	12
European level	33%	50%	8%	8%	0%	12
International/Global level	45%	27%	18%	9%	0%	11

Cluster 3

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	19%	35%	29%	10%	6%	31
National level	17%	40%	37%	10%	0%	30
European level	37%	37%	20%	7%	0%	30
International/Global level	39%	45%	13%	3%	0%	31

4 WP6 – Healthy food and food choice environments

Monitoring business actions and performance

Figure 23: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Monitoring business actions and performance

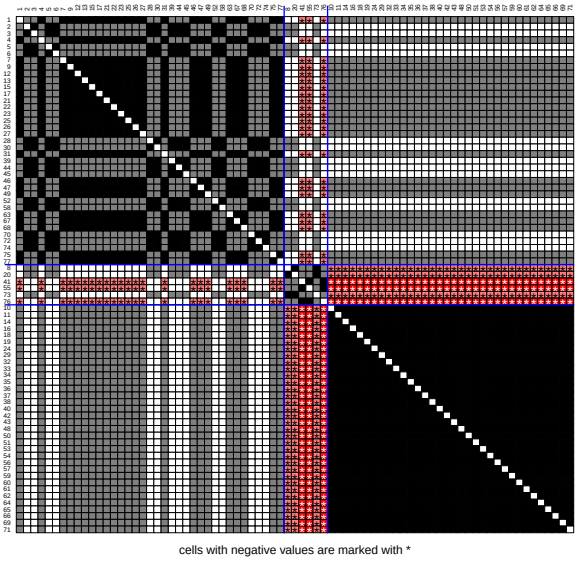

Table 21: Description of clusters

	Cluster 1	Cluster 2	Cluster 3
Average response	3.6	1.5	5
Number of org.	37	6	34

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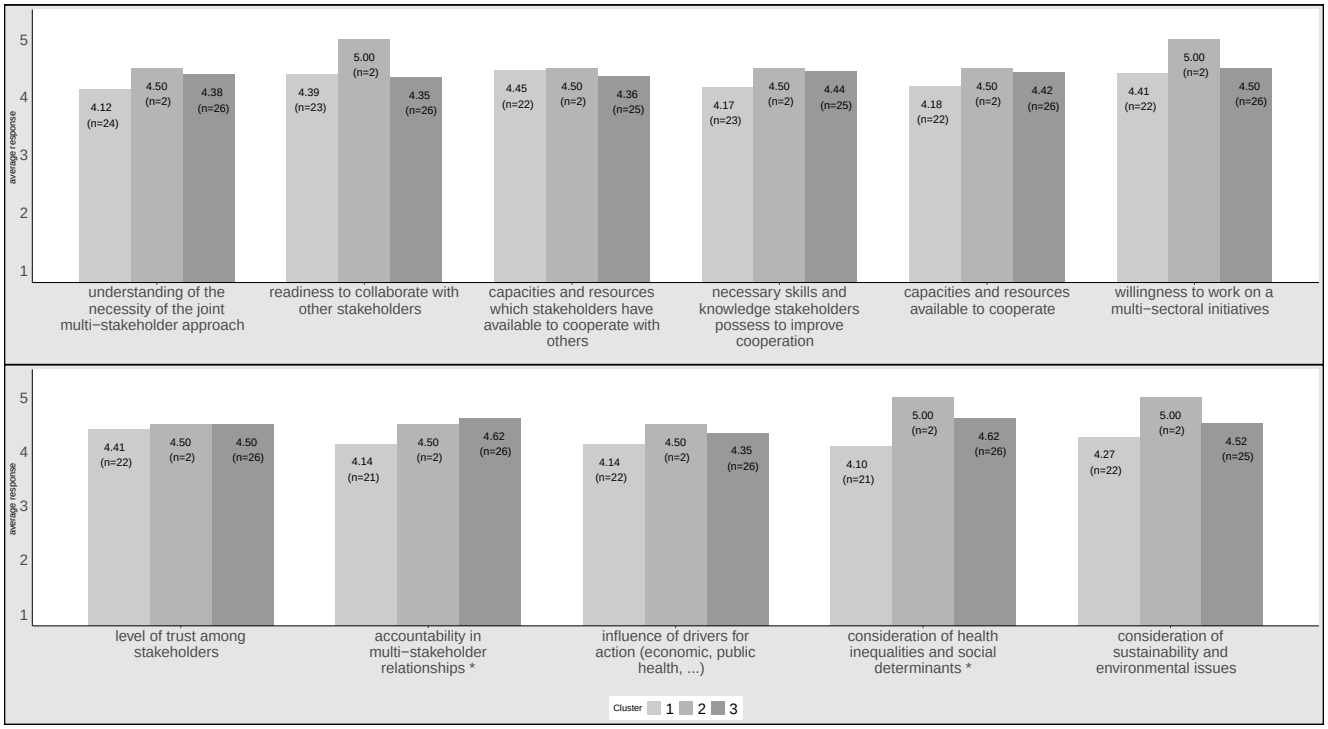
Table 22: Coverage according to welfare triangle

			Cluster 1	Cluster 2	Cluster 3
Public	Profit	Formal	0	2	1
Private	Profit	Formal	2	2	4
Public-private	Profit	Formal	1	0	0
Public	No-nprofit	Formal	20	1	14
Private	No-nprofit	Formal	7	0	10
Public-private	No-nprofit	Formal	6	1	3
Public	Profit	Informal	0	0	0
Private	Profit	Informal	0	0	0
Public-private	Profit	Informal	0	0	0
Public	No-nprofit	Informal	1	0	0
Private	No-nprofit	Informal	0	0	0
Public-private	No-nprofit	Informal	0	0	0

Table 23: Coverage according to sector

	Cluster 1	Cluster 2	Cluster 3
Sector			
Research	7	2	6
Health	14	3	17
Education	6	0	2
Agri-food chain	3	1	2
Social affairs	2	0	2
Environment	0	0	0
Transport	2	0	1
Built environment	1	0	0
Physical activity and sports	0	0	2
Finance or banking investment	0	0	0
Labour	0	0	0
Other:	2	0	2

Figure 24: For your organisation, how important are the following attributes of multi-stakeholder collaboration in decreasing childhood obesity?



Description of clusters for variables on (the most promising and commonly used) means to influence the policy decisions in childhood obesity are omitted due to small number of units in the clusters.

Table 24: How powerful do you perceive the position of your organisation in the policy decision-making processes regarding childhood obesity?

Cluster 1

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	38%	38%	29%	0%	0%	21
National level	24%	48%	24%	5%	0%	21
European level	47%	32%	11%	11%	0%	19
International/Global level	63%	21%	11%	5%	0%	19

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Cluster 2

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	0%	0%	0%	0%	100%	2
National level	0%	0%	0%	0%	100%	2
European level	0%	50%	0%	50%	0%	2
International/Global level	0%	50%	50%	0%	0%	2

Cluster 3

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	16%	12%	44%	24%	8%	25
National level	4%	32%	36%	24%	8%	25
European level	36%	48%	16%	0%	0%	25
International/Global level	44%	40%	12%	4%	0%	25

5 WP7 – Physical activity

Fiscal measures to promote physical activity

Figure 25: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Fiscal measures to promote physical activity

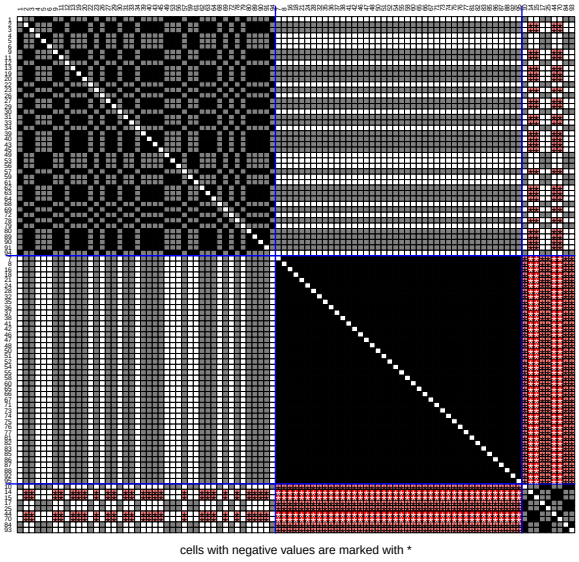

Table 25: Description of clusters

	Cluster 1	Cluster 2	Cluster 3
Average response	3.6	5	1.6
Number of org.	44	42	9

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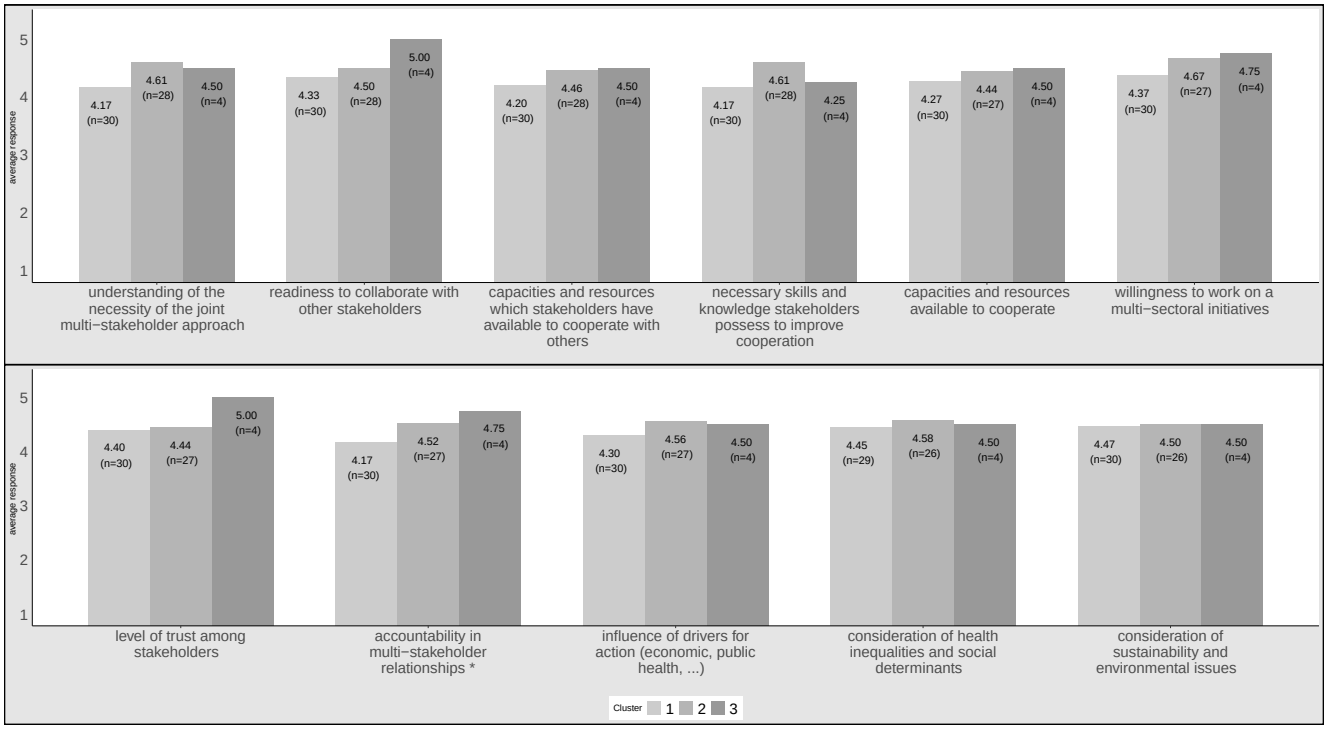
Table 26: Coverage according to welfare triangle

			Cluster 1	Cluster 2	Cluster 3
Public	Profit	Formal	2	0	1
Private	Profit	Formal	3	3	2
Public-private	Profit	Formal	0	1	0
Public	No-nprofit	Formal	24	22	0
Private	No-nprofit	Formal	9	12	2
Public-private	No-nprofit	Formal	5	3	3
Public	Profit	Informal	0	0	0
Private	Profit	Informal	0	0	0
Public-private	Profit	Informal	0	0	0
Public	No-nprofit	Informal	0	0	0
Private	No-nprofit	Informal	0	0	0
Public-private	No-nprofit	Informal	0	0	1

Table 27: Coverage according to sector

	Cluster 1	Cluster 2	Cluster 3
Sector			
Research	8	5	1
Health	22	20	6
Education	7	5	1
Agri-food chain	4	0	1
Social affairs	1	3	0
Environment	0	0	0
Transport	2	2	0
Built environment	0	1	0
Physical activity and sports	0	2	0
Finance or banking investment	0	0	0
Labour	0	0	0
Other:	0	4	0

Figure 26: For your organisation, how important are the following attributes of multi-stakeholder collaboration in decreasing childhood obesity?



Description of clusters for variables on (the most promising and commonly used) means to influence the policy decisions in childhood obesity are omitted due to small number of units in the clusters.

Table 28: How powerful do you perceive the position of your organisation in the policy decision-making processes regarding childhood obesity?

Cluster 1

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	30%	20%	33%	13%	3%	30
National level	18%	46%	21%	11%	7%	28
European level	46%	32%	11%	11%	0%	28
International/Global level	61%	29%	7%	4%	0%	28

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Cluster 2

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	11%	33%	41%	11%	7%	27
National level	11%	41%	30%	19%	4%	27
European level	36%	44%	16%	4%	0%	25
International/Global level	42%	38%	12%	8%	0%	26

Cluster 3

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	25%	75%	0%	0%	25%	4
National level	0%	75%	0%	0%	25%	4
European level	0%	100%	0%	0%	0%	4
International/Global level	25%	75%	0%	0%	0%	4

Measures to promote physical activity in schools

Figure 27: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Measures to promote physical activity in schools

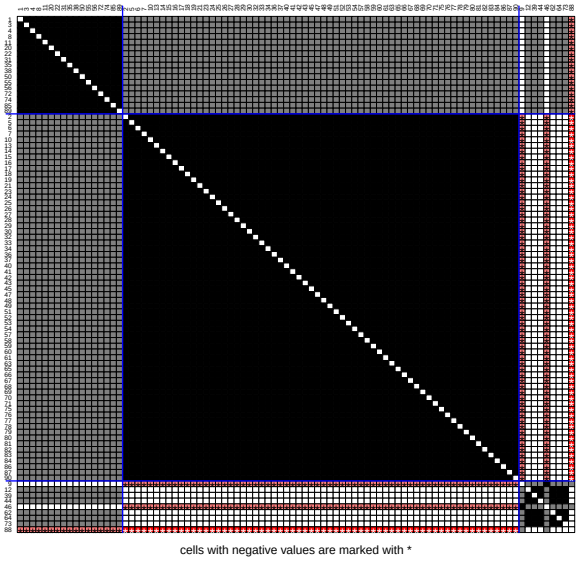

Table 29: Description of clusters

	Cluster 1	Cluster 2	Cluster 3
Average response	4	5	2.6
Number of org.	17	64	9

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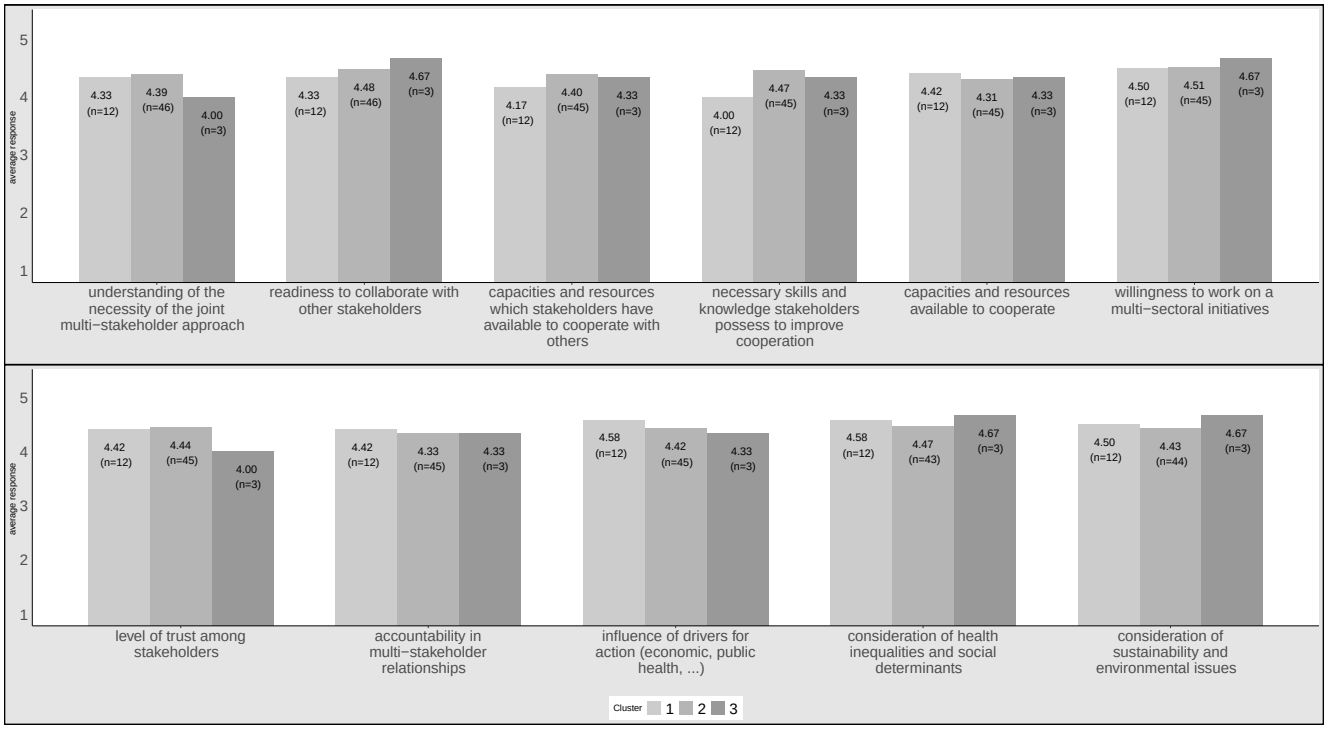
Table 30: Coverage according to welfare triangle

			Cluster 1	Cluster 2	Cluster 3
Public	Profit	Formal	0	1	0
Private	Profit	Formal	3	4	1
Public-private	Profit	Formal	0	1	0
Public	No-nprofit	Formal	7	35	4
Private	No-nprofit	Formal	5	17	0
Public-private	No-nprofit	Formal	2	5	2
Public	Profit	Informal	0	0	0
Private	Profit	Informal	0	0	0
Public-private	Profit	Informal	0	0	0
Public	No-nprofit	Informal	0	0	0
Private	No-nprofit	Informal	0	0	0
Public-private	No-nprofit	Informal	0	0	1

Table 31: Coverage according to sector

	Cluster 1	Cluster 2	Cluster 3
Sector			
Research	3	8	1
Health	8	33	7
Education	3	8	1
Agri-food chain	2	2	0
Social affairs	1	3	0
Environment	0	0	0
Transport	0	4	0
Built environment	0	1	0
Physical activity and sports	0	1	0
Finance or banking investment	0	0	0
Labour	0	0	0
Other:	0	4	0

Figure 28: For your organisation, how important are the following attributes of multi-stakeholder collaboration in decreasing childhood obesity?



Description of clusters for variables on (the most promising and commonly used) means to influence the policy decisions in childhood obesity are omitted due to small number of units in the clusters.

Table 32: How powerful do you perceive the position of your organisation in the policy decision-making processes regarding childhood obesity?

Cluster 1

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	25%	33%	33%	0%	8%	12
National level	33%	33%	8%	17%	17%	12
European level	58%	17%	17%	8%	0%	12
International/Global level	58%	17%	25%	0%	0%	12

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Cluster 2

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	20%	32%	32%	16%	5%	44
National level	9%	49%	30%	12%	2%	43
European level	33%	45%	14%	7%	0%	42
International/Global level	45%	40%	7%	7%	0%	42

Cluster 3

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	33%	0%	33%	0%	33%	3
National level	0%	67%	0%	0%	33%	3
European level	33%	67%	0%	0%	0%	3
International/Global level	33%	67%	0%	0%	0%	3

Measures to promote active transport among children

Figure 29: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Measures to promote active transport among children

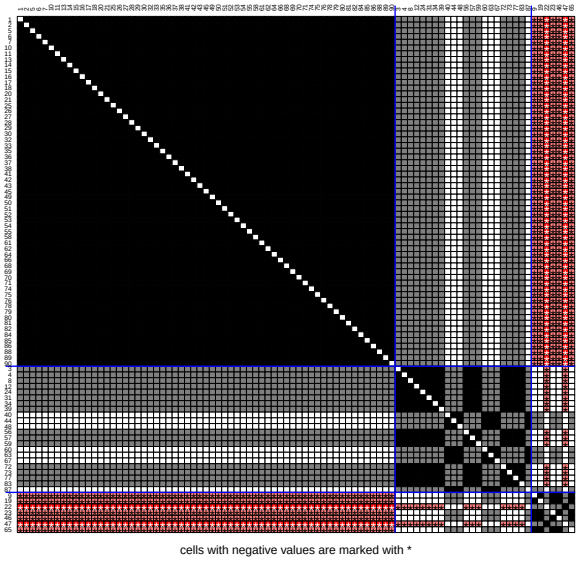

Table 33: Description of clusters

	Cluster 1	Cluster 2	Cluster 3
Average response	5	3.7	1.7
Number of org.	61	22	7

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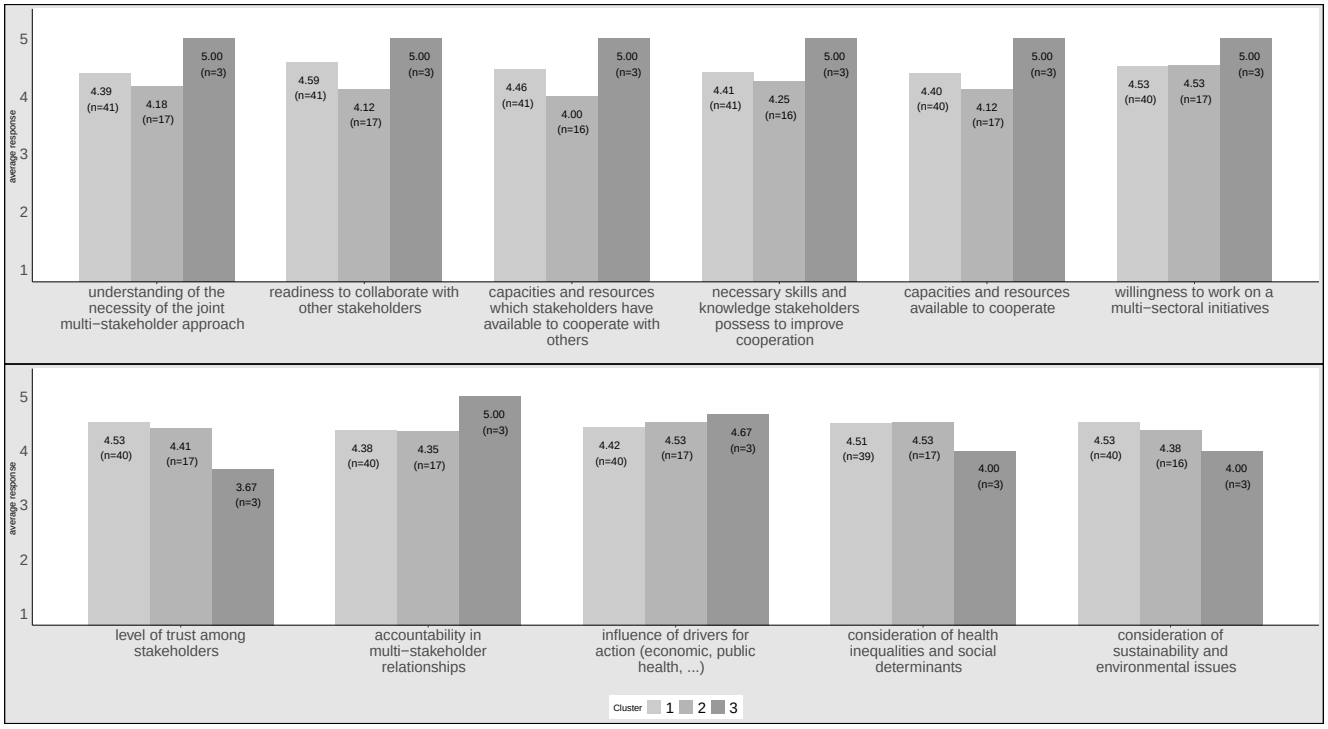
Table 34: Coverage according to welfare triangle

			Cluster 1	Cluster 2	Cluster 3
Public	Profit	Formal	0	2	0
Private	Profit	Formal	5	2	1
Public-private	Profit	Formal	1	0	0
Public	No-nprofit	Formal	35	9	2
Private	No-nprofit	Formal	17	2	3
Public-private	No-nprofit	Formal	3	5	1
Public	Profit	Informal	0	0	0
Private	Profit	Informal	0	0	0
Public-private	Profit	Informal	0	0	0
Public	No-nprofit	Informal	0	0	0
Private	No-nprofit	Informal	0	0	0
Public-private	No-nprofit	Informal	0	1	0

Table 35: Coverage according to sector

	Cluster 1	Cluster 2	Cluster 3
Sector			
Research	9	2	1
Health	30	14	4
Education	6	3	2
Agri-food chain	4	0	0
Social affairs	3	1	0
Environment	0	0	0
Transport	3	1	0
Built environment	2	0	0
Physical activity and sports	1	0	0
Finance or banking investment	0	0	0
Labour	0	0	0
Other:	3	1	0

Figure 30: For your organisation, how important are the following attributes of multi-stakeholder collaboration in decreasing childhood obesity?



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6 WP8 – Health Care

Capacity building for the implementation of programs

Figure 31: Agreement on successfulness of policies, measures and activities in childhood obesity prevention: Measures to promote active transport among children

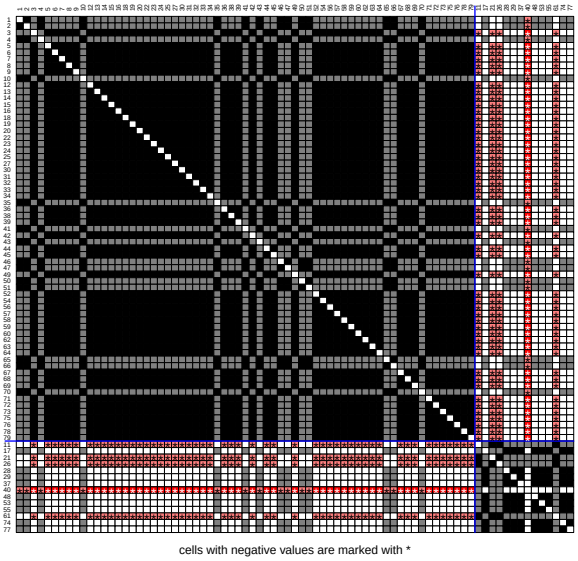

Table 36: Description of clusters

	Cluster 1	Cluster 2
Average response	4.8	2.6
Number of org.	65	14

Table 37: Coverage according to welfare triangle

			Cluster 1	Cluster 2
Public	Profit	Formal	1	1
Private	Profit	Formal	3	3
Public-private	Profit	Formal	1	0
Public	No-nprofit	Formal	36	4
Private	No-nprofit	Formal	14	4
Public-private	No-nprofit	Formal	7	2
Public	Profit	Informal	0	0
Private	Profit	Informal	0	0
Public-private	Profit	Informal	0	0
Public	No-nprofit	Informal	0	0
Private	No-nprofit	Informal	0	0
Public-private	No-nprofit	Informal	1	0

Table 38: Coverage according to sector

	Cluster 1	Cluster 2
Sector		
Research	11	2
Health	31	10
Education	10	1
Agri-food chain	3	0
Social affairs	4	0
Environment	0	0
Transport	1	1
Built environment	1	0
Physical activity and sports	1	0
Finance or banking investment	0	0
Labour	0	0
Other:	3	0

Figure 32: For your organisation, how important are the following attributes of multi-stakeholder collaboration in decreasing childhood obesity?

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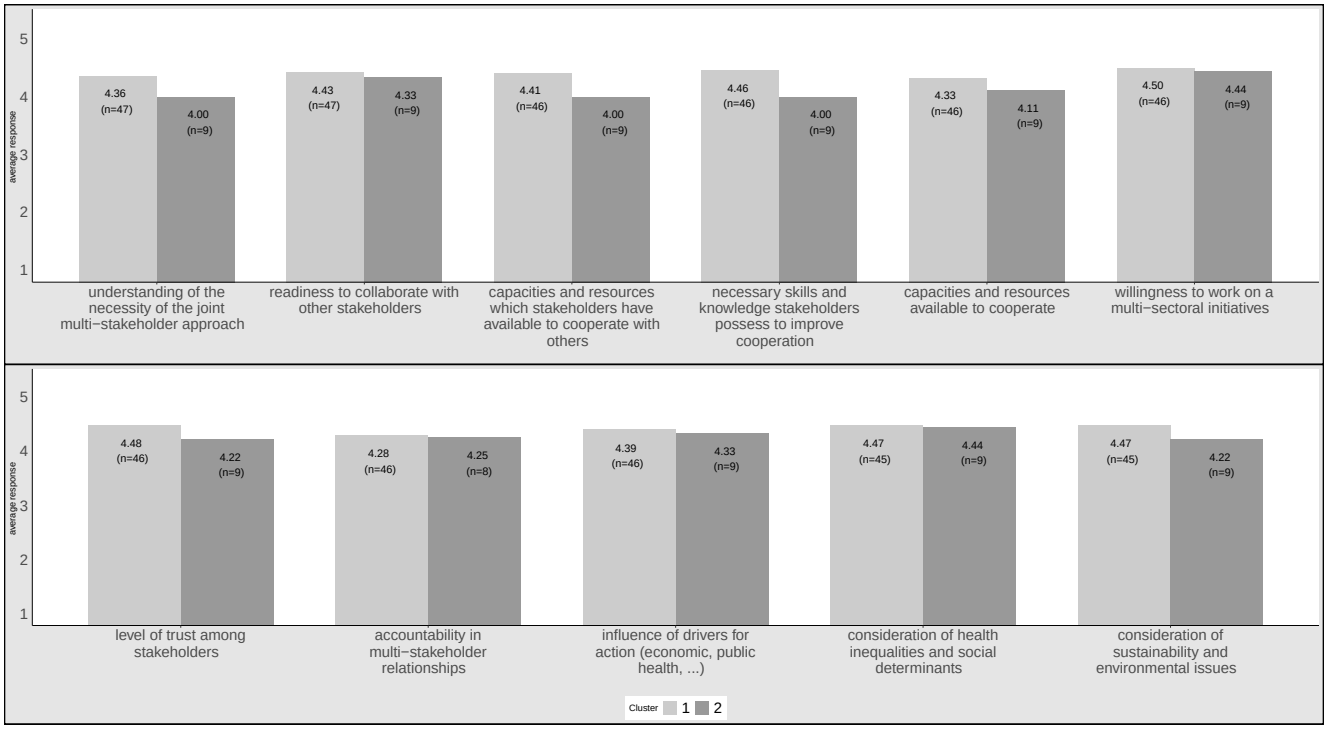

Figure 33: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

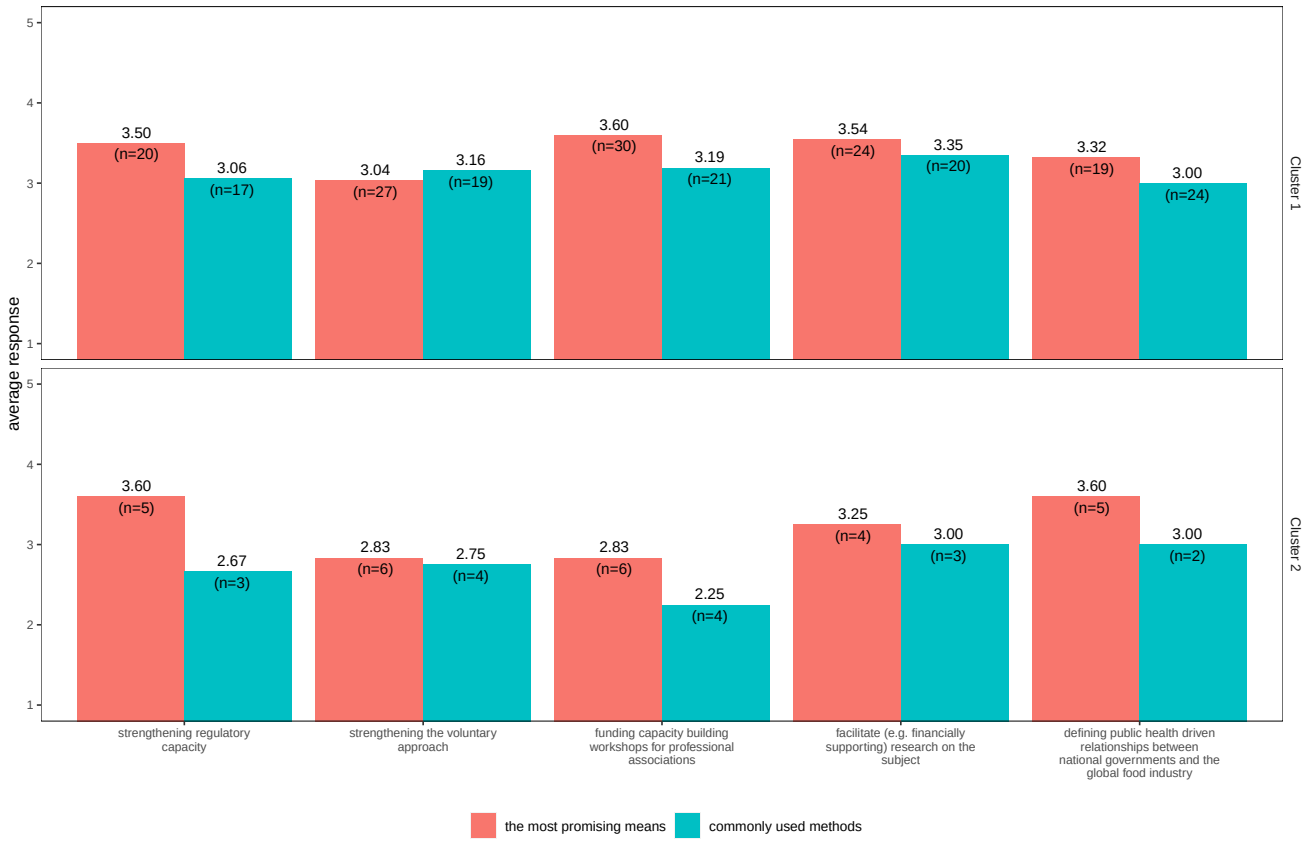

Figure 34: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

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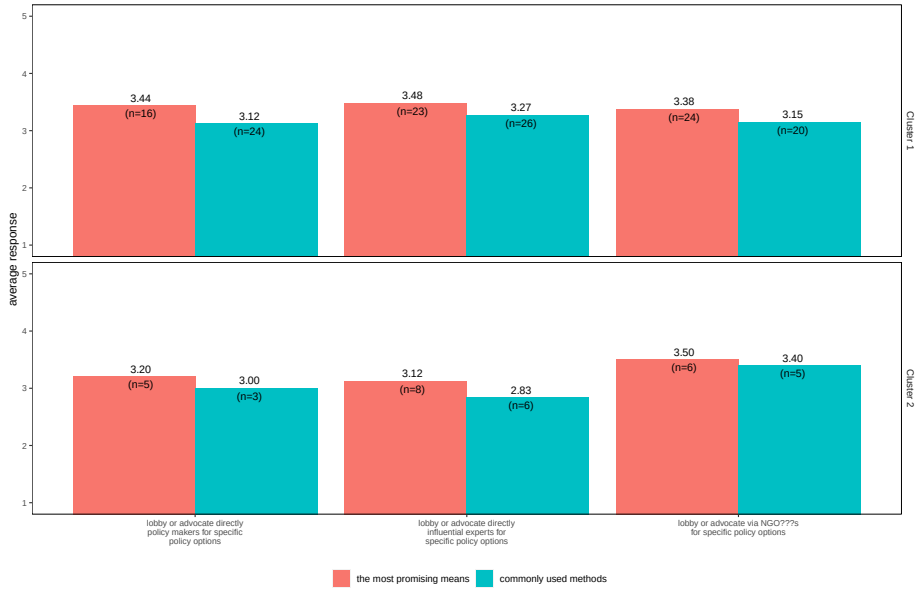

Figure 35: According to your organisation what are the most promising means (and what methods does your organisation most commonly use) to influence the policy decisions in childhood obesity?

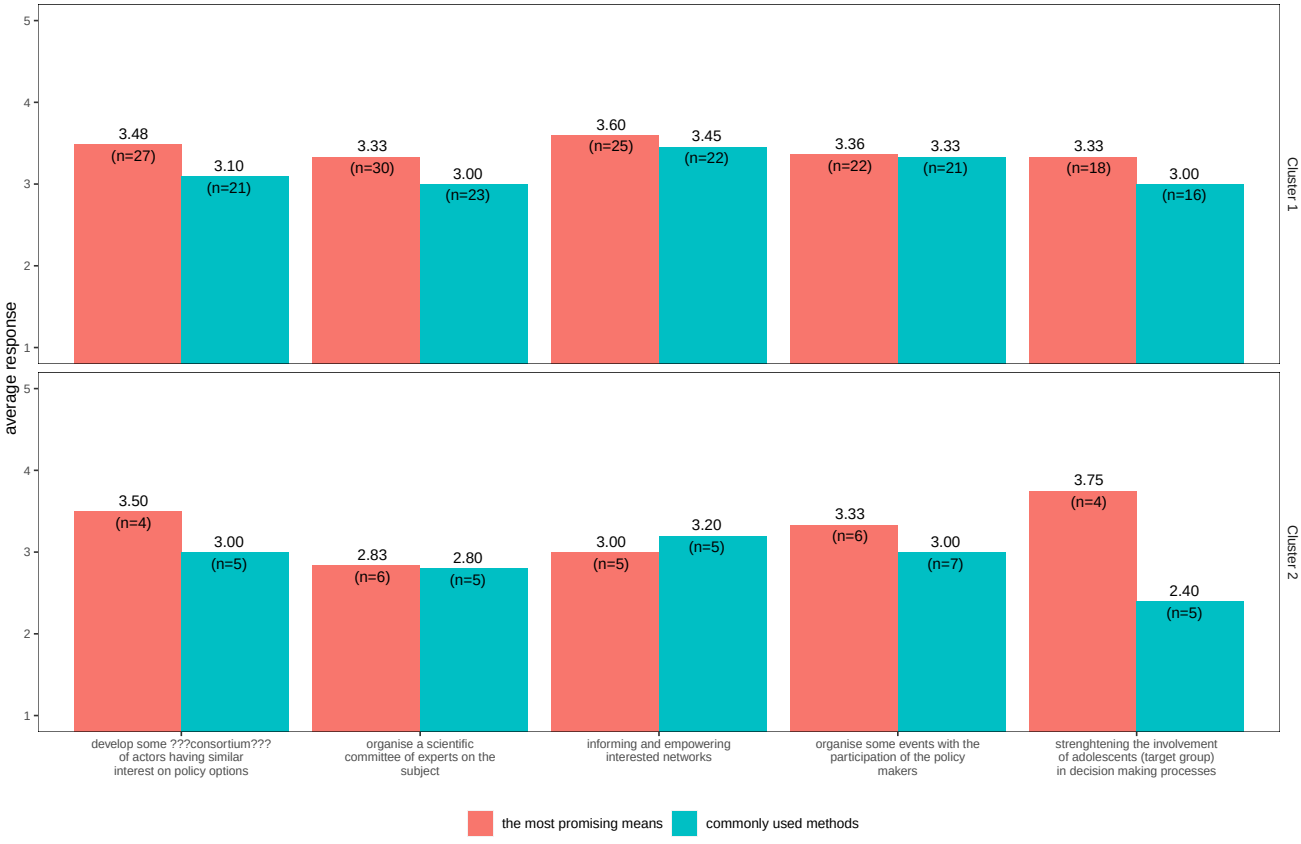

Table 39: How powerful do you perceive the position of your organisation in the policy decision-making processes regarding childhood obesity?

Cluster 1

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	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	20%	27%	36%	16%	7%	45
National level	12%	42%	33%	12%	5%	43
European level	41%	34%	15%	10%	0%	41
International/Global level	52%	29%	12%	7%	0%	42

Cluster 2

	Not at all powerful	Slightly powerful	Powerful	Very powerful	Extremely powerful	Valid n
Regional level	25%	50%	12%	0%	12%	8
National level	38%	38%	0%	12%	12%	8
European level	11%	56%	33%	0%	0%	9
International/Global level	50%	25%	25%	0%	0%	8

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