Policy options for responding to obesity:

cross-national report of the PorGrow project

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TABLE OF CONTENTS

Tables

Figures

Acronyms

BEUC ─ The Bureau of European Consumers Organisation
BMI ─ Body Mass Index, kg/m^2
BSE ─ Bovine Spongiform Encephalopathy
CAP ─ Common Agricultural Policy of the EU
CHOB ─ Children, obesity and associated avoidable chronic diseases
CIAA ─ The Confederation of the Food and Drink Industries of the EU
Codex ─ The Codex Alimentarius Commission
DAFNE ─ Datafood Networking (European Union-funded projects)
DALY ─ Disability Adjusted Life-Year
DGs ─ Directorates-General of the European Commission
EASO ─ The European Association for the Study of Obesity
ECDC ─ European Union Centre for Disease Prevention and Control
EESC ─ European Economic and Social Committee
EFSA ─ European Food Safety Authority
EHN ─ The European Heart Network
EPHA ─ The European Public Health Alliance
EPIC ─ European Prospective Investigation into Cancer and Nutrition
EU ─ European Union
FAO ─ Food and Agriculture Organization
HBSC ─ Healthy Behaviour of School Children (World Health Organization survey)
HEPA Europe ─ The European Network for the Promotion of Health-Enhancing Physical Activity
IOTF ─ International Obesity TaskForce
MCM ─ Multi-Criteria Mapping
MEPs ─ Members of European Parliament
MONICA ─ World Health Organization's MONItoring trends and determinants in CArdiovascular disease project
NAO ─ National Audit Office of the United Kingdom
NCD ─ non-communicable disease
NGO ─ non-governmental organization
NIPH ─ National Institute of Public Health in Sweden
OECD ─ Organisation for Economic Co-operation and Development
PorGrow ─ Policy Options for Responding to the Growing Challenge of Obesity
UK ─ United Kingdom
UN ─ United Nations
UNICEF ─ United Nations Children's Fund
US or USA ─ United States or United States of America
WHO ─ World Health Organization

Executive Summary

Obesity in Europe is reaching epidemic proportions, but Europe's policy-makers need more information about what controls might be acceptable and effective. The PorGrow project provides national and cross-national information on, and analyses of, the varying perceptions and judgements of key stakeholder groups in nine European countries. The results, reported here, can contribute to identifying promising policy initiatives, and helping policy-makers, industry bodies, public health and medical groups and citizens to make informed strategic choices.

The PorGrow project conducted a systematic process to identify key public policy options that might have a bearing on how to respond to the rising trend in the incidence of obesity in Europe. Using a Multi Criteria Mapping (MCM) method, quantitative and qualitative data were gathered from representatives of a broad range of organisations representing relevant stakeholder interest groups, in each of nine EU Member States: Cyprus, Finland, France, Greece, Hungary, Italy, Poland, Spain, and the UK. Reports for each Member State are available separately. The present document provides a cross-national assessment and overview for the European Union.

During structured interviews, stakeholders were invited to consider a set of 20 policy options and to propose additional policy options if they wished, and then to score those options assuming either favourable conditions or unfavourable conditions for the context in which the options could be implemented. Stakeholders provided scores by reference to criteria of their own choosing, and they were asked to describe these criteria and to provide relative weights to their criteria. The interviews were recorded and transcribed to provide qualitative data indicating the reasons for the choice of criteria, scores and weightings. The research team then analysed the data gathered in the interviews, and set the results in the context of the rising incidence of obesity in the Member States, the changing patterns of food consumption and physical activity, and the current debates about policy responses to obesity in the Member States and in the European context. The results are described in the nine country reports that complement this cross-national report.

The MCM approach provides a tool for analysts and policy-makers to inform their understanding of stakeholders' views and how to involve stakeholders in the development and implementation of practical actions. The data gathered for this study, when analysed in the public health and public policy context of Member States and the European Union, collectively indicate that there is a broad consensus that in order to reverse the rising trend in the incidence of obesity it will be necessary to implement a portfolio of measures, and that the design and implementation of those measures need to be co-ordinated and integrated.

One of the strengths of the MCM approach is that it provides analysts and policy-makers with a systematic picture of the preferences of different stakeholders, whilst also highlighting the detailed reasoning and associated uncertainties. By allowing each stakeholder to use their own criteria to judge policy options – policy-makers can identify the aspects of policies that most concern and appeal to stakeholder groups. Our findings indicate that, aggregating across all participants, there was broad common ground that the costs of the various policy options were less important than the social and health benefits, efficacy, acceptability and practical feasibility of the options. In particular:

- Educational options focussing both on school children and on the general adult population were perceived as broadly beneficial, presumed to be effective and of fairly low cost, as feasible and acceptable. Their effectiveness was however seen as dependent, amongst other things, on improved access to information and improved availability of healthier diets and opportunities for increased levels of physical activity. A large proportion of well-informed professionals also thought that there was significant scope for improved education and training of health professionals.
- Of the informational options, mandatory and improved nutrition labelling and controls on marketing terms were considered more feasible and socially acceptable than controls on advertising, but controls on advertising were considered as potentially more effective than other informational options in tackling obesity. All three approaches were recognised to have costs for industry. Many participants thought that the potential benefits of those measures outweighed their costs.
- Concerns about costs to the public sector or to individuals were the main reasons why there was considerable antipathy to fiscal interventions in the food supply, such as taxes on 'unhealthy' foods or subsidies on 'healthy' ones. Controls on food composition were considered effective in tackling obesity, and were widely considered to be both feasible and acceptable.
- High levels of significant additional social and health benefits were anticipated from changes in transport and planning policies, but the costs to the public sector were considered high and the implementation difficult and long-term. Improved provision of and access to sports and physical recreational facilities were highly regarded under most criteria but seen as imposing costs on the public sector. Physical activity informational aids such as pedometers were seen as low cost and technically feasible, but as ineffective at tackling obesity compared to other 'physical-activity' related options.
- Views concerning pharmaceutical interventions were polarised. Some participants thought that pharmaceutical products could be effective and commercially and economically beneficial, while others were dubious about their efficacy and scored them very poorly in terms of their social acceptability.
- Reform of the Common Agricultural Policy, from a health perspective, was considered socially desirable and acceptable but costly and difficult to implement.

The PorGrow Project's findings indicate that a comprehensive portfolio of policy measures, integrated into a coherent programme, would be well-supported by broad coalitions of stakeholders. The costs of not taking action on the other hand would be high and therefore the relative costs of implementing a programme of measures was less important than other aspects of these measures, in particular their social acceptability. Policies that could provide additional health or societal benefits would be particularly well received.

All participants accepted the need for 'downstream' interventions, such as educational measures designed to improve the ability for individuals to make appropriate health choices and to put them into practice. 'Upstream' policy measures, designed to increase

the opportunities to make healthier choices or restrict the counteracting influences, were not so readily accepted by some stakeholders, particularly those in the private sector, although many participants in other groups welcomed them.

Most stakeholders saw difficulties with technological options, such as the provision of pharmaceutical interventions to control bodyweight or the use of artificial sweeteners or fat substitutes, which were widely seen as having poor sustainability and long-term efficacy.

Since there have been no cross-national surveys of adult obesity prevalence levels in the European region, there is a strong case for improved monitoring of Body Mass Index levels in the populations of EU Member States, and especially amongst particularly vulnerable groups. There should also be improved monitoring of changing patterns of food consumption and levels of physical activity. If the trends in the incidence of obesity change in the desired direction, and at acceptable rates, then it may be appropriate to maintain the prevailing set policies. To the extent, however, that the trends either fail to move in the desired direction or shift only very slightly and slowly, then policy-makers will need to introduce additional measures. Comparative, cross-national studies of the relative effectiveness of different national policy approaches will also be useful, as long as they take into account the relevant cultural similarities and differences between countries.

It was evident from all the appraisals that **none of the participants suggested that a single option would be sufficient to reverse the trends in obesity prevalence: all implied that a package of measures would be needed. Policy makers developing actions to promote nutritional health and greater physical activity, such as the actions considered in the EU Green Paper, can be confident that the great majority of stakeholders recognise the need for such actions, that most stakeholders are prepared to accept their costs, but that the 'upstream' interventions in particular will require justification, which may most appropriately be characterised in terms of their wider health and social benefits.**

1 Epidemic of obesity

1.1 Obesity definitions

Obesity is normally defined as an abnormal or excessive amount of fat accumulated in adipose tissue to the extent that health may be impaired.[1] The distribution of the fat affects the risk associated with obesity, with excess fat in the abdominal area leading to the highest risk of subsequent degenerative disease. Although obesity was included in the 6th International Classification of Diseases in 1948 it has only recently begun to be more widely regarded as a disease in its own right, and not simply a risk factor for other disorders and diseases. This may be because of the multiple problems that arise as a consequence of obesity, including direct effects on bones and joints and indirect psychological consequences in terms of reduced self-esteem.

Various methods for measuring adiposity can be used in order to classify or diagnose obesity.[2] Most require sophisticated equipment, complex calibration and the use of fully-trained staff and are impractical for population survey purposes. Indirect measures of adiposity include body weight adjusted for height, waist circumference, the ratio of waist-to-hip circumference and skin-fold thickness measures. These are relatively easy to obtain using simple equipment and less well-qualified staff.

The most common used indicator of obesity is the Body Mass Index (or BMI), a measure of body weight (in kilograms) divided by height (in metres) squared. This only provides an approximation of adiposity, as persons with high levels of lean (muscle) mass will also have relatively high BMI scores. It does not indicate the location of the adiposity, whereas waist circumference, or the ratio of waist circumference to hip circumference (the waist-hip ratio) and skin fold measures do provide some indication of the location of the adiposity. BMI, however, is by far the most widely used measure in anthropometric surveys of obesity and it was the main indicator of obesity used in the studies discussed in this report.

The World Health Organization (WHO) adopted the definition that a BMI of 30 in adults should be taken as the threshold for obesity. Because questions were raised about the universal applicability of this benchmark, the WHO convened an expert group that recommended different BMI benchmarks for Asian populations. More severe levels of obesity have also been defined, as has a less severe definition, described as ‘overweight’. These are shown in Table 1-1.

Table 1-1. Categories of adiposity according to BMI (adults)

Description	BMI (kg/m2)
Underweight	under 18.5
Normal range	18.5 24.99
Overweight	25 or more
Obese	30 or more
sub-classifications:	
overweight pre-obese	25-29.99
moderately obese	30-34.99
severely obese	35-39.99
very severely obese	40 or more

Source: adapted from WHO 2000[1]**Error! Bookmark not defined.**

Note that there can be confusion about the use of the word 'overweight'. It may refer to all persons with a BMI of 25 or more, or it may refer only to those persons with a BMI between 25 and 29.99 (sometimes this is referred to as 'overweight non-obese' or 'pre-obese').

The BMI classifications given in Table 1-1 apply to adults. They cannot be applied to children because weight and height measurements are changing through normal growth patterns. Several alternative approaches have been defined for measuring children: one uses age-based charts for weight, height and BMI based on a reference population, and defines excessive adiposity as a BMI more than two standard deviations above the reference population's mean. A second approach also uses a reference population, but defines obesity as a BMI above the 95th centile of the population's BMI distribution. The reference population used in either of those two definitions may be a local population (for example the UK Department of Health uses child centiles based on data from English children in 1990) or the one previously recommended by the WHO from the year 2000, consisting of large populations of children in the USA from birth to 20 years of age. The current recommended WHO reference population is a new international child growth standard released in April of 2006, based on the growth of breast-fed children from a number of countries around the world.[3]

A third approach is to take an internationally representative sample of children and to plot the BMI centile curves back from adulthood through childhood, equivalent to adult BMIs of 25 and 30. This provides a series of benchmarks linked to the adult definitions, adjusted for age and gender. Benchmark values on the basis of six combined surveys in Asia, Europe, and North and South America have been published by Cole et al[4] and are recommended by the International Obesity TaskForce for comparison of child obesity prevalence statistics across different populations.

1.2 Sources of data for the EU

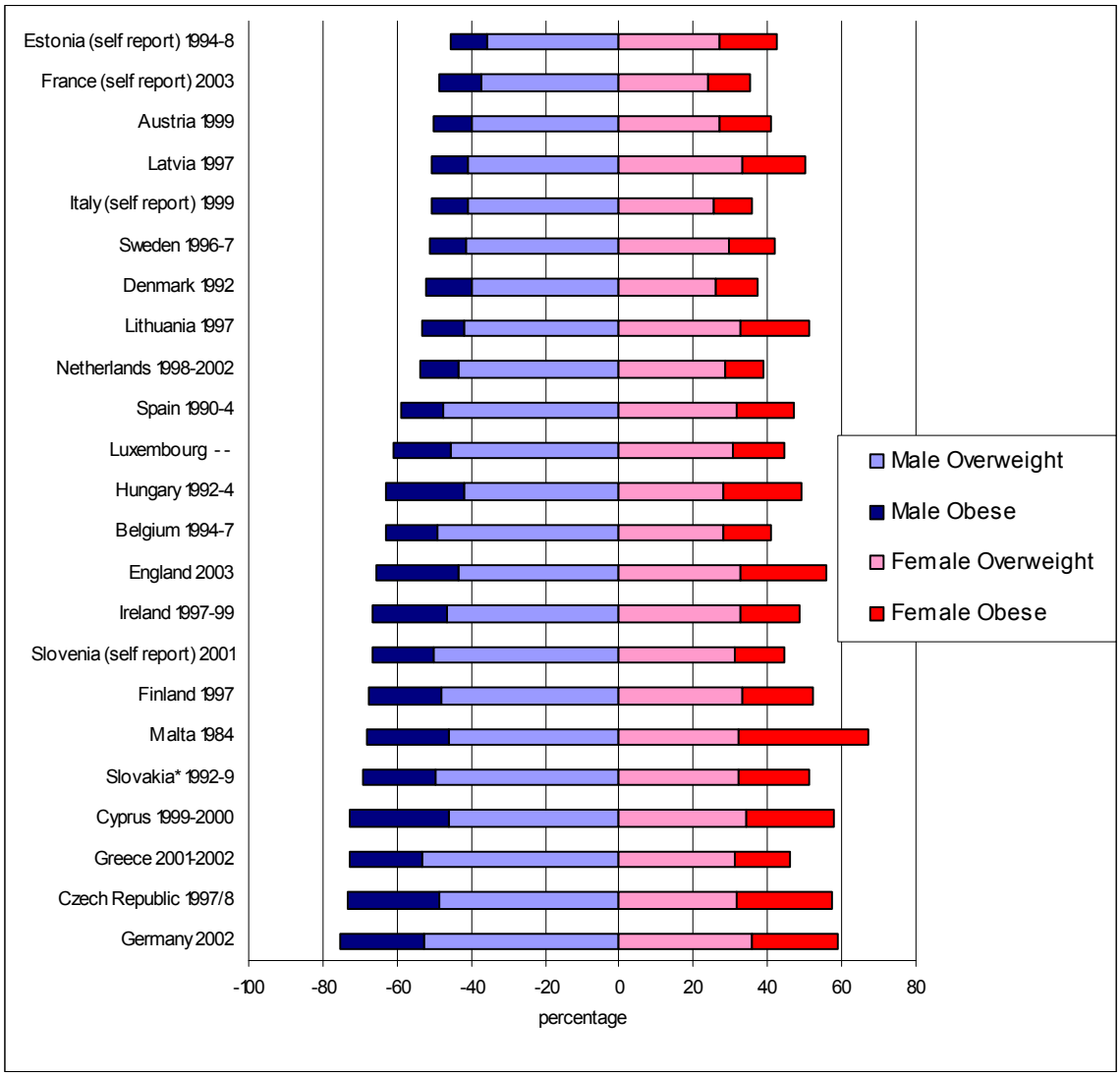
1.2.1 Prevalence of overweight and obesity in adults

There have been no cross-national surveys of adult obesity prevalence levels in the European region, although one co-ordinated study was undertaken for the MONICA project, which ran from the early 1980s to the mid-1990s and sampled populations in 38 locations in 21 countries worldwide.[5] Generally, estimates of the prevalence of obesity and overweight are based on surveys of national and sub-national samples collected by a

range of institutions as part of government and research institute health survey activities. The International Obesity TaskForce collates relevant and comparable figures and estimates of the prevalence in all countries are provided by the World Health Organization for their online non-communicable disease database.

A summary of recent surveys produced by the International Obesity TaskForce for the launch of the European Commission's Platform on Diet, Physical Activity and Health in 2005 is shown below in Figure 1-1:

Figure 1-1 Adult overweight and obesity in the European Union (to March 2005). Recent surveys



Source: IOTF collated data[6]
Notes: Age range and year of data in surveys may differ. With the limited data available, prevalence figures are not age-standardised. Self reported surveys may underestimate true prevalence. Sources and references are available from the IOTF database (http://www.iotf.org/database/index.asp).
* - Slovakia: IOTF estimate based on measured data.

The database maintained by the World Health Organization contains estimates of the prevalence of obesity and overweight among adults (defined as age 15 years and over). The figures are based on collated surveys (such as the IOTF material) which are adjusted to compensate for different age groups in the samples and projected to cover regions and countries for which data are absent. The reliability of those estimates is hard to establish, as the figures are not strictly comparable due to the variability of age ranges, dates of survey, method of data collection and regional boundaries. Nonetheless, approximate comparisons can be provided. For example, the WHO obesity prevalence figures for the Spain, France and the United Kingdom in 2002 can be compared with a national survey in Spain for 2000-1, two sets of data for France (the first based on self-reported height and weight in a national survey in 2003 and the second on measured height and weight in a survey conducted in three regions of France in 1995-7), and the Health Survey for England for 2002.

The results (summarised in the Table 1-2 below) show a reasonable degree of concordance regarding the estimates of overweight (BMI≥25) though there are some discrepancies in the estimates of obesity (BMI≥30) especially in respect of France. The French data also highlight the problem of relying on self-reported estimates of height and weight. Several studies comparing self-reported and measured anthropometric indices have shown that self-reported weight tends to be underestimated (especially by women) and height tends to be overestimated (especially by men) resulting in under-reporting of BMI, with further evidence that the degree of under-reporting is linked to the level of obesity and also varies with gender, age, socio-economic status and ethnicity.[7]

Table 1-2. Comparison of WHO data with national survey data

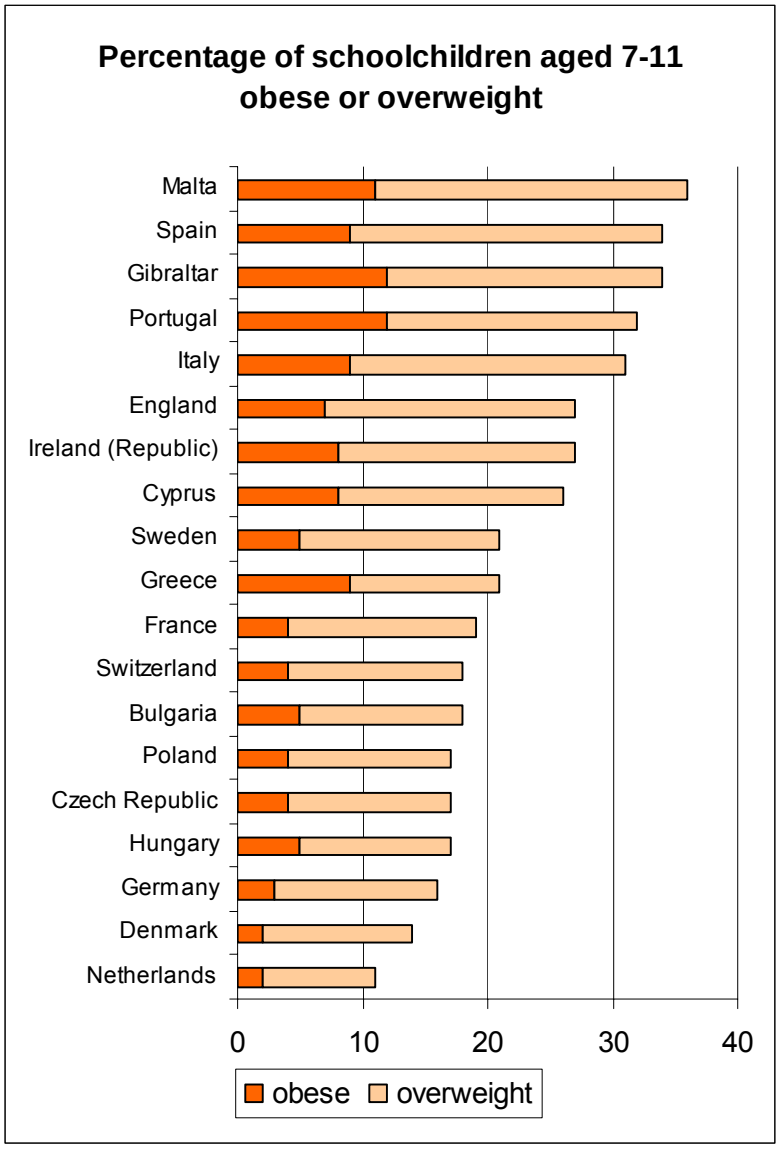
	Overweight BMI≥25		Obesity BMI≥30	
	Male	Female	Male	Female
WHO Spain 2002	56	46	16	15
Spain 2000-1, age 25+	58	46	12	15
WHO France 2002	44	33	7	6
France 2003, self-report, age 15+	49	35	11	11
France 1995-7, 3 region, age 15+	47	29	18	18
WHO UK 2002	63	59	19	22
England 2002, age 16+	66	57	22	23

Source: WHO database[8]; Basdevant & Charles 2003[9]; Marques-Vidal et al 2004[10] and Health Survey for England 2002[11]

1.2.2 Prevalence of overweight and obesity in children

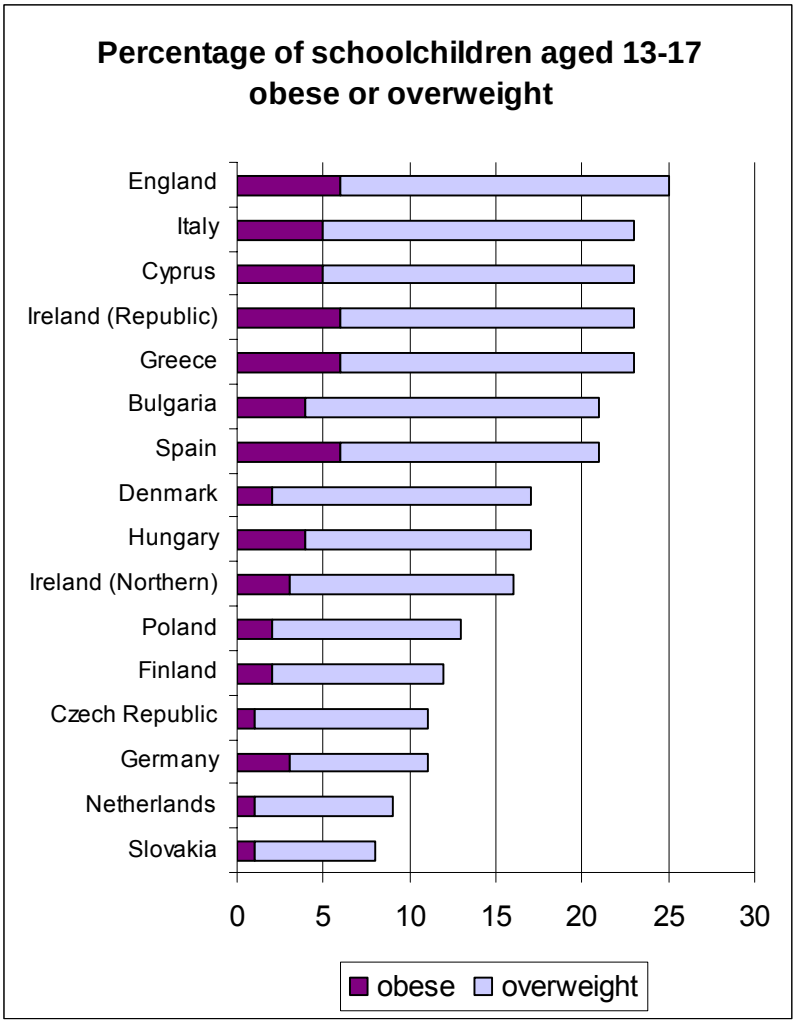
As with adults, there are no overall sample survey data available for children's obesity in Europe, based on measured height and weight. (For self-reported data, see below.) The International Obesity TaskForce has provided figures based on national and regional survey data, published at the launch of the European Commission's Platform on Diet, Physical Activity and Health.[12] These are reproduced below in Figure 1-3:

Figure 1-2. Estimated percentages of children aged 7-11 obese or overweight for selected European countries.



Source: IOTF 2005[6]

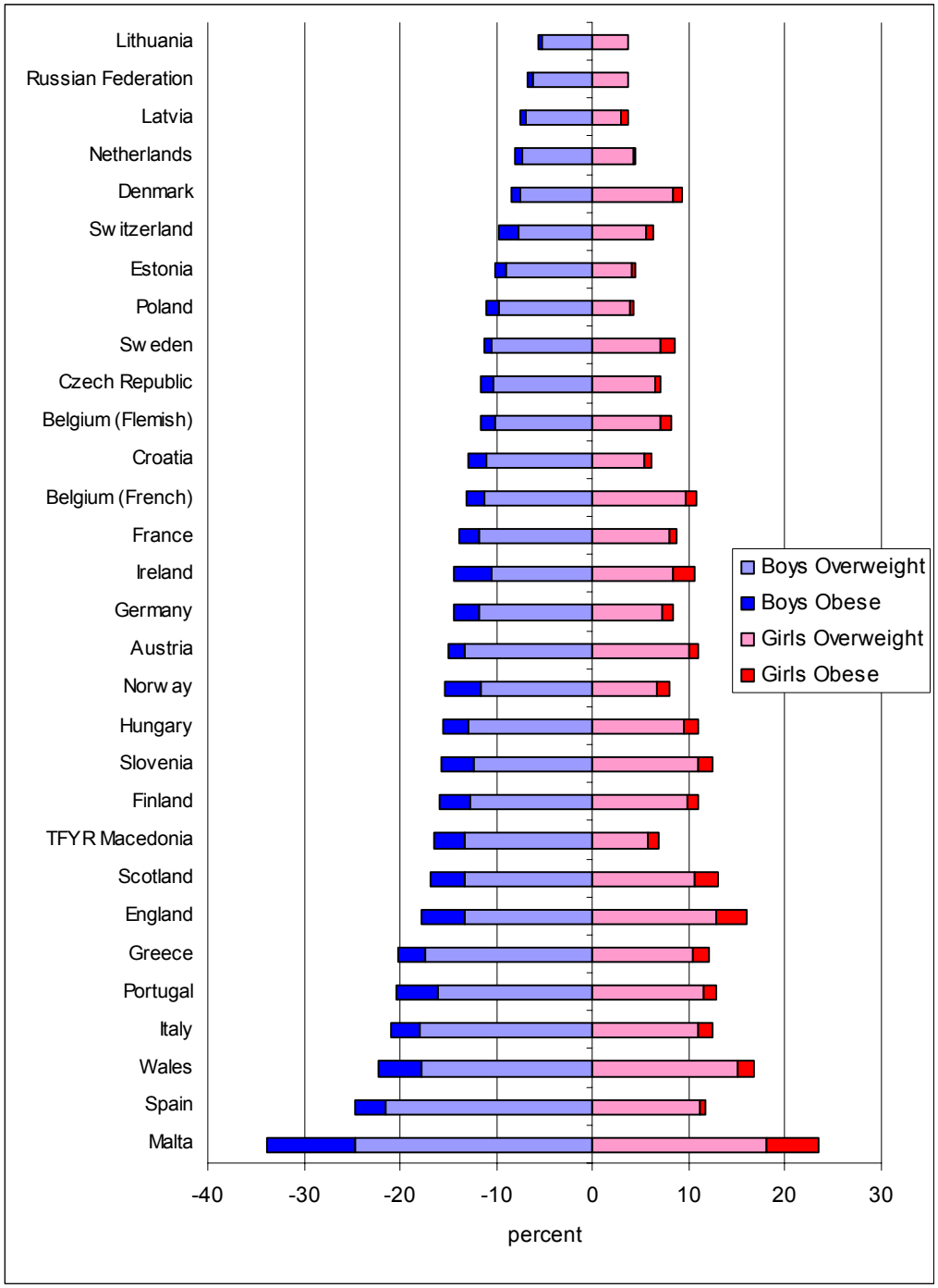
Figure 1-3. : Estimated percentages of children aged 13-17 obese or overweight for selected European countries



Source: IOTF 2005[6]

A survey of children's self-reported height and weight was conducted as part of the series of surveys by the WHO on the Health Behaviour of School Children (or HBSC)[13], which has reported data for the 2001-2 survey and is currently undertaking the next survey, including additional countries. The 2001-2 data are given below, but care should be taken: as with adults, there may be significant under-reporting of weight, and this may not be evenly distributed across the survey samples. In addition, the researchers report that some 14% of the HBSC survey respondents aged 13 refused to answer the questions on weight and height.

Figure 1-4. Overweight and obesity in children aged 13, based on self-reported height and weight. HBSC survey 2001-2

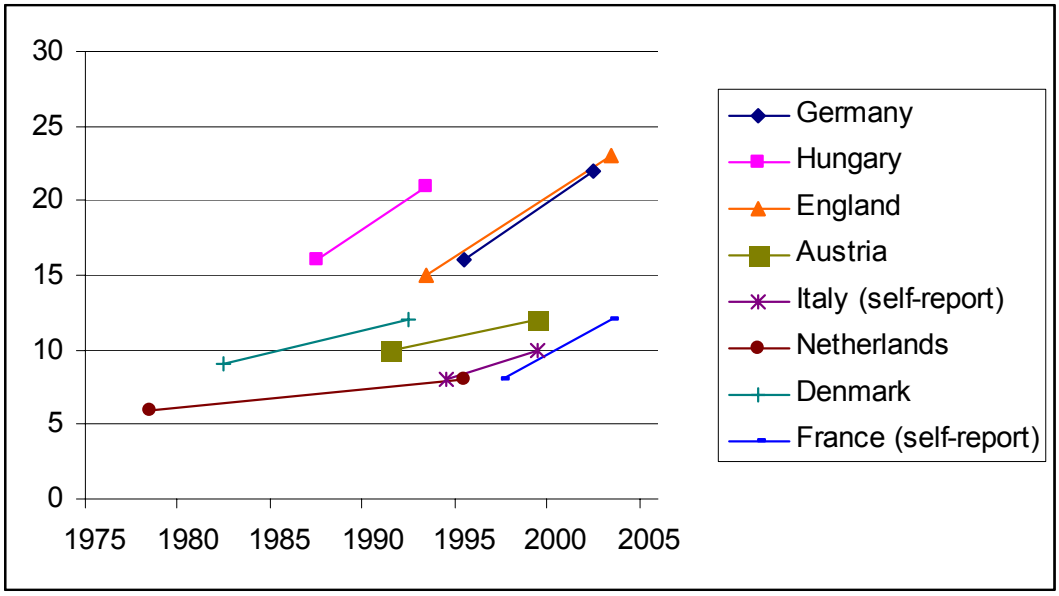


Source: adapted from HSBC 2004[13]

1.2.3 Trends in prevalence data for adults

Using survey data from the IOTF database, countries in Europe are experiencing a rapid increase in the prevalence of overweight and obesity. Examples for selected countries are shown in the graph below:

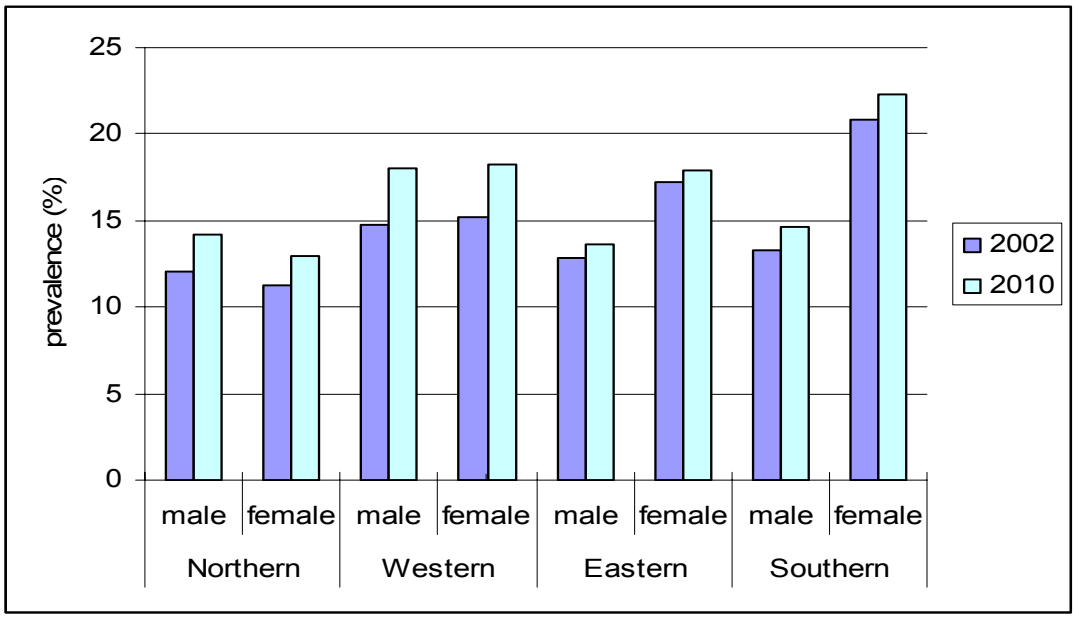
Figure 1-5. Rising levels of obesity prevalence among adults in European countries - percentage of adult population with BMI >30



Source: IOTF database[6]
Note: Definitions of 'adult' may differ between countries

The WHO database includes estimates of overweight and obesity among adults projected to 2010. Using those figures indicates that the WHO forecasts a continuing rising trend for countries in Europe, shown in Figure 1-7 for major European geographical regions.

Figure 1-6. Rising levels of obesity predicted for adults in all European regions 2002-2010

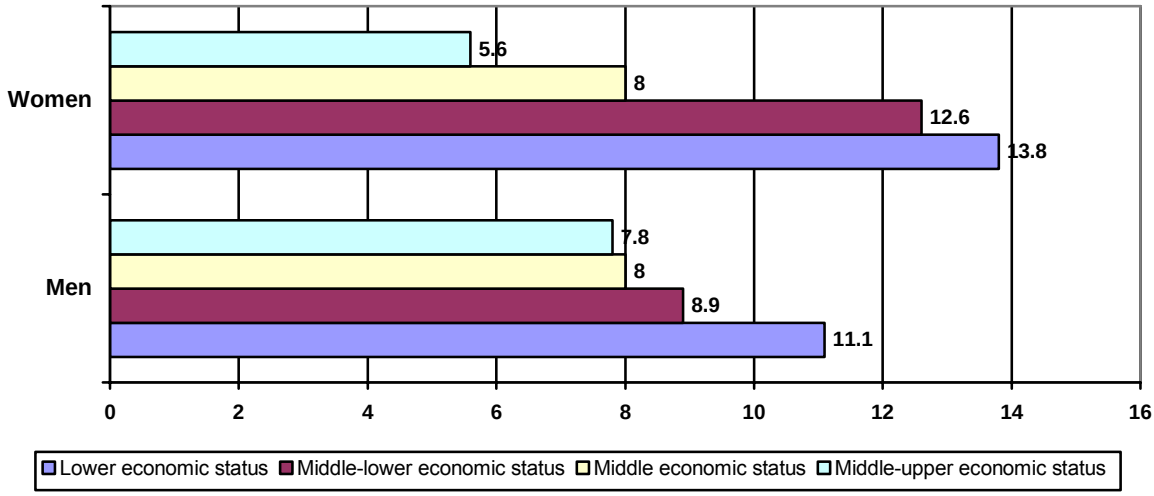


Source: WHO database[8]
Northern: Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway. Sweden
Western: Belgium, France, Germany, Ireland, Luxembourg, Netherlands, Switzerland, UK
Eastern: Austria, Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Slovakia, Slovenia
Southern: Greece, Italy, Malta, Portugal, Spain, Cyprus, Turkey

For further information the reader is referred to the individual PorGrow country reports that give available details on prevalence and trends according to age, socio-economic status and ethnicity. As a general summary the following points can be made:

- The prevalence levels for overweight and obesity appear to increase through adulthood with highest levels among adults in their 50s and 60s. Members of age groups older than this may show reduced overweight and obesity prevalence levels due to (a) a healthier lifestyle during their younger years and/or (b) a selective attrition due to higher mortality rates from diseases linked to obesity.
- Gender differences are not uniform across all population. In some minority ethnic groups obesity is significantly more common among women than among men (e.g. Pakistani, Indian and Black Caribbean groups in the UK). Comparing men and women in the UK (see country report) it can be seen that women tend to have a higher prevalence of obesity, while men tend to have a higher prevalence of non-obese overweight.

Figure 1-7. Prevalence of obesity among adult men and women, by economic status, European Union.



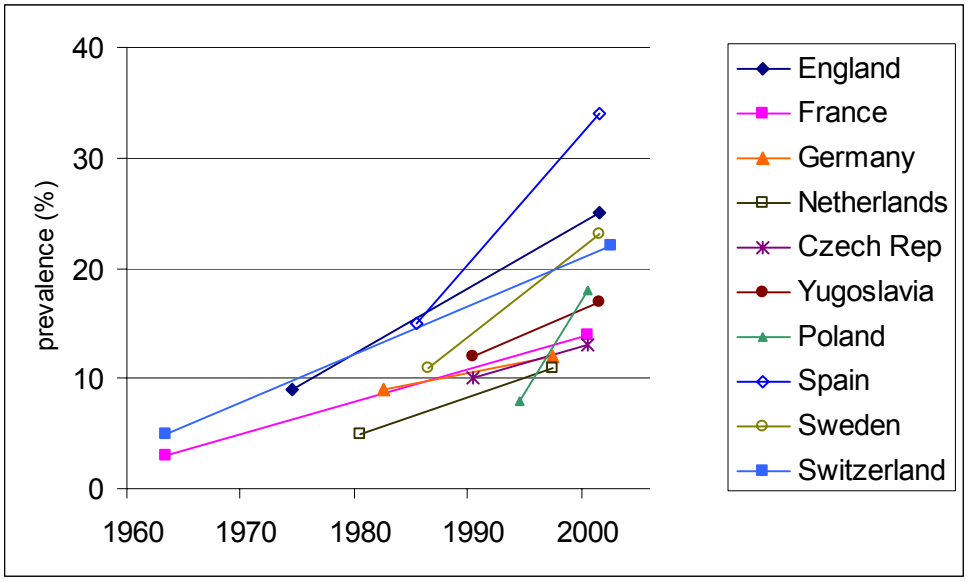
Source: adapted from Martinez et al., 1999[14]
Economic status measured by household income or by occupation. Self-reported heights and weights

- Data from some 80,000 adults in the WHO MONICA project covering 26 population groups found lower educational attainment linked to higher BMIs in only about half of the population groups with respect to men, but in virtually all the groups with respect to women.[15] The trends over time suggested that the differentials were increasing.
- A study of health indicators in developed economies showed that both obesity and diabetes were linked less strongly to national average income than to indicators of inequality (such as the Gini index which measures inequality in income distribution), implying that the links between socio-economic status and obesity may be mediated by the degree of relative inequality rather than indicators of absolute deprivation in wealthier countries.[16]
- Further evidence suggests that perceived social status and self-esteem may influence health behaviour,[17] and obesity prevention and treatment may be less successful among lower-income groups than amongst those with higher incomes.[18]
- There appears to be a tendency for members of minority ethnic groups to have higher levels of obesity, especially after several generations of residence in their host countries. These trends may in part be due to socio-economic differences, including greater exposure to environments conducive to weight gain, but may also reflect culturally-specific health-related behaviour patterns.

1.2.4 Trends in prevalence data for children

Using survey data from the IOTF database, countries in Europe are experiencing a rapid increase in the prevalence of childhood overweight and obesity.[19] Examples for selected countries are shown in Figure 1-9.

Figure 1-8. Trends in the prevalence of childhood overweight (including obesity) in European countries



Source: Jackson-Leach & Lobstein 2006[19]
Note: Age groups differ between countries

The same source gives projected estimates of childhood overweight and obesity 2006 and 2010. The projections are based on trends from the 1980s and 1990s that indicate that the annual increase in child obesity prevalence is itself increasing. If these trends continue, by the year 2010 the European Union can expect to see the numbers of overweight and obese children rising by approximately 1.3 million children per year, of which the numbers of obese children will be rising by over 0.3 million per year.

Table 1-3. Proportion of children overweight and obese in the European Union (25 Member States) projected to 2006 and 2010.

	2006	2010
Overweight or obese	30.4%	36.7%
of which obese	7.1%	8.8%

Source: Jackson-Leach & Lobstein 2006[19]
Note: School-age children (5-17 years inclusive)

1.3 Summary of main points

- There have been no cross-national surveys of adult obesity prevalence levels in the European region.
- Estimates of the prevalence of obesity and overweight are based on surveys of national and sub-national samples collected by a range of institutions as part of government and research institute health survey activities. The World Health Organization maintains a database with estimates of the prevalence of obesity and overweight among adults (defined as age 15 years and over) which uses projections to cover regions and countries for which data are absent, and adjusts

for different age groups in the samples so that projections can be made for the future.

- The reliability of these estimates is hard to establish, but comparisons with national surveys from individual countries show a reasonable degree of concordance regarding the estimates of overweight (BMI≥25) though there are some discrepancies in the estimates of obesity (BMI≥30).
- Estimates of overweight and obesity among adult women range from around 35% (in French and Italian women) to about 70% (in Maltese women) and among men, from about 45% (in Estonian men) to around 75% (in German and Czech men).
- Estimates of overweight and obesity in children 7-17 range from around 9% (in the Netherlands and Slovakia) to about 35% (in Malta).
- Survey data show a rapid increase in the prevalence of overweight and obesity among adults in various European countries. Trends also indicate the obesity problem is even greater among certain groups including adults between the ages of 50 and 60, ethnic minorities, those with lower educational attainment, those experiencing greater inequality, lower social status and lower self-esteem.
- Rapid increase in the prevalence of childhood overweight and obesity are also being experienced in Europe with estimates of .the numbers of overweight and obese children rising by approximately 1.3 million children per year, of which the numbers of obese children will be rising by over 0.3 million per year.

2 Estimated costs of obesity

This section will consider two aspects of the costs of obesity: the health costs – i.e. the burden of ill-health associated with obesity – and the financial costs, which are largely a consequence of the ill-health.

2.1 Health consequences of overweight and obesity

There are several methods for estimating the disease burden experienced by a population, of which the most widely used (e.g. by the World Health Organization) is the Disability Adjusted Life-Year, or DALY. One DALY is equivalent to one lost year of healthy life, and is based on estimates of years of life lost due to premature mortality combined with years experiencing disability and ill health.

Using this concept, estimates can be made of the relative contribution of different diseases to the total disease burden. In low-income developing economies, 60% of DALYs are caused by infectious and parasitic diseases, perinatal mortality, respiratory disease and nutritional deficiencies. In developed, high-income countries the majority of DALYs are associated with cardiovascular disease, cancer and psychiatric disorder.

The burden of disease attributable to specified risk factors can also be estimated: i.e. the DALYs due to factors such as tobacco smoking, excess weight, lack of physical activity or unsafe sex, can be estimated and compared. This has been done on a global basis by the World Health Organization[20] and on a regional basis for the European Union (15 Member States) in 1997 by the National Institute of Public Health in Sweden.[21] The Swedish model estimated that overweight accounted for 3.7% of all ill-health (i.e. 3.7% of the total disease burden for the region, measured in DALYs), with poor nutrition (low fruit and vegetable intake, high saturated fat intake) responsible for a further 4.6% of the total disease burden. Lack of physical activity accounted for an additional 1.4% of total DALYs. Together, these causal factors accounted for a greater burden of disease than either tobacco smoking (9.0% of total DALYs) or alcohol consumption (8.4% of total DALYs) (see Table 2-1 below).

Table 2-1. Contribution of leading factors to the burden of disease in the European Union

Causal factor	Contribution (%)
Tobacco smoking	9.0
Alcohol consumption	8.4
Overweight	3.7
Occupational risks	3.6
Low fruit and vegetable intake	3.5
Relative poverty	3.1
Unemployment	2.9
Illicit drugs	2.4
Physical inactivity	1.4
High saturated fat intake	1.1
Outdoor air pollution	0.2

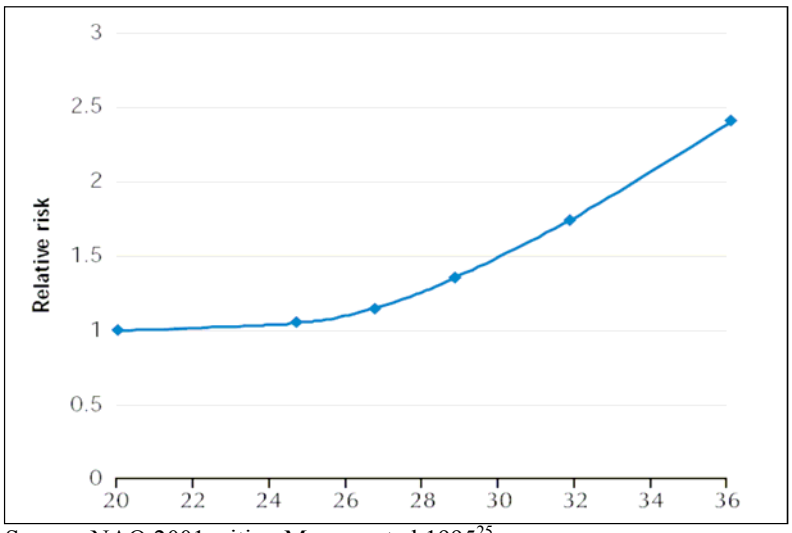
Source: NIPH 1997[21]

A similar finding has been made in the World Health Organization's estimate of the relative importance of different risk factors for disease in developed countries, which attributed nearly 60% of total DALYs to tobacco smoking (12%), raised blood pressure (11%), alcohol consumption (9%), raised blood cholesterol (7.5%), overweight (7.5%), low fruit and vegetable intake (4%), physical inactivity (3.5%), illicit drug taking (2%), unsafe sex (1%) and iron deficiency (1%).[22] That list mixes some causes and consequences: for example, excess bodyweight is closely linked to raised blood pressure and raised cholesterol levels. In this analysis, overweight and its consequences together exceed the burden of ill-health linked to tobacco. Overweight combined with dietary inadequacies and physical inactivity accounts for over 20% of the total disease burden (in DALYs) in developed economies.

Some estimates of the burden of ill-health due to overweight have been made in several EU Member States. The UK National Audit Office estimated that approximately 6 per cent of all deaths in England were attributable to obesity in 1998,[23] and the corresponding 2002 figure was 6.8% of all deaths.[24] This compares to about 10 per cent of all deaths due to smoking, and less than one per cent from road accidents. On average, each person whose death could be attributed to obesity lost nine years of life (1998 figures).

For young adults, the risk of an earlier death for someone with a BMI of 30 is about 50 per cent higher than that for someone with a BMI in the range 20 to 25. With a BMI of over 35 the risk is more than doubled.

Figure 2-1. Increasing body (BMI) and relative risk of early death



Source: NAO 2001, citing Manson et al 1995[25]
Notes: Women only. USA database

Several reviews have identified the major health consequences of obesity, which range from life-threatening diseases and premature death to non-fatal but disabling conditions that have an adverse effect on the quality of life.[26] Overweight and obese individuals are at increased risk for life-threatening diseases, which are among the principle causes of death in Europe, including: Coronary heart disease, hypertension and stroke, certain cancers (endometrial, breast, and colon), and type 2 diabetes.

In addition, non-life-threatening problems associated with overweight and obesity are also prevalent in Europe, including: Orthopaedic disorders and osteoarthritis, gall stones, sleep apnoea and asthma, menstrual abnormalities, polycystic ovary syndrome, liver steatosis, and psychological problems associated with low self-esteem and low achievement

Table 2-2. Estimated increased risk for obese people of developing obesity-related diseases

Disease	Relative risk for women	Relative risk for men
Type 2 Diabetes	12.7	5.2
Myocardial Infarction	3.2	1.5
Angina	1.8	1.8
Hypertension	4.2	2.6
Stroke	1.3	1.3
Cancer of the Colon	2.7	3.0
Ovarian Cancer	1.7	-
Gall Bladder Diseases	1.8	1.8
Osteoarthritis	1.4	1.9

Source NAO 2001[27]
Non-obese = 1.0

2.1.1 Consequences in children

Based on a literature search of over 40 surveys of childhood diseases linked to obesity, recent estimates suggest that over 20,000 obese children in the European Union have type 2 diabetes, while over 400,000 have impaired glucose tolerance.[28] On a conservative estimate, over a million obese children in the EU are likely to show a range of indicators for cardiovascular disease, including hypertension and raised blood cholesterol levels, and have three or more indicators of the metabolic syndrome. Over 1.4 million may have early stages of liver disorder.

Table 2-3. Estimated minimum numbers of children in the EU with obesity-related indicators of disease, 2006

	LOWEST ESTIMATED PREVALENCE AMONG OBESE CHILDREN	Lowest estimated number of obese children affected in EU
Raised blood triglycerides	21.5%	1.09m
Raised total blood cholesterol	22.1%	1.12m
High LDL cholesterol	18.9%	0.96m
Low HDL cholesterol	18.7%	0.95m
Hypertension	21.8%	1.11m
Impaired glucose tolerance	8.4%	0.42m
Hyperinsulinaemia	33.9%	1.72m
Type 2 diabetes	0.5%	27,000
Metabolic syndrome† (3+)	23.9%	1.21m
Metabolic syndrome† (4+) (age 10-17.9y)	4.6%	0.13m
Hepatic steatosis	27.9%	1.42m
Elevated aminotransferase	12.8%	0.65m

Source: Lobstein & Jackson-Leach 2006b[28]
†Metabolic syndrome was defined as having a number of the following: hypertension, central adiposity, raised HDL blood cholesterol, raised blood triglycerides, raised blood glucose levels.
Notes: European Union 25 Member States. Age range 5.0 – 17.9 years unless otherwise shown.

2.2 Economic costs

Illness associated with obesity gives rise to costs to the health services and to support services (direct costs) and as a result of lost productivity (indirect costs). Direct costs of obesity arise primarily from medical consultations, drugs and treatments of diseases attributable to obesity. In the UK, the National Audit Office estimated that the costs of obesity amounted to 1.5 per cent of health service expenditure in 1998, primarily attributed to treating conditions caused by obesity.[27,29] The major cost drivers are hypertension, coronary heart disease, and type 2 diabetes. Osteoarthritis and stroke accounted for a further proportion of the direct costs.

In other countries the estimates for direct costs tend to be higher, with most countries estimating the direct costs of obesity to lie between two and six per cent of national health care budgets.[24] Examples of these estimates are given in Table 2-4 below.

Table 2-4. Estimates of the direct costs of obesity to national health services

Country	Year of estimate	Proportion of total healthcare expenditure due to obesity	Prevalence of obesity (BMI>30)	
			At time of estimate	Latest available
England	1998	1.5%	19.0%	23.5%
France	1992	1.5%	6.5%	9.0%
Netherlands	1981-89	4%	5.0%	10.3%
Canada	1997	2.4%	14.0%	13.9%
Portugal	1996	3.5%	11.5%	14.0%
Australia	1989/90	>2%	10.8%	22.0%
USA	1999	8.5%	30.5%	30.5%
USA	2000	4.8%	30.5%	30.5%

Source: House of Commons 2004[24]

The premature death of members of the economically active workforce results in lost productivity. In England, the National Audit Office estimated that in the late 1990s obesity caused an annual loss of over 40,000 years of working life in the pre-retirement working population due to obesity-related premature death. The NAO also estimated that obesity lead to over 18 million days of sickness absence (1998 figures), equivalent to around one percent of the country's total working days. This figure is likely to be an underestimate as it excludes both self-certified and uncertified sickness absence, and takes no account of sickness due to diseases for which the proportion of cases attributable to obesity cannot be quantified. For example, back pain associated with obesity is excluded from the estimates, as there was no figure for relative risk on which to make the calculations. Back pain is one of the most common causes of sickness absence and its inclusion could increase the estimate significantly.

Table 2-5. The estimated work-related costs of obesity and consequential diseases, England 2002

	£ bn	€ bn
Lost earnings due to attributable mortality	1.05 – 1.15	1.65 – 1.80
Lost earnings due to attributable sickness	1.30 – 1.45	2.05 – 2.28
Total indirect costs	**£2.35 – 2.60**	**€3.70 – 4.10**

Source: adapted from House of Commons 2004[24]

Those estimates are just for obese people, and do not include those overweight but not obese. Being overweight raises the risk of disease to a lesser extent than does obesity (typically around a quarter of the raised risk of premature death compared with obese people) but the numbers of overweight people in the population are typically two to three times the number of obese people. It would not be unreasonable to add a further £1bn to the figure for 2002 for the indirect costs in the UK.

Furthermore the figures presented here refer only to adult obesity. The costs of childhood obesity and overweight have not been included. It is impossible to put a figure on the lost productivity – due to the need for care by parents or for the children's subsequent lost earnings due to lost school education. Medical costs for child obesity have not been

estimated, except in one US study where ailments related to obesity (primarily asthma, sleep apnoea, diabetes and gall bladder problems) accounted for some 1.7% of US hospital costs.[30] An equivalent figure for the UK, taking account of lower obesity prevalence and lower health care costs, may add another £0.5 billion (€0.78 billion) to the total above, including both the health care and the employment costs.

Including the cost of the social and psychological effects of being obese would raise those figures further. Excess bodyweight is linked to a lower likelihood of finding a marriage partner, of finding work and of being promoted. Overweight people are likely to be on lower earnings (perhaps reducing the lost-days-of-work costs) and are more likely to suffer low self-esteem and depression. Psychiatric problems, especially depression, are the largest single cause of lost days of healthy life in developed economies, and besides the human costs they are a major cost to the health services and a cause of lost productivity and more generally of social welfare.

Lastly, there are the costs or benefits (depending on perspective) of the weight-loss industry. At any one time some 12 million people in Britain are attempting to lose weight. In 2001 the UK market for slimming products was estimated to be worth some £5.2 billion (€8.2 billion) and has been forecast to reach £6.6 billion (€10.4 billion) by 2006.[31]

Similar estimates are not available for other EU Member States, and there is a case therefore for Member States developing estimates of the economic burdens of obesity within their jurisdictions.

2.3 Summary of main points

- The costs of obesity include both the burden of ill-health associated with obesity as well as the economic costs, including the direct costs of health and support services related to obesity and its associated diseases and those which are indirect, related to the loss of productivity.
- Estimates of the burden of disease attributable to obesity, poor nutrition and lack of physical activity together account for a greater proportion of the total burden of diseases in the European Union than tobacco smoking or alcohol consumption.
- The direct cost of treating obesity in 4 different European countries was estimated as being in the range of 1.5% of healthcare expenditure in England in 1998 to 4% in the Netherlands in 1981-1989.
- In England, the National Audit Office estimated that in the late 1990s obesity caused an annual loss of around one percent of the country's total working days, worth an estimated £2.35-2.60 billion or €3.70-4.10 billion in indirect costs in 2002. Furthermore, it is likely this is an underestimate because it excluded both self-certified and uncertified sickness absence, and takes no account of sickness due to diseases such as back pain associated with obesity. These estimates also do not include those who are overweight pre-obese (typically twice to three times as many who are obese), or consequences related to childhood obesity (medical costs of childhood obesity, the need for care by parents, or for the children's subsequent lost earnings due to lost school education). Including the cost of the social and psychological effects of being obese would raise those figures further. The market

for slimming products in the UK is also a considerable one and has been forecast to reach £6.6 billion (€10.4 billion) by 2006.

- Similar estimates are not available for other EU Member States, and there is a case therefore for EU Member States developing estimates of the economic burdens of obesity within their jurisdictions, and then for making comparisons amongst them.

3 Trends in food consumption and physical activity

There are several sources of information on food consumption and physical activity patterns:

1. **Trends in national supply data, based on estimates of agricultural production, plus imports, minus exports and changes in stock levels**: From these data estimates of food supplied to the domestic market can be obtained. Estimates are also made of wastage and processing losses to arrive at a figure for food 'moving into consumption'. The figures rely on estimates supplied by national governments to bodies such as the UN Food and Agriculture Organization and the OECD, and given the different methods which may be used by countries to arrive at their data, the data are unreliable for making close comparisons between countries, but do have validity for analysing trends within a country. The data are available as estimates as total quantities and as quantities per unit population, but they do not take account of changes in population structure (e.g. more older people, changes in inequalities). Of special interest in these datasets are trends in per capita food energy supply (caloric content) and trends in specific nutrients such as fats, oils and sugars.

2. **Figures for commercial markets, sales and trends over time:** The availability of market surveys may be subject to commercial restrictions. Market data are valuable in identifying specific sub-sectors of the population – e.g. sales to children, or sales of children's products – and shifting patterns of consumption within specific sectors – e.g. a rise in low calorie beverages within the soft drinks sector. Also of interest are trends in investment in food supply and manufacturing, and trends in agricultural support policies that may influence investment programmes. Trends in advertising, retailing and catering – such as the rise in fast food outlets – may also be helpful in analysing the 'upstream' factors affecting food choices.

3. **Trends on household purchases, shopping or food basket surveys**: Most countries take sample surveys of shopping behaviour in order to make economic forecasts, to monitor inflationary trends and to estimate changing market demand. Surveys may be limited to price issues (the cost of common items) or may include quantitative food data indicating the amount of specific types of food being purchased. Surveys usually need to be interpreted in the light of the household structure – number of adults, children of various ages etc. The studies may be valuable for indicating socio-economic differences in purchasing patterns and dietary quality.

4. **Dietary surveys of samples of individuals:** These are generally expensive to conduct, especially if they are to be representative of the whole population, and are unlikely to be undertaken sufficiently frequently to be able to offer more than very rudimentary trend data. Dietary surveys are also prone to reporting error: they rely on recall of recent food consumption or on diaries being kept by the individuals concerned.

5. **Data on food security** may also be relevant: these are traditionally measured in terms of national capacity (e.g. the production of staple foods as a proportion of total consumption, or the amount of staple foods held in storage as a proportion of daily national consumption) but there are also measures of household food security, such as the amount of total household income that is spent on obtaining food. The relative prices of

foods (relative to other foods or to overall expenditure) may indicate economic incentives to consume.

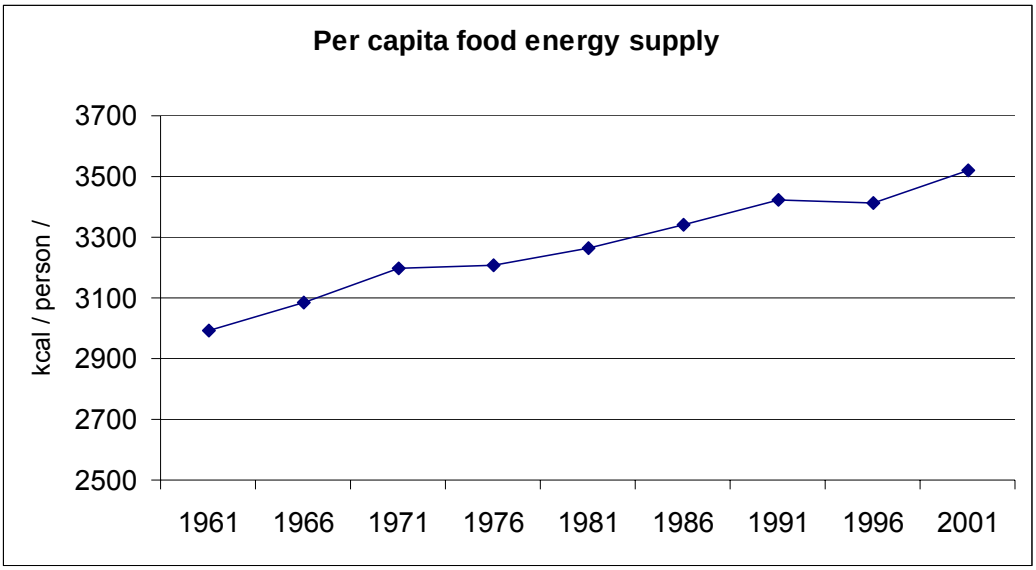
6. Also of interest are **data on food accessibility and availability**: this is especially important to groups of people with low household food security. Accessibility (is the food available within a reasonable distance/time) and availability (is the actual food wanted available at the locations people have access to) are obviously linked to affordability – with food effectively unavailable if it is priced above a family's budget, and inaccessible if the family cannot afford the necessary transport and time to gain access.

7. Physical activity patterns are far less well recorded than are food supply and consumption patterns. Surveys using self-reported data of habitual activity have been undertaken but otherwise most data is indirect – such as measures of community cycling activity, sales of bicycles, or membership of fitness facilities. Surveys of physical inactivity are also sparse: indirect measures include TV watching, video watching and computer use, including gaming and online gaming, and sales of games machines.

3.1 Supplies 'moving into consumption'

Food balance sheet figures from the UN Food and Agriculture Organization indicate a trend within the EU towards greater food energy consumption per head since the 1960s.

Figure 3-1. Increasing food energy supplied to consumers in the European Union



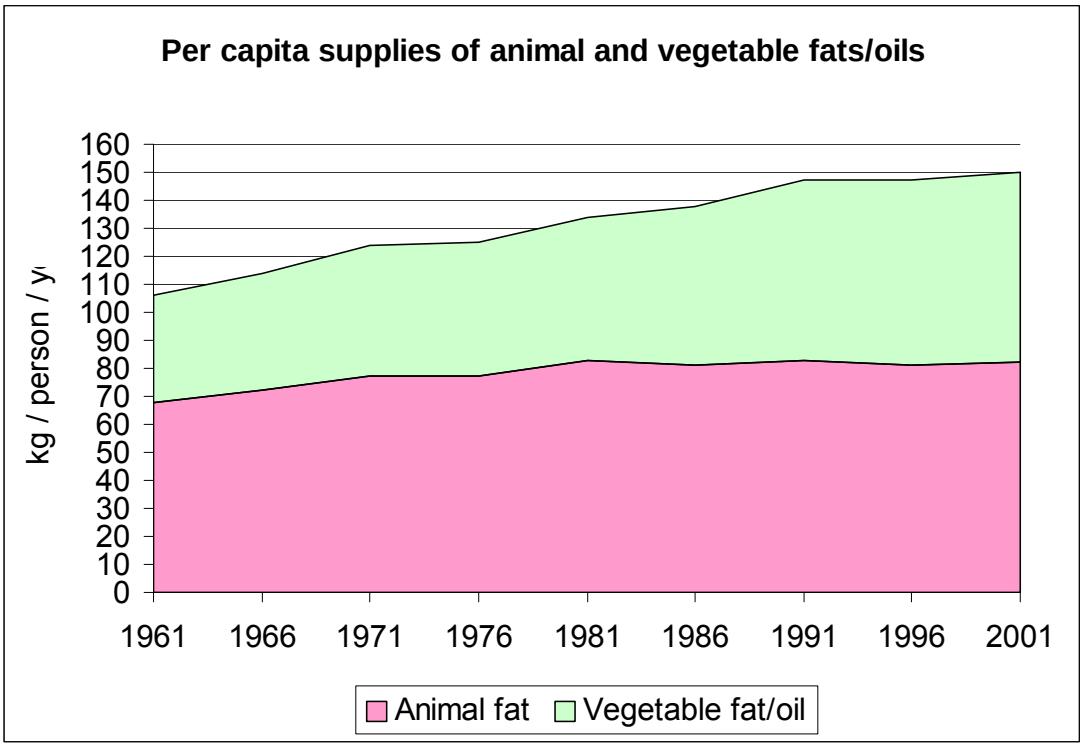
Source: FAO Food balance sheets[32]

The FAO figures indicate an increase in calorific energy supplied by food of over 15% during the four decades 1961-2001, and represent those food supplies that are available to be consumed in each year, after taking account of changes in stock levels, diversion into animal feed and wastage during production, manufacturing and distribution. This increase in average food energy supply, at a time when population average energy expenditures appear to have fallen, represents a significant likely increase in surplus calorie intake. Previous comparisons of trends across more than 30 countries have shown that the rate of increase in the prevalence of obesity is correlated with increases in the per capita supply

of food energy.[33] Perhaps this is to be expected: for an average adult an increase in food intake of 100kcal per day could lead to a gain in bodyweight of 4kg over a year, assuming no increase in energy expenditure and that 0.45 kg (or 1 pound) of fat represents an energy reserve of about 4000 kcal.[34] For the average man this represents about one BMI unit, and for a woman about 1.3 BMI units. Thus an average daily surplus of 100kcal in energy balance could, for an adult with a BMI of 22 kg/m^2, lead to him or her becoming overweight in 2-3 years and obese in 6-8 years. Snack foods containing 100 kcal are easily found (a 330ml can of soft drink typically contains 120kcal, a 30g bag of potato snacks 150kcal, and a 50g portion of chocolate 250kcal), whereas increases in energy expenditure require a greater level of effort to obtain.

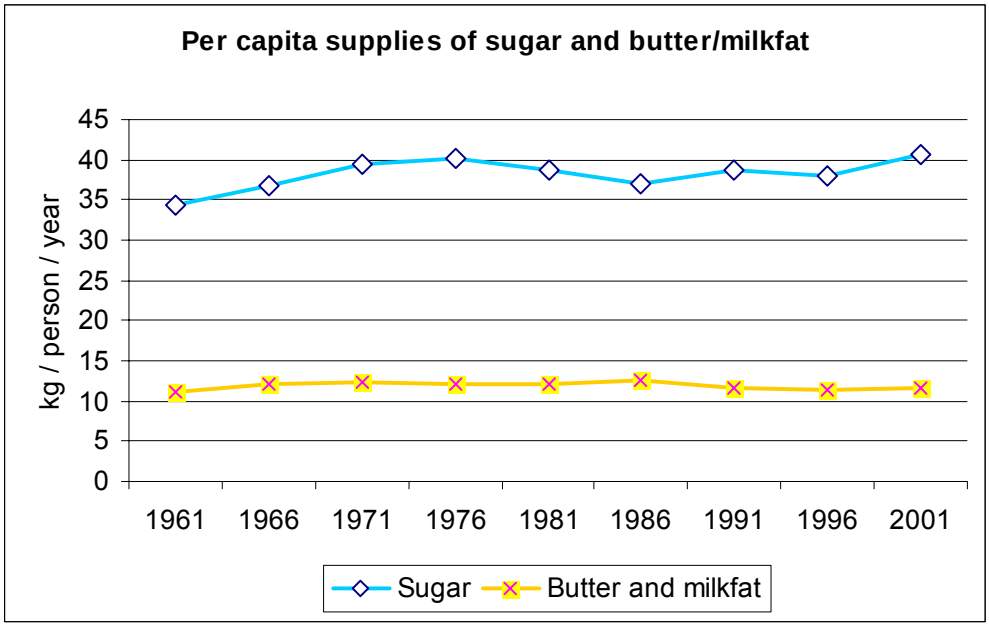
There is no single clear pattern to identify the source of the increasing calorific intake over the last two decades: FAO data for supplies moving into consumption show an increase in total fat supplies, with a significant rise in fats and oils derived from vegetable sources (primarily seed oils) but with no corresponding fall in fats derived from animal sources (primarily carcase fat and dairy fats). Food supplies of sugar and of butter/milkfat remained little changed across the period, while supplies of raw and processed fruits and vegetables increased strongly.

Figure 3-2. Food supplies per person in the European Union, 1961-2001. Animal and vegetable fats/oils



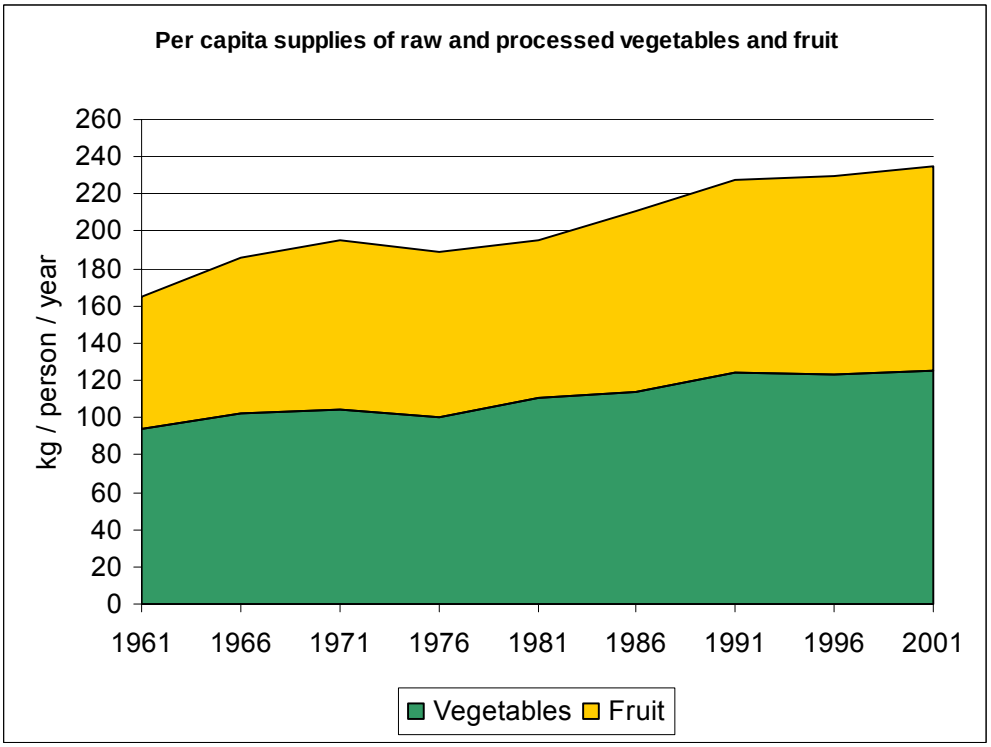
Source: FAO Food Balance Sheets[32]

Figure 3-3. Food supplies per person in the European Union, 1961-2001. Sugar and butter/milkfat



Source: FAO Food Balance Sheets[32]

Figure 3-4. Food supplies per person in the European Union, 1961-2001. Raw and processed vegetables and fruit



Source: FAO Food Balance Sheets[32]
Notes: 'Fruit and vegetables' excludes pulses, nuts and root crops (e.g. potatoes)

Studies of family food consumption patterns may also be taken into account. Household food purchase figures have been collected under the EU-funded DAFNE programme, which assembled data from nationally-collected household budget surveys at different times in the 1990s. The surveys did not include foods purchased and eaten outside the home, although such foods make an increasingly important contributor to the total diet. Despite its limitations, the DAFNE programme has shown a progressive narrowing of differences in the food choices of Northern and Southern European countries, although Southern Europeans still consume a significantly greater amount of olive oil and of pulses than Northern Europeans.[35] Several of the Central/Northern European countries recorded values for daily vegetable and fruit availability that are close to those of the Mediterranean region. In addition, the consumption of fruit juices was identified as a characteristic of the Northern diet, particularly in Germany and Finland. In the 1990s, the populations of Mediterranean countries increased their meat consumption.

Cross-sectional analyses of self-reported dietary patterns were recorded for several European countries participating in the context of the European Prospective Investigation into Cancer and Nutrition (EPIC), that began in the early 1990s and which ran for 10 years. The results indicated that the diets of the Greek and Italian participants were characterized by relatively high intakes of plant foods and oils of vegetable origin and a lower consumption of animal and processed foods compared with other countries studied.[36] France and particularly Spain have more heterogeneous dietary patterns, with a relatively high consumption of both plant foods and animal products. In the Netherlands, Germany and the UK larger amounts of potatoes and animal, processed and sweetened/refined foods were consumed, with proportions varying across countries/centres. In these countries, consumption of vegetables and fruit is similar to, or below, the overall EPIC means, and is low for legumes and vegetable oils. Overall, dietary patterns were similar for men and women, although there were large gender differences for certain food groups. EPIC participants, it should be noted, were volunteers and generally health conscious.

The EPIC programme also found that food energy intake, obtained from a self-reported dietary questionnaire, tended to underestimate true intake, with 14% of women and 10% of men described as 'extreme under-reporters'.[37] The majority of these under-reporters were found in adults with higher levels of BMI.

3.1.1 Children's food consumption patterns

The only pan-European estimates of children's food consumption patterns are from the self-reported surveys of school children's health behaviour conducted by the WHO (children aged 11 – 15 years).[38] The most recent survey, conducted in 2001-2, showed:

- 40% of girls and 39% of boys did not regularly eat breakfast on school days, with the figure rising from 29% at age 11 to 43% at age 15
- In virtually all countries fewer than 50% of children ate vegetables every day. On average 30% of children said they ate vegetables daily, but the children in countries famous for their Mediterranean diets reported lower than average levels, especially Spain, where vegetables were typically eaten daily by only 12% of children.

- In virtually all countries fewer than 50% of children ate fruit every day. On average, 30% of boys and 37% of girls reported eating fruit daily, but in sixteen countries more than 75% of children were eating fruit very rarely (once a week or less often). Lowest levels of consumption were reported among children in Baltic and some Nordic countries.
- Soft drinks and confectionery were consumed daily by about 30% of children (over 40% in some countries). Lowest levels were in Baltic and Scandinavian countries.

3.1.2 Infant feeding

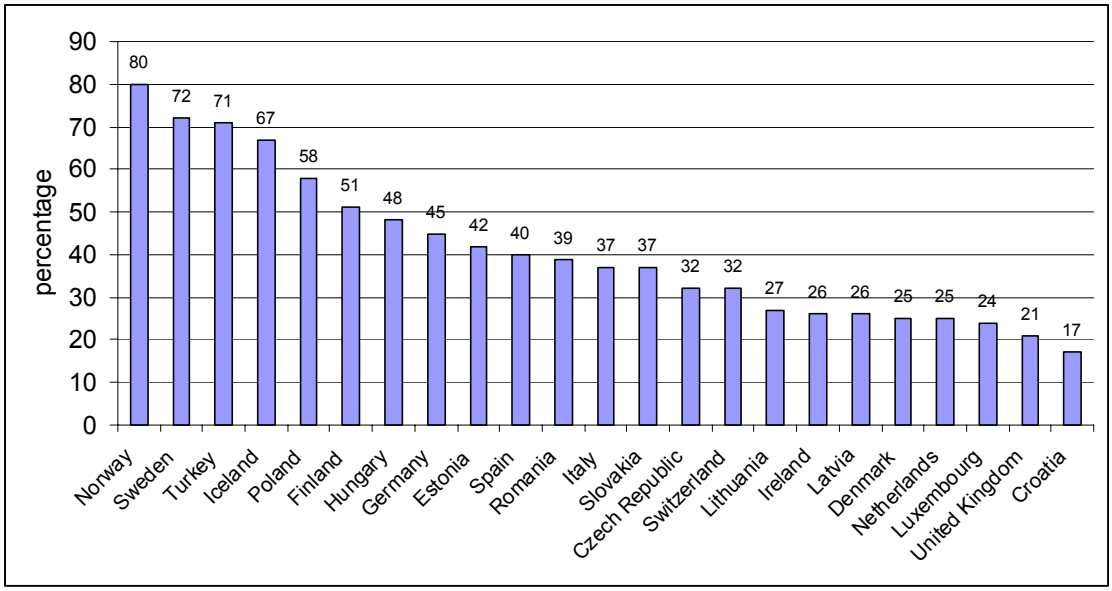
A World Health Organization review of diets linked to obesity in infants recommended: (i) exclusive breastfeeding (ii) not adding sugars and starches in feeding formula (iii) helping children to respond to appetite rather than empty their plates (iv) assuring adequate micronutrient intake to promote linear growth.[39] The review recommended education to mothers and low socio-economic status communities with low food security should emphasise that overweight and obesity in children do not represent good health.

The review also noted the tendency for populations in economic transition (e.g. migrants from low income areas, migrants to urban areas) to replace their traditional, healthier foods 'with heavily marketed, sugar sweetened beverages (e.g. soft drinks) and energy dense fatty, salty and sugary foods' and stated that 'heavy marketing of energy-dense foods and fast-food outlets' increased the risk of weight gain and obesity. The marketing of breastmilk substitutes has also been criticised in numerous World Health Organization and UNICEF publications for its effect in undermining breastfeeding.[40]

Several reviews have noted an association between breastfeeding in the first few months and subsequent reduced risk of child and adolescent obesity.[41] Breastmilk is the recommended diet for infants up to six months of age but most children receive mixed diets by that age, and many are receiving no breastmilk at all – in 17 out of 23 European countries surveyed the majority of mothers were not offering any breastmilk at six months (see figure 3-4 below).[42] Even the modest target of offering some breastmilk at the age of three months was being missed in several countries, the worst rates being found in the UK where barely 25% of infants were being offered any breastmilk by three months of age. In contrast, the proportion was 90% in Sweden.

Nevertheless, breastfeeding rates appeared to show a gradual increase during the 1990s. Nordic countries have significantly higher levels of breastfeeding than they did two decades earlier: Norway's breastfeeding rates (at 3 months) rose from below 30% in 1969 to about 80% in 1985.[43] Various policy measures, including the introduction of Baby Friendly Hospitals encouraging initial breastfeeding, and employment rights that encourage prolonged maternity leave and breastfeeding in the workplace, can help to support a mother wishing to offer breastmilk.

Figure 3-5. Percentage of infants exclusively or partially breastfed at 6 months, 1995-2000



Source: WHO European Regional Office[44]

3.1.3 Socio-economic differences in dietary intake

Socio-economic differences in dietary intake were reviewed by Roos et al, looking at data collected in the 1980s and early 1990s.[45] In northern European countries there was a strong trend of greater fruit and vegetable consumption among more highly educated families than amongst those with less education. In southern Europe the distinction was less clear, indicating the longer tradition of plant-based 'Mediterranean' diets for lower-income families: a finding supported by evidence that manual workers are at greater risk of heart disease compared with non-manual worker in northern European countries, whereas this socio-economic difference is less marked in southern Europe, and is even reversed amongst the oldest generations.[46]

Similar findings are reported in the Health Behaviour of Schoolchildren survey for 2001-2002. It noted that dietary patterns are influenced by socio-economic status, and that young people from lower socio-economic groups consume snacks and sweets and skip breakfast more frequently, and ate less fruit and vegetables than young people from higher socio-economic groups.[47]

Infant diets are also affected by socio-economic factors. Breastfeeding rates show socio-economic differences in most affluent countries, with the frequency and duration of breastfeeding greater among higher income groups. In the UK, for example, mothers in the highest income group are twice as likely to be breastfeeding during the first week after a baby's birth than mothers from the lowest group, and the social class difference increase over the subsequent weeks.

Table 3-1. Proportion of mothers breastfeeding in the highest (1) and lowest (5) social classes, UK, 1999

	Breastfeeding rates (% of mothers)	
	Social Class 1	Social class 5
One week after birth	84	40
Six weeks after birth	73	23
Four months after birth	56	13

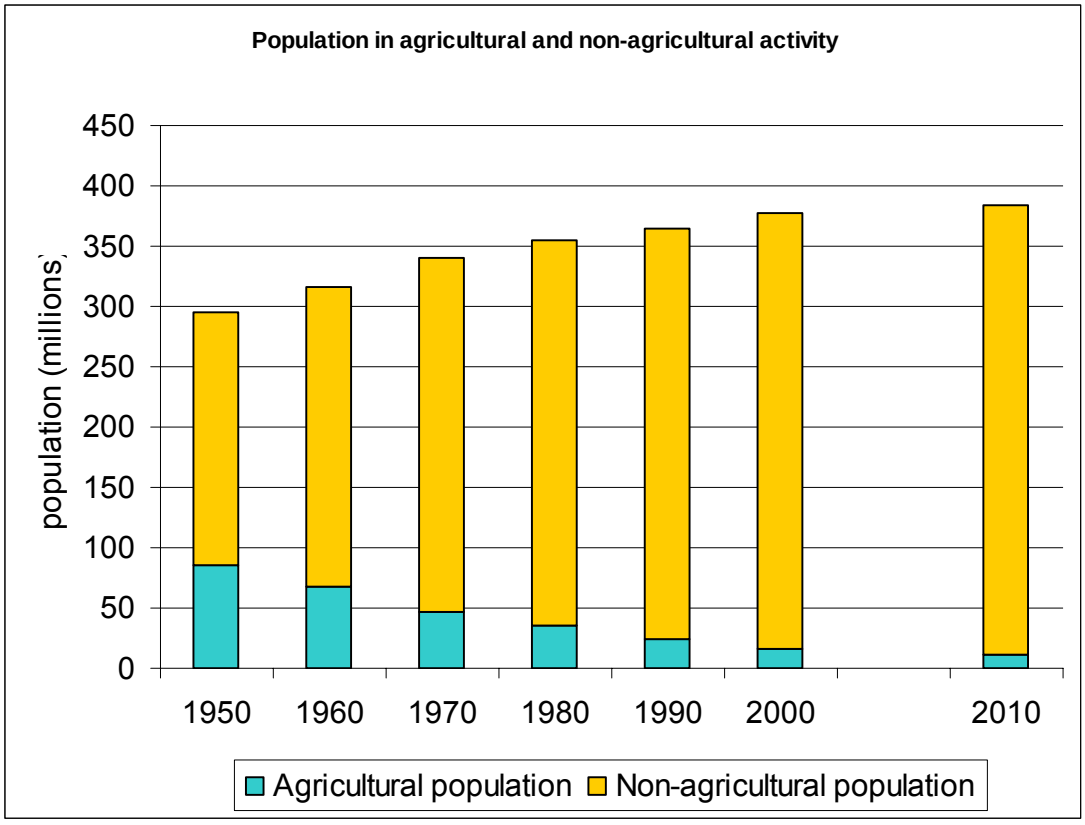
Source: Nelson 1999[48]

3.2 Physical activity

3.2.1 Physical activity among adults

With large numbers of the population employed in non-manual occupations with low levels of physical activity and extended sedentary behaviour, the opportunities for activity lie largely outside working hours. Transport to and from work, activity during work breaks, activity in domestic environments, activity in the local neighbourhood (e.g. shopping), leisure activity and sports offer alternative opportunities. Recent reviews have recommended a total of one hour per day of moderate-intensity activity on most days of the week for adults[49] and every day for children.[50]

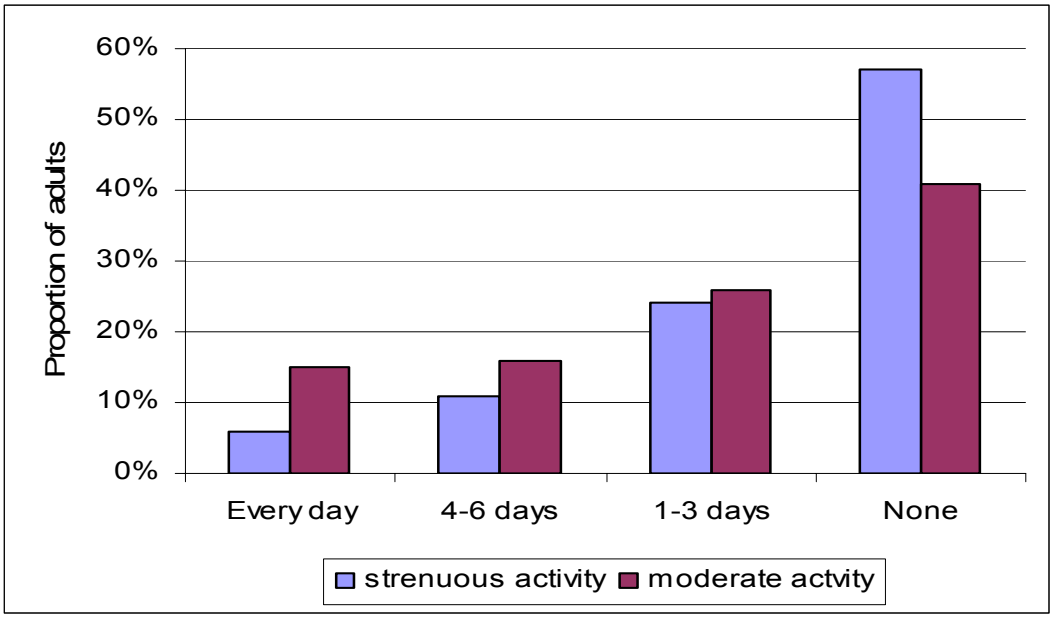
Figure 3-6. Declining proportion of the population in engaged in agricultural activity, European Union (15 Member States)



Source: FAO Database[32]

Physical activity is not easy to measure and most surveys have relied on self-reported estimates of time spent in various forms of activity and inactivity. A questionnaire survey of some 16,000 adults in all the then 15 Member States of the European Union, conducted by Eurobarometer in 2002, found that nearly 60% of adults had undertaken no strenuous physical activity, and 40% not moderate activity, in the week before the survey. Only 15% undertook moderate activity on a daily basis.[51]

Figure 3-7. Number of days in the week when adults undertook strenuous activity and moderate activity, European Union (15 Member States)

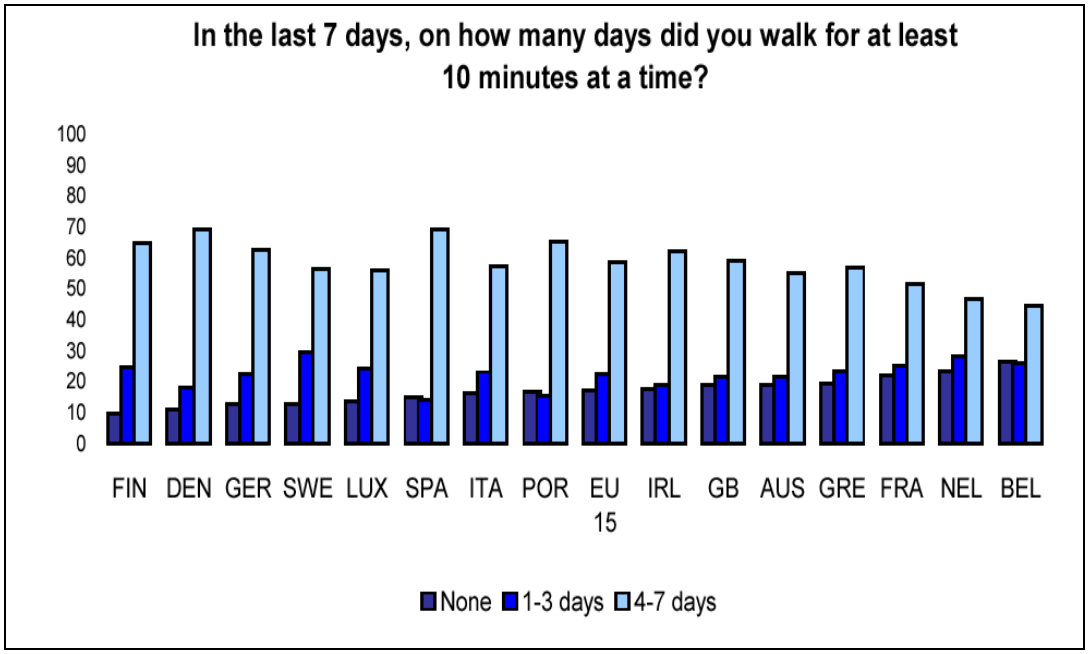


Source: Eurobarometer 2002[51]
Note: Self-reported activity levels

Moderate activity was defined as 'carrying light loads, cycling or playing tennis' but excluded walking. Of those that reported moderate activity in the past week, only 20% reported moderate activity lasting more than an hour on any given day.

Low levels of activity, such as ten minutes' continuous walking, were undertaken by a larger proportion of the population on a routine basis, although even then barely 40% of adults practice this amount of activity daily, and in two countries, Netherlands and Belgium, more than half of adults said they undertook this activity on fewer than four days a week.

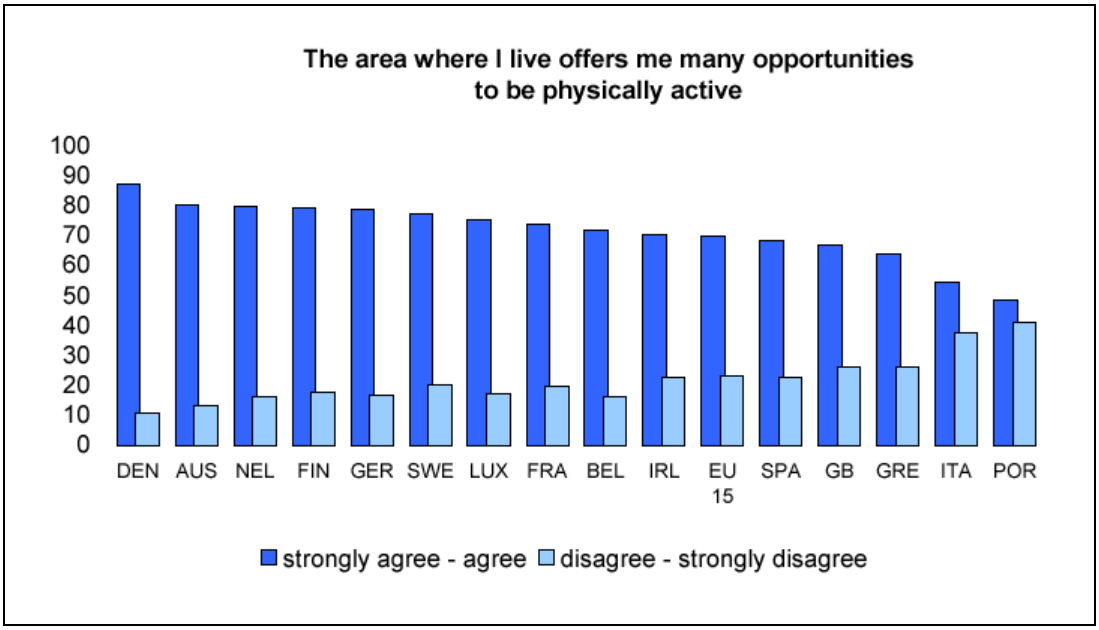
Figure 3-8. Indicators of percentage of adult that walked at least 10 minutes at a time, over the previous week



Source: Eurobarometer 2002[51]

The Eurobarometer survey also inquired whether respondents felt that there were adequate opportunities to take physical activity: 25% disagreed with the statement 'The area where I live offers me many opportunities to be physically active', 24% did not feel that 'Local sport clubs and other local providers offer many opportunities to be physically active' and 36% disagreed with the statement 'My local authority does enough for its citizens concerning their physical activities'. These figures were higher among younger age groups and were highest among respondents in Italy and Portugal, and lowest among respondents in Denmark and Netherlands.

Figure 3-9. Percentage of adults reporting that the areas in which they live provide opportunities for physical activity



Source: Eurobarometer 2002[51]

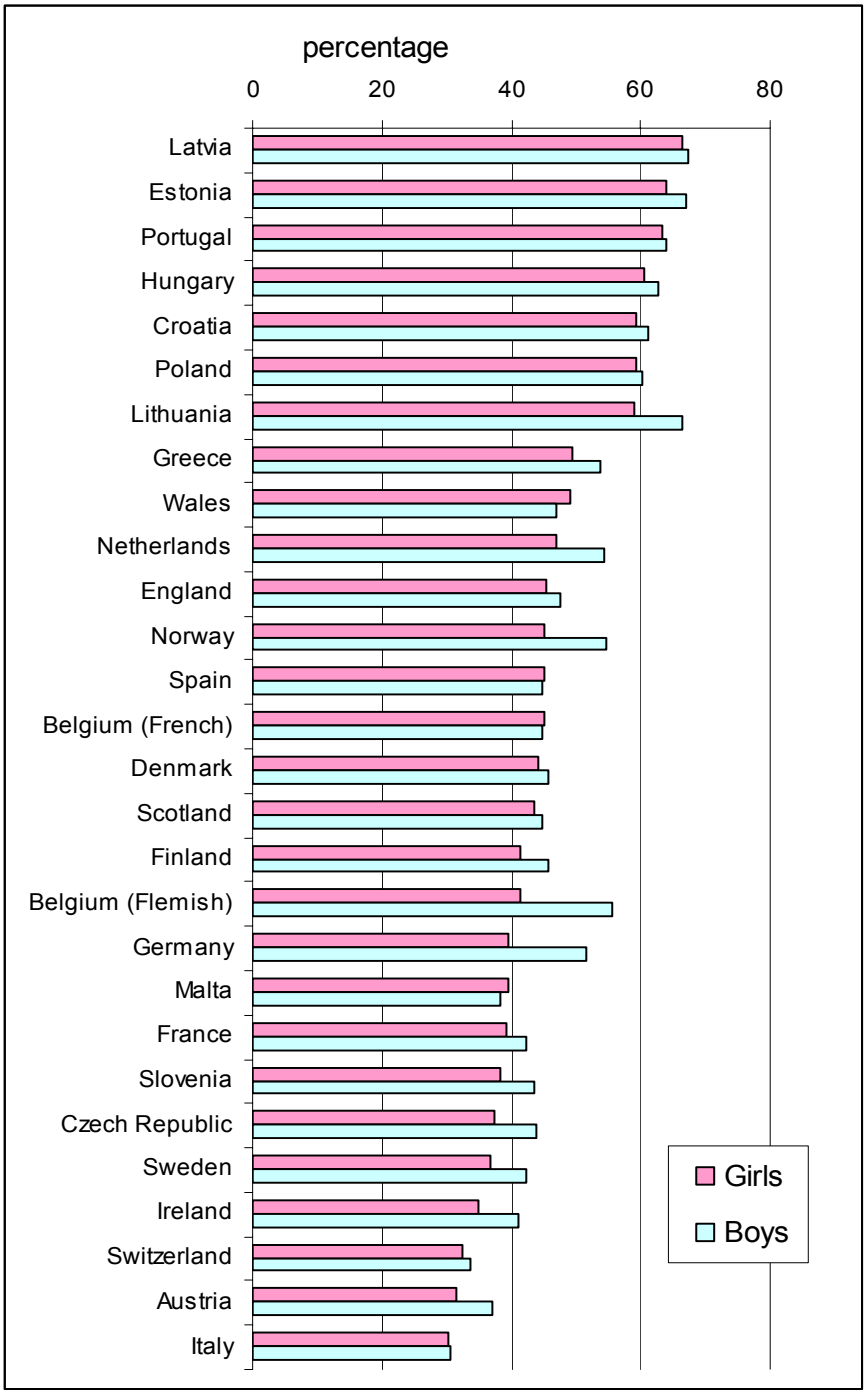
3.2.2 Physical activity among children

Self-reported physical activity levels among children in Europe were examined in the Health Behaviour of School Children survey of 2001-2002.[52] Overall the survey found that approximately two-thirds of children were not achieving an hour's moderate activity per day, on five or more days a week. Boys (40%) were more likely to achieve the target than girls (27%) and for girls especially the amount of physical activity declined between age 11 and age 15 years.

Lowest levels of activity were found among children in Belgium (Flemish), Estonia, France, Italy, Norway and Portugal, with fewer than 20% of children meeting the target.

In contrast, more than a quarter of all respondents (26%) reported watching television for four or more hours each weekday, rising to 45% of children watching four or more hours of television per day at weekends (see chart below). Countries and regions shows little consistency between weekday and weekend viewing or between age groups, although Estonia, Latvia, Lithuania were consistently in the top quartile of television use, and Austria and Switzerland in the lowest quartile.

Figure 3-10. Percentage of children aged 13 watching four or more hours television each day on weekends



Source: HBSC survey 2001-2[13]

3.3 Summary of main points

- The Food and Agriculture Organization figures indicate an increase in calorific energy supplied by food of over 15% in Europe during the four decades 1961-2001, mostly due to increases in the consumption of vegetable oils and fruits and vegetables.
- The DAFNE programme has shown a progressive narrowing of differences in the food choices of Northern and Southern European countries, although Southern Europeans still consume a significantly greater amount of olive oil and of pulses than Northern Europeans. The EPIC study also indicated some differences in terms of the consumption of animal and processed foods, with Greek and Italian participants showing lower consumption and participants from the Netherlands, Germany and the UK showing higher consumption.
- The only pan-European estimates of children's food consumption patterns are from the self-reported surveys of school children's health behaviour conducted by the WHO (children aged 11 – 15 years). The most recent survey (2001-2) showed that almost half of children did not regularly eat breakfast on school days and less than 50% ate vegetables or fruit on a daily basis. Soft drinks and confectionery were consumed daily by about 30% of children (over 40% in some countries).
- Although several reviews have noted an association between breastfeeding in the first few months and subsequent reduced risk of child and adolescent obesity, in 17 out of 23 European countries surveyed the majority of mothers were not offering any breastmilk at six months. Nevertheless, breastfeeding rates appeared to show a gradual increase during the 1990s especially in Nordic countries.
- Socio-economic differences are also evident in the dietary intakes of adults, children and infants in Europe, especially in the North, where higher socio-economic status has been linked to healthier eating habits.
- A EU-wide questionnaire-survey of self-reported physical activity conducted in 2002 found physical activity levels to be quite low, with nearly 40% of adults not having performed any moderate activity in the week before the survey and only 15% doing so on a daily basis. Even very light activity, such as ten minutes' continuous walking, was undertaken by only 40% of adults surveyed. One quarter to one third of those interviewed also felt they did not have adequate local opportunities to be physically active especially among younger respondents and respondents in Italy and Portugal.
- Children interviewed in the Health Behaviour of School Children survey of 2001-2002 also reported that nearly ⅔ were not achieving the recommended 1 hour of moderate activity 5 days per week (especially girls), ¼ to nearly ½ were watching 4 or more hours of television per day (especially on weekends).

4 Policy-making institutional structures

4.1 The European Union

The European Union is a historically and politically unique association of countries (Member States) founded on a series of treaties under which the Member States delegate some of their national sovereignty to collective shared institutions and that represent not only their national interests but also their collective interest. The treaties constitute what is known as 'primary' legislation, and from them is derived a large body of 'secondary' legislation that has a direct impact on the daily lives of European Union citizens. It consists mainly of *regulations*, *directives* and *recommendations*.

These legislative instruments, along with EU policies in general, are the result of decisions taken by three main institutions, in consultation with several other bodies:

4.2 The Council of the European Union, representing Member State governments

The Council of the European Union is the EU's main decision-making institution. It was formerly known as the 'Council of Ministers', and for brevity it is often called 'the Council'. Each EU country in turn presides over the Council for a six-month period. Every Council meeting is attended by one minister from each of the Member States. Which ministers attend a meeting depends on which topic is on the agenda: there are several different Council 'configurations', covering different policy areas, including industry, trade, transport, environment, health and education. The most senior version of these bodies brings together the heads of governments of all the EU countries plus the President of the European Commission, and is referred to as 'the European Council', and its meetings are often described as 'summits'.

The Council's work as a whole is planned and coordinated by the General Affairs and External Relations Council. The preparatory work for Council meetings is done by the Permanent Representatives Committee (Coreper), made up of the Member States' ambassadors to the EU, assisted by officials from the national ministries. Its General Secretariat, based in Brussels, handles the Council's administrative work.

The Council and European Parliament (see below) share legislative power as well as responsibility for the budget. The Council also concludes international agreements that have been negotiated by the Commission.

According to the treaties, the Council has to take its decisions either unanimously or by a majority or 'qualified majority' vote. On important questions such as amending the treaties, launching a new common policy or allowing a new country to join the Union, the Council has to agree unanimously. In most other cases, qualified majority voting is required: i.e. a decision cannot be taken unless a specified minimum number of votes are cast in its favour. The number of votes each EU country can cast roughly reflects the size of its population.

4.3 The European Parliament, representing citizens

The European Parliament is an elected body representing EU citizens, and members of the European Parliament (MEPs) are elected by universal adult suffrage every five years.

The present Parliament, elected in 2004, has 732 members. Parliament normally holds its plenary session in Brussels and any additional sessions in Strasbourg. It has 17 committees that do the preparatory work for its plenary sessions, and a number of political groups that mostly meet in Brussels. The Secretariat-General is based in Luxembourg.

Parliament and the Council share legislative power, and they do so using three different procedures (in addition to simple consultation).

First, there is the 'cooperation procedure', introduced by the Single European Act in 1986. Under this procedure, Parliament gives its opinion on draft directives and regulations proposed by the European Commission (see below), which can then amend its proposals to take account of Parliament's opinion.

Second, there is the 'assent procedure', also introduced in 1986. Under this procedure, Parliament must give its assent to international agreements negotiated by the Commission, to any proposed enlargement of the European Union and to a number of other matters including any changes in election rules

Third, there is the 'co-decision procedure', introduced by the Treaty of Maastricht (1992). This puts the Parliament on an equal footing with the Council when legislating on a whole series of important issues including the free movement of workers, the internal market, education, research, the environment, Trans-European Networks, health, culture and consumer protection. Parliament has the power to throw out proposed legislation in these fields if an absolute majority of MEPs vote against the Council's 'common position'. However, the matter can be put before a conciliation committee.

Parliament and the Council also share equal responsibility for adopting the EU budget. The European Commission proposes a draft budget, which is then debated by Parliament and the Council. Parliament can reject the proposed budget, and it has already done so on several occasions. When this happens, the entire budget procedure has to be re-started. Parliament has made full use of its budgetary powers to influence EU policymaking. However, most of the EU's spending on agriculture is beyond Parliament's control.

Parliament also has the power to dismiss the Commission by adopting a motion of censure. This requires a two-thirds majority. It checks that EU policies are being properly managed and implemented – for example by examining the reports it receives from the Court of Auditors and by putting oral and written questions to the Commission and Council.

4.4 The European Commission – a politically independent body designed to promote collective European interests

The Commission is one of the EU's key institutions. From 1 November 2004, the new Commission has 25 members – one per country. The Commission is assisted by a civil service made up of 36 'Directorates-General' (DGs) and services, based mainly in Brussels and Luxembourg.

The Commission's job is to uphold the interests of the EU as a whole, so it must not take instructions from any Member State government. As 'Guardian of the Treaties', it has to ensure that the regulations and directives adopted by the Council and Parliament are

being put into effect. If they are not, the Commission can take the offending party to the Court of Justice to oblige it to comply with EU law.

The Commission is the only institution that has the right to propose new EU legislation, and it can take action at any stage to help bring about agreement both within the Council and between the Council and Parliament.

As the EU's executive arm, the Commission carries out the decisions taken by the Council – in relation to the Common Agricultural Policy, for example. The Commission is largely responsible for managing the EU's other common policies, such as research, development aid, cross-border broadcasting and regional policy. It also manages the budget for these policies.

The Commission is answerable to Parliament, and the entire Commission has to resign if Parliament passes a motion of censure against it. It was when faced with just such a motion of censure that President Jacques Santer tendered the collective resignation of his Commission on 16 March 1999.

Although primary responsibility for enacting health-related policies resides with Member States, European influence on legislation is exerted through two mechanisms: Directives, which are proposed by the Commission and agreed at European level for general application across the Community and which instruct Member States to enact the required text through national legislation, and Regulations, which are issued by the European Commission and are binding on Member States without requiring national legislation. The Commission may also make Recommendations that are not binding on Member States.

4.4.1 The European Commission's competence in health promotion

Although not initially envisaged as a core part of the European Union's objectives, the role of consumer protection and health promotion has increasingly gained attention as a cross-border issue, reflected in concerns for trading standards, consumer rights and product safety, including food safety.

The political momentum was increased with the salmonella and Bovine Spongiform Encephalopathy (BSE) crises in the late 1980s, and the legal competence for Commission action in relation to food and public health issues were strengthened in the 1992 Maastricht Treaty,[53] which amended the original terms of the founding Treaty of Rome and specifically included duties to

(Article 129) Ensure *'a high level of human health protection*' with Community action '*directed towards the prevention of diseases … by promoting research into their causes and their transmission, as well as health information and education*'. Significantly, the Treaty added that '*Health protection requirements shall form a constituent part of the Community's other policies.*'

(Article 129a) Contribute to the attainment of *'a high level of consumer protection through … specific action which supports and supplements the policy pursued by the Member States to protect the health, safety and economic interests of consumers and to provide adequate information to consumers*'. Significantly, the Article stated it should not be used to lower standards: '*Action adopted pursuant to [this article] shall not*

prevent any Member State from maintaining or introducing more stringent protective measures' provided that such measures were compatible with the Treaty.

The 1993 'Framework for Action in the Field of Public Health' specified the Commission's role in assembling information and monitoring trends in public health, and required the Commission to publish regular reports on the state of health in the European Union (EU). The 1997 Treaty of Amsterdam further strengthened the Commission's competence to act in respect of health protection and disease prevention and identified the need for further actions to 'achieve improvements in public health', as well as activities to 'prevent diseases and health problems' and the 'reduction of risks to human health'. A new Article 152 of the EC Treaty replaced Article 129 and gave the Commission a wider scope than before, to encourage cooperation between Member States not only in respect of diseases and major health scourges but also, more generally, all causes of danger to human health, as well as the general objective of improving health.

The Commission's powers to foster research, cross-national networking and exchange of information have subsequently been fulfilled through a range of research programmes in public health issues and the issuing of a Green Paper on health, nutrition and physical activity. Specific actions relating to obesity are discussed in Section 5.

4.5 The European Economic and Social Committee – a consultative body representing civil society

When taking decisions in policy areas covered by the European Community, the Council and Commission consult the European Economic and Social Committee (EESC). The Committee's members represent the various interest groups that collectively make up 'organised civil society' – including trade unions, employer organisation, women, youth and family organisations and others – and the Council appoints members for a four-year term.

The EESC has to be consulted before decisions are taken in a great many fields (e.g. employment, the European Social Fund, vocational training) and in addition the Committee can also give opinions on any matter it considers important.

4.6 The Committee of the Regions – a consultative body representing regional and local government

The Committee of the Regions was set up under the Treaty on European Union, and consists of representatives of regional and local government, proposed by the Member States and appointed by the Council for a four-year term. Under the Treaty, the Council and Commission must consult this Committee on matters of relevance to the regions, and the Committee may also adopt opinions on its own initiative.

4.7 Other pan-European policy-making bodies

Various other bodies exist for the creation and agreement of policies affecting Europe, largely stemming from regional sections of global bodies, such as the various agencies of the United Nations. These include:

4.7.1 The World Health Organization Regional Office for Europe

This office coordinates the activities of the World Health Organization's 52 Member States in the European Region, and includes the states of the former USSR, Israel and Turkey. The WHO is governed by the World Health Assembly that meets annually in Geneva, and the regional office has an equivalent regional assembly held in various Member States by rotation. In addition, special 'ministerial summits' are held every few years. The next ministerial meeting for the European region is due towards the end of 2006; it will be held in Istanbul, and will focus on the topic of obesity prevention.

Departments within the WHO Regional Offices include several with interests in obesity policy issues, including nutrition and physical activity sections in the department responsible for Non-Communicable Disease and Lifestyles, along with sections responsible for social inequalities in health and family health.

Each Member State within the region has one or more nominated liaison persons acting usually within the government's health department as a formal point of contact with the WHO. In addition, several key staff within the WHO office will usually have a counterpart in the government health department: for example the WHO's nutrition programme manager will have a counterpart nutritionist in most government health departments for direct programme collaboration.

4.7.2 Other UN bodies

Various other United Nations agencies have programmes of relevance to public health and obesity. Examples include

- The UN Food and Agriculture Organization (FAO), which provides agricultural specialist input, food security, food safety and nutrition programme support;
- Codex Alimentarius Commission (Codex), which is a body jointly run by the WHO and the FAO, and which sets standards for international trade in food and related substances, including labelling, nutrition information and health claims used for food marketing;
- The United Nations Children's Fund (UNICEF), which supports educational programmes and health protection measures (such as the Code of Marketing of Breastmilk Substitutes and the Convention on the Rights of the Child).

4.7.3 Non-governmental organisations

Various pan-European organisations have an influential role in policy development, through lobbying and public relations activities. Examples of these include:

- The Confederation of the Food and Drink Industries of the EU (CIAA), which represents the food and drink manufacturers and 'participates pro-actively in the development of an environment where all European food and drink companies (whatever their size) can compete effectively for sustainable growth in the context of an enlarged EU and global markets. The CIAA says that it 'contributes to the development of a legislative and economic framework addressing competitiveness, food quality and safety, consumer information and respect for the environment as regards the food and drink industry'.

- The European Consumers Organisation (BEUC), which is a Brussels-based federation of 40 independent national consumer organisations from the EU, accession and EEA countries. It describes its job as being 'to try to influence, in the consumer interest, the development of EU policy and to promote and defend the interests of all European consumers'.
- The European Association for the Study of Obesity (EASO) has more than 2500 members in 27 countries. Members come from a wide range of professions including sports specialists, dieticians, doctors and scientists. EASO 'aims to promote research into obesity, facilitate contact between individuals and organisations, and promote action that tackles the epidemic of obesity'.
- The European Public Health Alliance (EPHA) which represents over 100 non-governmental and other not-for-profit organisations working on public health in Europe.
- The European Heart Network (EHN) which is an alliance of heart foundations and heart-health non-governmental organisations throughout Europe, with member organisations in 25 countries. The EHN 'plays a leading role in the prevention and reduction of cardiovascular disease through advocacy, networking and education so that it is no longer a major cause of premature death and disability throughout Europe' and its work includes obesity prevention programmes.
- European Medical Association is concerned with improving health workers' training and cross-border recognition of qualifications.
- International Diabetes Federation – Europe, which promotes diabetes prevention programmes in the region.
- Federation of European Nutrition Societies, consisting of 25 European nutrition societies, and concerned with promoting nutrition training and research in order to promote health.
- International Sport and Culture Association, based in Denmark, hosts the European Youth and Sport Forum, and acts on the principle that 'sport could play a central role in creating a culture of citizenship across Europe as well as aiding the key priorities of social integration, health and democracy'.
- The European Network for the Promotion of Health-Enhancing Physical Activity (HEPA Europe) is a collaborative project working 'for better health through physical activity among all people in the WHO European Region, by strengthening and supporting efforts to increase participation and improve the conditions for healthy lifestyles'.

Other advocacy groups are also increasingly involved in policy-formation at European level, including specialists in endocrinology, paediatrics, community and school health promotion, teachers, family organisations, trade unions in health and education and a number of industry-related bodies, including those in food manufacture, vending, catering and retailing, and in sport, leisure, transport, building, media and advertising.

4.8 Main summary points

- The European Union (EU) is an association of countries, or Member States, which delegate some of their national sovereignty to cross-national institutions representing both national and collective interests.
- The Council of the EU represents Member State governments and is the EU's main decision-making institution.
- The European Parliament is an elected body representing EU citizens.
- The Parliament and Council share legislative power and equal responsibility for adopting the EU budget.
- The European Commission is a politically independent body designed to promote collective European interests. It is the EU's executive arm and the only institution that has the right to propose new EU legislation. Health promotion (including assembling information, monitoring trends in public health as well as health protection and disease prevention) and consumer protection (including trading standards, consumer rights and food & product safety) have also recently gained attention as cross-national issues.
- The European Economic and Social Committee represent the various interest groups that collectively make up 'organised civil society', including trade unions, employer organisations and others.
- The Committee of the Regions is a consultative body representing regional and local government.
- Other pan-European bodies influential in policy development include the World Health Organization, other United Nations bodies (FAO, Codex, UNICEF), and a number of non-governmental organisations (including professional organisations, organisations focused on specific diseases, on physical activity, and other advocacy groups.)

5 Policy debates and initiatives in the EU

Fifty years ago, Europe was recovering from a devastating war. Food policies were devoted to establishing secure, adequate food for the population. Refugees and food rationing were still huge problems and the region relied heavily on countries such as the USA, Canada and Australia to provide Europe's bread, cheese and meat.

By the mid-1970s, strong national and regional agricultural support measures had helped ensure better agricultural supplies within the region, in both the European Community and the centralised economies. There was, generally, plenty to eat, and a huge food processing industry had become well established.

By the 1980s, the old problems of food shortage were, in Western Europe, becoming problems of what to do with huge amounts of food that were not being eaten. In Eastern Europe the political changes of the late 1980s and early 1990s were leading to new problems of food supply and distribution. Across the region, there was evidence of increasing rates of disease related to the food being eaten – with rising rates of food-borne infectious diseases, rising rates of deficiency diseases in pockets of the region, and high rates of chronic, degenerative diseases in which dietary factors played a key role.

The costs of these diseases, in terms of the demands upon the health services and the costs in economic, social and family terms, are emerging. Health services especially are becoming conscious of the share of their budgets consumed by food-related ill-health. In response, health policy makers are turning their attention 'upstream' looking at the causes of ill health, rather than just on its diagnosis and treatment. This approach encourages policy makers to explore opportunities to reduce disease costs and improve the health of the population at large. At the forefront of pan-European policy-making are two bodies, the European Commission and the European Regional Office of the World Health Organization.

5.1 Policy focus on diet and health

As noted in the previous section, Article 129 (subsequently Article 152) of the European Community Treaty states that the Community shall ensure a high level of human health protection in the definition and implementation of all its policies and activities. Nutrition and physical activity are determinants of health and it was increasingly accepted that these determinants should be included when assessing Community actions to ensure a high level of human health protection. This theme was emphasised in the Commission's White Paper on food safety published in 2000,[54] which proposed the 'development of a comprehensive and coherent nutrition policy' at Community level, led by an action plan.

Later in the same year, the French Presidency of the European Union chose to highlight nutrition with a conference and a published report.[55] This emphasised many aspects of public health nutrition and social inequalities and emphasised the need to consider the determinants of health as well as health indicators themselves.

In the same year, 2000, the European Regional Committee of the World Health Organisation (WHO) unanimously supported a five-year Action Plan for Food and Nutrition Policy,[56] which described the informational, educational and networking activities which would be provided by the WHO to support national measures to develop nutrition policies, with encouragement given to monitoring, health promotion (e.g. in

schools) and breastfeeding promotion, but which also suggested that national strategies would benefit from advisory bodies, such as a national food and nutrition council capable of proposing and evaluating cross-departmental initiatives to tackle diet-related ill health. The Plan also suggested forming a pan-European Food and Nutrition Task Force to facilitate coordination between EU and UN agencies, governments and non-governmental agencies, but this proposal has not been developed.

The year 2000 also saw the culmination of a two-year programme to develop dietary guidelines for health in Europe under the **Eurodiet** initiative.[57] Its main recommendations included a set of population goals for certain nutrients and foods, and targets for certain lifestyle features which are consistent with the prevention of major public health problems in Europe. The report urged public health interventions such as those successfully introduced in Finland and Norway, emphasising the importance of co-ordinated, multi-sectoral and population-wide strategies. It also echoed the WHO Food and Nutrition Action Plan in calling for inter-sectoral food and nutrition councils at national level and the creation of a new European Standing Committee on Nutrition to develop pan-European strategies.[58]

These activities were followed by a Council resolution on health and nutrition in 2001, which invited the European Commission to undertake a range of activities on food, diet and health policies.[59] This resolution noted a number of points relevant to obesity prevention policy:

> "The Council
>
> IS CONCERNED by the consequences of the increase in obesity and overweight in the European Union, particularly among children and adolescents.
>
> NOTES the changes in the various diets and food cultures in the European Union and the increasing importance of mass catering and pre-prepared foods in particular.
>
> NOTES that despite the progress which has been made in the field of nutritional information and labelling there is still not a sufficient guarantee of reliable, consistent and accessible information on the nutritional characteristics of foodstuffs and on the nutritional quality of diets.
>
> EMPHASISES, however, that many Community policies, particularly in the fields of public health, agriculture, fisheries, research, transport, consumer protection and the internal market, have such an impact that […] national nutritional policies can have full effect only if aspects relating to nutritional health are taken into account in the drafting and implementation of the Community policies concerned.
>
> NOTES that action to improve the availability of and access to healthy food as well as information about healthy diet are important components of nutrition policy.
>
> CONSIDERS that if a health and nutrition policy is to be effective it must be based, inter alia, on exchanges of experience and information as well as on cooperation and training of all the parties concerned, including nutritional health professionals, operators in the sector, consumers and non-governmental organisations.
>
> INVITES the Commission to study ways of promoting better nutrition within the European Union, if necessary presenting appropriate proposals to that end, and particularly to:

- allow for nutritional health to be taken into account when drawing up and implementing any relevant Community policies and develop tools for assessing the impact of other Community policies on nutritional health;
- continue to develop tools to monitor nutritional health and its determinants, drawing on existing tools in use by Member States, in order to obtain comparable data, and ensure regular assessment of this data, complementing work by Member States;
- support and promote regular exchanges of experience in the area of health and nutrition;
- facilitate the development of scientific evidence in the area of nutritional health by experts in this field, in particular to provide backing for and to update national or local dietary guidelines and the information given to consumers;
- support research into the links between health and nutrition, into diet-related diseases, into an understanding of eating and dietary habits and into the impact of policies on health and nutrition;
- facilitate the exchange of information on nutrition-related training courses and professions;
- develop the use of nutritional labelling, by adapting it to the needs of consumers, and of other means of providing nutritional information;
- examine the possibility of conducting projects to promote diets, which could include subjects as diverse as fruit and vegetable consumption and breastfeeding;
- consider the use of new information technologies to improve the information available to those involved in this sector, and also to the public;
- plan follow-up to nutrition activities."

The emphasis in that Council resolution was on informational and educational activities, and specifically charged the Commission with developing proposals in those areas. Several public health research projects were funded and proposals within the fifth and sixth framework were encouraged. However, the explicit promise made in the 2000 White Paper to develop an action plan has not yet born fruit. Instead a review of Commission activities relating to nutrition was prepared in 2002 and published a year later.[60] Although proposing no specific actions, the review did indicate that the Commission's role in influencing diet and nutrition extended well beyond informational and educational activities, and included policies relating to:

- Food safety (nutrition was included in the brief for the establishment of the European Food Safety Authority);
- Community-funded research into food production technologies;
- The common agricultural policy and the common market organization for fishery and aquaculture products
- Consumer protection and trade regulation in respect of, for example, food labelling and health claims;
- The mutual recognition of qualifications in relevant disciplines, such as health promotion, nutrition and dietetics;

- Audio-visual communications policy, including TV advertising across frontiers;
- Employment practices, including the support of breastfeeding through workplace initiatives;
- Social support measures, such as the distribution of particular foods to older people, hospitalized patients ands schoolchildren;
- Enlargement policies, which include food quality control measures;
- Aid and development policies, which support food production enterprises;
- Multilateral activities including participation in policy-making within WHO, FAO and Codex.

By 2002 the Commission had established an *Ad Hoc* Group on Nutrition under the Inter-service Group on Health. The *Ad Hoc* group comprised staff from relevant policy areas within the Commission, and its mandate included the exchange of relevant information, discussion on the measures needed to develop nutrition policy, and the identification of common actions to be undertaken across policy areas. However, apart from several meetings in 2002, the group appears to be dormant.

Obesity was also chosen as one of the priority topics under the Danish EU presidency, July-December 2002, with a conference on the topic held in September of that year at which delegates agreed that 'prevention and treatment initiatives should be taken immediately on the basis of existing professional knowledge'. In December 2002, as a follow up to this conference, the Council of the European Union adopted a number of conclusions that underline the necessity of preventing and responding to the problems caused by obesity and the need to adopt an interdisciplinary approach, and reiterated its request to the Commission to take prevention of obesity into account in all relevant EU policies, particularly within the new public health action programme.[61]

5.2 Current EC activity

The Commission's concern in respect of obesity was expressed in a 'round table' initiative hosted by DG Sanco, which met in five meetings from mid-2004 to early 2005, consisting of Commission staff and representatives of food commercial operators, health and consumer NGOs and observers from relevant agencies (including the WHO). The outcome of these meetings was the launch in early 2005 of the European Platform for Action on Diet, Physical Activity and Health. This has continued the theme of a forum for the various stakeholder groups concerned with obesity prevention as well as health promotion, and the launch of the Platform was preceded by a press interview with the EU Health Commissioner, Markos Kyprianou, who said "I would like to see the industry not advertising directly to children any more," and which indicated that the "food industry has been given a year to stop advertising junk food to children and improve product labelling or face possible legislation."[62]

The Platform has subsequently held a series of meetings in which participant organisations have made a series of commitments to action, including monitoring, provision of information, support for local interventions, networking and research. The Platform has also created working groups to focus on 'healthy lifestyles, 'informing consumer behaviour' and 'monitoring' – the latter concerned with assessing the commitments being made by participants in the Platform.

In parallel with these developments, the Commission has also been responsible for coordinating a European Network on Nutrition and Physical Activity, consisting of member-state nominated experts to provide a forum on current policies and give advice on strategy.[63] It has held three meetings in the period 2003-2006.[64]

The most recent action taken by the Commission has been the publication of a discussion document (Green Paper) entitled *Promoting healthy diets and physical activity: a European dimension for the prevention of overweight, obesity and chronic diseases*.[65] That document raised a number of issues directly related to obesity prevention policies, including:

- Relevance and legitimacy of Community policies for the promotion of healthy diets and physical activity, and towards creating environments which make healthy choices easy choices
- Research needs and dissemination channels.
- Awareness-raising amongst decision makers, health professionals, the media and the public at large.
- Information to consumers, e.g. on food labels, and consumer education, e.g. to interpret the labels.
- The value of voluntary codes for limiting the advertising and marketing of energy-dense and micronutrient-poor foods.
- The role of commercial operators and other stakeholders in providing materials for consumer health education and for school-based health education.
- The relevance of institutional catering such as school meals services and workplace canteens.
- The role of physical activity in schools, and active transport to school and workplace.
- The role of health services and health professionals in promoting healthy diets and physical activity into health services.
- The measures needed to foster the development of environments that are conducive to physical activity.
- The measures needed to reach disadvantaged and minority population groups.

The Commission is due to publish comments on the Green Paper during 2006 and to present a draft Strategy document in early 2007.

Assessment of Community policies remains on the political agenda, and forms part of the work of the newly-established European Union Centre for Disease Prevention and Control (ECDC) in Sweden. The ECDC focus is on infectious diseases, but a review of the ECDC role in chronic disease prevention is expected after 2007.[66]

5.3 EESC activities

Besides the European Commission, other Community bodies have expressed concerns over the obesity epidemic. Notable among these is the European Economic and Social

Committee (EESC), which prepared an Opinion on the issue of obesity in 2005.[67] This outlined the idea of a campaign, entitled 'Obesity Check', which would call on commitments from a wide range of stakeholders to state what they were doing to combat obesity.

Stakeholders expected to be involved in Obesity Check explicitly include state and civil organisations, commercial operators, the media and individuals, and a wide range of options were suggested, including food product reformulation, marketing controls and clear labelling. Industry players identified included food producers, retailers, catering companies, sporting-goods manufacturers, advertising and recreation businesses, insurance and banking groups, pharmaceutical companies and the media.

5.4 WHO activities

While these developments were happening at EU level, the World Health Assembly endorsed a World Health Organization 'Global Strategy on Diet, Physical Activity and Health' in May 2004. This identified a number of issues relating to obesity, and proposes a strategy focussing on an 'enabling environment' for actions at individual, community, national and global levels which, "…when taken together, will lead to reduced disease and death rates related to unhealthy diets and physical inactivity."[68] The Strategy recognised the need to "…actively engage all sectors, including civil society, the private sector and the media…" and recognised the need to involve government ministries and agencies responsible for a wide range of policies, including agriculture, commerce, transport, finance, environment and urban planning. The Strategy also gave examples of government action that could be undertaken, including adult education programmes, controls on marketing to children, development of health-promoting agricultural policies, the use of taxation or subsidies for influencing food consumption patterns and improving health service capacity for obesity prevention, as well as supporting school and community interventions.

Follow-up actions related to the Strategy have been undertaken in several WHO regions, including the European region. The Regional office has launched a series of meetings leading up to a Ministerial conference on obesity scheduled for November 2006 in Istanbul. The anticipatory meetings included reviews of physical activity, the role of NGOs, social inequalities, marketing to children and food production policies. A series of detailed review papers is being prepared as background for the Istanbul meeting, and a summary of these will be published before the meeting. A Charter statement from the meeting is expected, indicating the range of activities that Member States may consider to tackle the rising obesity epidemic.

5.5 NGO activities

A major project run by the European Heart Network has involved two significant stages. The first, run in 2004-2005, consisted of a research study into obesogenic environments in selected EU Member States, with a focus on marketing to children of food products. This resulted in a report, which marked the start of the second phase of the programme that consisted of a series of stakeholder meetings held in 14 Member States and at EU level to discuss priorities for actions to prevent obesity in children. The options were based on those used in the present PorGrow study. The outcome of this exercise is due to be published in late 2006, but initial findings suggest that stakeholder groups identified a

range of priority options as being needed, selected across informational educational, environmental and fiscal measures. Several potential options were given low ratings: these included physical activity monitoring devices, synthetic fats and sweeteners, and pharmacological interventions.

5.6 Main summary points

- Fifty years ago in Europe food policies were devoted to establishing secure, adequate food for the population after food rationing during the war. In the mid 1970s strong national and regional support measures led to the establishment of a huge food processing industry. In the 1980, different food policies were needed to address the issue of surplus food production in western European countries. In the 1990s concerns turned towards issues of food safety, diseases related to diet and the costs associated with such diseases, including obesity.
- The European Commission (EC) published a White Paper on food safety in 2000, followed by a review of Commission activities related to nutrition in 2003. In 2005, the EC launched a European Platform for Action on Diet, Physical Activity and Health (composed of various stakeholder groups) and coordinated meetings of the European Network on Nutrition and Physical Activity (composed of experts on nutrition-related topics from various member states). More recently, the EC published a discussion document (Green Paper) entitled *Promoting healthy diets and physical activity: a European dimension for the prevention of overweight, obesity and chronic diseases*, raising issues directly related to obesity prevention policies. The Commission is due to publish comments on the Green Paper during 2006 and to present a draft Strategy document in early 2007.
- The Council of the European Union played an important role in inviting the EC in 2001 and 2002 to take food, diet & health policies and obesity prevention into account. Although the requests were initially limited to informational and educational activities, the documents produced by the EC have gone beyond these to include other initiatives, including the Common Agricultural Policy, audio-visual communications policy, social support measures and others.
- The World Health Organization (WHO) has also been at the forefront on pan-European policy making. In 2000 the WHO Regional Office for Europe launched a 5-year action plan for food and nutrition, which was followed by the WHO's Global Strategy on Diet, Physical Activity and Health in May 2004. A Ministerial conference on obesity sponsored by the Regional office has also been scheduled for November 2006, which is expected to result in a draft Charter statement with a range of activities that Member States may consider to tackle the rising obesity epidemic.
- The European Economic and Social Committee (EESC), prepared an Opinion on the issue of obesity in 2005, outlining the idea of the 'Obesity Check' campaign, calling on the collaboration of various stakeholders in combating obesity.
- NGOs such as the European Heart Network have also been active in supporting research into obesogenic environments and sponsoring stakeholder meetings to identify priority actions for preventing obesity in children.

6 Introduction to MCM

This section sets out the key features of the multi-criteria mapping (MCM) process in comparison with other approaches to appraisal and it provides some background on the reason for the choice of this method for the present project. Fundamentally, MCM derives from the most prominent of a wide variety of 'decision support tools' developed in the field of decision analysis.[69] In particular, it is based on longstanding and firmly grounded principles that have been explored and tested over many decades in the general discipline of multi-criteria analysis.[70] However, MCM is also informed by some well-established criticisms of multi-criteria approaches.[71]

MCM shares with other mainstream multi-criteria approaches a simple four-part structure:

1. characterising a wide range of relevant alternative ways to achieve a particular policy aim ('***options***'),
2. developing a set of '***criteria***' to represent different particular viewpoints on the issues that are relevant to the appraising of those options,
3. evaluating under each criterion in turn with numerical '***scores***' to reflect the performance of each option under each criterion for a given viewpoint,
4. assigning a quantitative '***weighting***' to each criterion, in order to reflect its relative importance under the viewpoint in question.

The end product of these four steps, is the calculation of an overall performance ***rank*** for each option under all the criteria taken together for a particular viewpoint. Here, MCM follows the well-established 'linear additive weighting' procedure, in which the rank simply represents the weighted sum of normalised scores.

Unlike most other comparable approaches – both in the field of decision analysis and more widely – MCM focuses as much on 'opening up' as on 'closing down' a decision or policy process.[72] In other words, it uses the four-part process outlined above as a way to gain a systematic picture of the precise way in which different perspectives vary on the issues and options in question. This generates a rich body of information concerning the ***reasons*** for differing views, as well as their ***practical implications*** for the overall performance of the selected options. In this way, MCM tries to span the divide between narrow quantitative methods (which directly address decision priorities, but which may be insensitive to wider considerations) and broader qualitative approaches (which can accommodate more diverse perspectives, but can have difficulty focusing on the context of the decision). Particular features of MCM that allow this unusual combination include:

(i) a core set of diverse options are precisely defined in advance by the research team for purposes of comparison, but participants are free also to redefine those options or add additional ones;

(ii) participants are entirely free to choose and define their own criteria (rather than having these imposed upon them), but this does not affect the comparability of the final results (which are in terms of 'performance');

(iii) careful attention is given in scoring to the exploring and documenting of 'uncertainties' – the way in which performance may vary for any individual participant, depending on assumptions or context;

(iv) a clear picture is given of performance under each individual viewpoint and the method does allow these to be aggregated across groups of participants or all participants taken together, but the primary focus is on exploring the resulting 'map' of the way that option performance varies across perspectives, rather than on revealing a single uniquely definitive view.

By combining a tight focus on decision options whilst at the same time 'opening up' the practical implications of different real-world perspectives, MCM tries to avoid a serious – but often neglected – problem suffered in common by economic, decision and risk assessment techniques, as well as by many more qualitative deliberative and participatory approaches. This problem concerns the way in which such methods claim, aspire or are interpreted to provide a single uniquely robust, rational or legitimate picture of option performance, irrespective of the divergent uncertainties, interests, priorities, and values associated with different expert and socio-political perspectives. Where they are used like this to 'close down' policy debates, such methods are being employed in a fashion that undermines their own fundamental founding principles of rationality or inclusion. To the extent that it avoids such untenable attempts at 'closing down', MCM is free to adopt the most straightforward of theoretically valid mathematical procedures used in decision analysis, thus enhancing the important qualities of accessibility (to participants) and transparency (to third parties).

Since its development in the late 1990's, MCM has been used in a wide variety of contexts, including the appraisal of options for energy strategy[73], food production[74] , environmental policy consultation[75] and public health responses to the shortage of kidney donors.[76] It has been favourably reviewed as an academic research tool[77] and as a framework for policy appraisal.[78] Forming part of a 'wider 'deliberative mapping' process, it has been recommended as a basis for high level government policy consultation.[79]

6.1 Recruitment of Participants and Scoping

The first step in the MCM process involves the recruitment of participants. This is conducted in a way that seeks to reflect a broad 'envelope' of relevant perspectives. Given that the level of detail with which they are expected to appraise the different options will typically exceed that achieved in any formal organisational policy position, participants are necessarily recruited as individuals. However, the selection of these individuals is informed primarily by their institutional affiliations or socio-economic associations. In this way, when taken together, the resulting perspectives (though not constituting formal policy positions) can be expected to represent in some detail the main relevant dimensions in the policy debate.

In the present project, the recruitment of participants was conducted on the basis of a template, which was in turn informed by a detailed stakeholder analysis conducted by the research team. The template specified a set of institutional and socio-political associations of a form and at a level of generalisation that was judged by the research team to be broadly applicable in all the nine case study countries. The definitions for each

category in this template are given in Section 8. With some thought given also to other factors (such as the gender mix), this was then used as a basis for recruiting the same number of participants in each country, such that the individual affiliations or associations match each template category as closely as possible.

The individuals selected by this means in each of the nine countries were then approached by the national research teams in order to explain the aims and context of the project, negotiate any associated matters such as provisions for anonymity, and to secure their consent. The next step in the process was a 'scoping interview', usually conducted by telephone. This involved a conversation of half an hour or so, in which the MCM approach was explained and any general queries dealt with concerning the project, the chosen topic or the basis for their own engagement. Following this, participants were each sent a small package of information, providing further background on the project, an outline of the method and a set of detailed definitions for each of the ' core options' that each participant would be asked to include among the options that they appraised.

6.2 The MCM Interview

The next step in the process was the MCM interview itself. This was conducted (usually by a single interviewer) at a convenient venue for the participant (usually their place of work) using a laptop computer loaded with a specialised MCM software package, called ***MC Mapper***. Depending on the depth, breadth and speed with which the participant conducted their appraisal, this interview typically lasted between two and three hours. In addition to the quantitative and textual documentation recorded using the software package, the interview was also audio-recorded for later transcription and analysis.

Each interview then proceeded through each of the four steps labelled (1) to (4) in the introduction above. Although these were approached in a consistent sequence, it was possible at any stage for participants to return to an earlier stage and augment or amend that aspect of their appraisal.

1. The participant first considered the set of options defined in some detail in advance by the research team (in order to allow comparability across the appraisals of different participants). These included the set of seven '***core options***', which every participant was asked to appraise. They also included the set of a further thirteen '***discretionary options***' whose definitions were already loaded into the MCM software by the research team, but on which the decision whether to include them in appraisal was left to the discretion of the participant. The definitions of both above categories of '***predefined options***' are described in Section 8.2 of this report. The participant raised any general issues that occurred to them in considering these options and on this basis identified any variants or additions that they might wish to include in their own MCM appraisal as '***additional options***'.
2. The next step in the MCM interview process involved the developing of a personal set of appraisal ***criteria*** under which to assess the chosen predefined and additional options. In some instances, participants simply listed their criteria based on prior preparation. In other cases, there was a process of 'thinking aloud' as they worked to produce a set of criteria. In most cases, the issues raised could be treated as distinct aims between which trade-offs may sometimes be necessary. However, the MCM method also allows participants to define issues under which no

compromises or trade-offs may be contemplated. These '***principles***' may reflect fundamentally unquantifiable ethical matters, or they might represent thresholds of performance in relation to other criteria for which scores have been quantified, but below which performance would be regarded as intolerable.

3. The third step in the MCM process involves the scoring of each option under each criterion. Here, interviewees were asked to assign numerical ***scores*** to represent option performance. It was possible to use any scale regarded as meaningful by the participant, the requirement simply being that higher numbers values reflect higher performance and that the ratios between the numbers reflect the ratios of performance (ie: a difference in score of eight indicates a performance that is valued twice as high as a difference of four). Usually, participants chose to use a scale between one and ten.

   The 'units of measurement' in this scoring process are different under each criterion and are, of course, subjective and specific to the individual criteria and interviewees. For this reason, the values for each criterion are 'normalised' using a standard mathematical operation in order to reflect all scores as a function of the difference between the best and worst performing options under each criterion. This operation is performed automatically and instantly by the computer at the time of the interview and the results displayed in real time for the participant to review as a simple chart. This allows the emerging picture of performance to be constantly reviewed and amended if necessary.

   As mentioned previously, an important, and quite unusual, feature of the MCM technique is that participants were asked to assign two performance scores to each option under each criterion. One score reflected the performance under the most favourable assumptions. The other represented the performance under the most pessimistic assumptions. The performance of particular options might be thought to depend on the ways in which they were interpreted and implemented. In this way, interviewees were able to express any ***uncertainties*** by qualifying their scores to take account of variability or ***conditionality*** in performance from context to context. This provided a systematic framework and also a cue for the interviewer to document, by open-ended questioning, some of the crucial determinants underlying the interviewee's assessments. For instance, assigning 'best' and 'worst' scores can address differences between better and worse forms of implementation, or between appropriate and inappropriate applications.

4. Having determined performance scores, participants were then asked to indicate the relative importance of each of their appraisal criteria by means of a simple numerical ***weighting***. Taken together, these weightings reflect the relative importance, to the interviewee, of their criteria. In contrast to the relatively technical business of scoring, this weighting process reflected intrinsically subjective judgements over priorities and values. The weightings, multiplied by the normalised performance scores, produced an overall performance ranking for each of the appraised options. However, because interviewees provide 'best' and 'worst' performance scores, the rankings were expressed not as single numbers, but as ranges of values. Issues of principle, under which some options may have been

effectively ruled out of consideration, represent a different form of reasoning under which trade-offs are not appropriate and were therefore not assigned a weighting.

5. The final stage in the MCM interview involved the participant in reviewing the final picture of option performance, as reflected in the overall ***ranking*** pattern across their appraised options. This picture is clearly displayed as a graphical chart on the computer. If they wished, the participant was free to alter their weightings or scores in the light of this picture, with the objective of arriving at a final overall pattern of ranks, with which they felt comfortable as an accurate expression of their personal perspective. In a few cases, this review prompted participants to return to define new options or criteria, or even to reconsider aspects of scoring. In such cases, the interviewer would encourage the participants to justify their reasons for any changes.

6.3 Methods of Analysis

The MCM interview software yields data in the form of quantitative ***scores***, ***uncertainties***, ***weights*** and the associated final ***ranks***, as well as transcripts of the interview and ***textual notes*** made on the computer during the interview in order to document key features of the participant's option and criteria definitions, assumptions behind scoring and uncertainties and rationales for weighting. However, the analysis also makes use of other materials, including any '***nuggets***' drawn from the transcripts of the interview discussion or other materials referred to by the participant as documenting their own perspective. The analysis of these quantitative and qualitative MCM data then proceeded in parallel as an iterative, inductive process in which – like other appraisal techniques – the judgement of the analyst plays a crucial role. However, it is a distinguishing feature of MCM that the subjectivity and conditionality of these judgements are rendered unusually transparent by the relatively open framing, the multiple finely specified parameters and the clear way in which sensitivities are displayed in representing the associated results. Care was also taken to ensure that the interpretations were informed at least as much by the qualitative findings as by the quantitative results. This was in order to avoid the frequent temptation to focus on apparently straightforward (but potentially misleading) numerical and graphical representations, rather than the qualitative assumptions and meanings on which these were constituted. In addressing each stage, the analysis team worked both as individuals and by meeting regularly as a team in order to check and triangulate hypotheses and emerging findings.

In order to facilitate this process, a separate specialist software package was developed as part of the present project, called ***MCM Analyst***. This includes a central database containing all data relating to all participants, interlinked with text ***reports*** for representing in narrative form various permutations in the qualitative data and a spreadsheet to process and present quantitative data in the form of ***charts***.

Each stage in this analysis was performed primarily by the national teams, although key interpretations (for instance concerning the grouping of participants into perspectives) were finalised through iterative consultation between national teams and under central coordination to ensure comparability across national analyses. Informed by the national level analyses, the international analysis then followed a similar iterative process, developing and testing further hypotheses in relation to the combined data for all national

case studies taken together. The findings at each stage are documented separately in the national and international reports.

Further details are given in the individual country reports of the PorGrow project, and in the Interview Manual[80] and in the Analysis Manual[81] available from the PorGrow principal investigator.

6.4 Main summary points

- The Multi-criteria mapping (MCM) process is a policy appraisal approach developed in the 1990s based on well-grounded principles and extensive exploration and testing.
- The MCM has a 4-part structure composed of:
    - Options: ways to achieve a policy aim;
    - Criteria: issues that are relevant in appraising the options;
    - Scores: numerical measures of how each option performs under different criteria;
    - Weighting: measure of the relative importance of the criteria in measuring the options;
- The MCM is unique in its balance between quantitative and qualitative approaches and is able to distinguish not only how different options perform, but also a detailed vision of why they perform the way they do.
- An MCM appraisal is conducted by:
    - Recruiting participants as individuals, but who are selected primarily because of their institutional affiliations or socio-economic associations;
    - Holding the 2-3 hour long interview using a laptop computer loaded with specialised MCM software, called *MCM Mapper*. The interview consists of the following stages:
        - Considering the options. These included options previously identified by the researchers, which were identified as 'core' options (i.e., those which interviewees were encouraged to rate) or 'discretionary' options (those which interviewees could chose to rate or not), as well as any additional options which the interviewees might have wished to add.
        - Developing a personal set of appraisal criteria.
        - Providing 2 scores for each option using each criteria: one under the most favourable assumptions, one under the most pessimistic conditions.
        - Expressing the relative importance of each appraisal criteria by weighting.
        - Reviewing the final picture of option performance and making any necessary adjustments.

- The analysis occurs using the specially developed software *MCM Analyst,* which allows the data to be examined individually as well as by perspectives (i.e. groups of participants), issues (i.e groups of criteria) and/or clusters (i.e. groups of options).
- These special features, as well as the possibility to explore consequences of assumptions and the use of qualitative data included in the notes taken during the interview to test and reform hypotheses, make the MCM Analyst a unique and extremely useful tool in quantitatively presenting a balanced view of the results.
- The analysis was performed primarily by the national teams, with a few key interpretations (such as the grouping of participants into perspectives) being finalised through centrally-coordinated, iterative consultations across teams.
- The international analysis also followed an iterative process, during which additional hypotheses were developed and tested for the combined data of all national case studies taken together.

7 Stakeholders and their perspectives

7.1 Stakeholder selection

In order to identify the main groups of stakeholders that could and should contribute to the PorGrow project, an analysis of the networks of relevant organisational and institutional stakeholders was developed. That analysis was based on the assumption that the issue of obesity was not just relevant to, but also important for, a wide range of stakeholders including those concerned with both the food chain and physical activity. The objective of the analysis was not to provide an exhaustive list of all and any groups that might have a bearing on the issue of obesity, but rather to identify those that were of primary relevance to debates about public policy options for responding to obesity policy.

Public policy-making cannot be decided and implemented solely by ministers and their ministries. Those actors and institutions have the power and influence that they do by virtue of the fact that they act as part of wider networks of support and influence. This approach has come to be known as 'policy network analysis'[82] in which "…it is assumed that policymaking is sectorised and takes place within networks of public and private actors. Each policy network ordinarily includes the relevant government department…structure is important in policy networks."[83] Consequently, the PorGrow project team aimed to identify the key stakeholder groups who were, could or should be, actively involved in the relevant policy networks.

The central units of analysis in the PorGrow project are public policy options, and therefore it was necessary to engage with stakeholder groups that have a direct and pertinent interest in, and perspective on, the broad range of public policy options relevant to the issue of obesity. In the analysis of the data, it may however be appropriate to take the implications of those interests in relation to the options into account.

In the summer of 2004, a generic trans-national analysis of the networks of institutions and interests with a stake in obesity policy-making was developed. The methodology adopted by the PorGrow project did not allow an exhaustive process of consultation with all relevant interests, and it was therefore necessary to reconcile the aspiration to engage with as wide a range of pertinent stakeholders as possible with the requirement that the research needed to be conducted within the available time and financial constraints. It was also important to generate data sets that were of a manageable size. At the start of the project, moreover, the tool for analysing the data had not been constructed and care had to be taken to ensure that the project was not over-ambitious. If the data sets were too massive then the task of analysing them would have been correspondingly greater.

Taking those considerations into account, and by drawing on previous experience with the application of the Multi-Criteria Mapping methodology, it was agreed by the participants in the project that the number of interviews with stakeholders that should be required in each of the 9 participating countries should be approximately 20. Within that constraint, the aspiration was to gather data from a range of sufficiently differentiated sets of stakeholders to ensure that the envelope of different perspectives was reasonably comprehensive and relevant to current policy debates.

Even before the formal start of the project, a list of possible stakeholder groups was articulated, and it included over 35 possible stakeholder groups. At the start of September

2004 that list was divided into three groups, categorised in terms of the first, second and third ranks.

Drawing on those lists, and working within those parameters, an extensive discussion took place at the initial project meeting in September 2004 during which candidates for possible inclusion were identified. A debate was held on their relative importance. It was thought vital to engage with stakeholders from the main elements in the food chain, from farmers, via food processors and retailers through to caterers and consumers. It was also agreed that stakeholders with professional interests that had a bearing on levels of physical activity were important, in both the public and private sectors. When considering commercial stakeholders operating within the food chain, and in providers of facilities for sport, exercise and physical activity, it was agreed that it was important to engage not just with large companies but also with representatives of relatively small and medium sized enterprises.

It was also deemed appropriate to engage with public policy-makers within each of the national administrations, as well as with those whose working lives and professional responsibilities were likely to be affected by public policy initiatives intended to address the issue of obesity. The participants in the PorGrow project also decided that it was worthwhile including media correspondent and/or journalists with a special interest in health issues since they might provide an effective overview on the debates within their countries. The participants in the PorGrow project decided that the range of stakeholders to be interviewed in each of the 9 participating countries would include at least 21 stakeholders; and they were characterised as follows:

1. Farming industry representatives
2. Food processing company representatives
3. Representatives of large commercial catering chains
4. Representatives of large food retailers
5. Representatives of small ‘health’ food retailers
6. Representatives of public sector caterers (eg school meal providers)
7. Representatives of consumer groups
8. Senior official government policy makers in health ministry
9. Senior official government policy makers in finance ministry
10. Public health professionals
11. Town and transport planners
12. Representatives of life insurance industry
13. Representatives of commercial sport or fitness providers
14. Representatives of school teachers
15. Members of expert nutrition/obesity advisory committees
16. Health journalists
17. Representatives of advertising industry
18. Representatives of the pharmaceutical industry
19. Public health non-governmental representatives
20. Public interest sport and fitness NGOs
21. Representatives of trades unions

7.2 Grouping stakeholders into Perspectives

It is possible to combine these categories of participants into groups – hereafter called Perspectives – in order to enhance the analysis. At the project meeting of September 2005, it was agreed that all national teams would present an analysis of the participants in an agreed list of Perspectives, although national teams were free to examine alternative groupings of participants in addition to the agreed list. The agreed list of Perspectives is shown in Table 7-1.

Table 7-1. Participants grouped into Perspectives for analytical purposes.

Perspective	Category
A. Public interest, non-governmental organisations	7. Consumer movement 19. Health non-governmental organisation 20. Sport and fitness non-governmental organisation 21. Trades union
B. Food chain, large industrial and commercial organisations	1. Farming industry 2. Food processing industry 3. Large commercial catering chain 4. Large food retailer
C. Small food and fitness commercial organisations	5. Small 'health' food retailer 13. Commercial sport or fitness provider†
D. Large non-food industrial and commercial organisations	12. Life insurance industry 13. Commercial sport or fitness provider† 17. Advertising industry 18. Pharmaceutical industry
E. Policy-makers	8. Health ministry 9. Finance ministry
F. Public providers	6. Public sector catering 11. Town and transport planning 14. School teaching
G. Public health specialists	10. Public health professions 15. Nutrition/obesity advisory committee 16. Health journalism

† This category could be put into Perspective C or D according to whether the participant represented a large or small commercial operator.

It can be seen from the table that one category of participant, category 13 representing commercial sports or fitness providers, could be classified as Perspective C or Perspective D according to the research team's view on whether the commercial operation should be classified as large or small. In the following countries the participant in category 13 was placed in Perspective C: Cyprus, France, Greece, Hungary, Poland, Spain and the UK; and in the following countries the participant was classified as Perspective D: Italy and Finland.

7.3 Cross-national summary of participants and potential bias

Separate PorGrow country reports are available (in local languages and in English) that summarise the details of each of the participants for that country. For present purposes it is important to note whether there were significant missing elements from one or more countries that might cause a bias in the comparison of countries and in the collated

results. As the table below shows, only one country, Greece, omitted one category of participant – that of public sector catering – which was due to the practice in Greece of using large commercial caterers to provide publicly provided catering services under contract. .

Table 7-2. Categories of participant not interviewed, by country.

Country	Category of participant not interviewed
Cyprus	All categories interviewed
Finland	All categories interviewed
France	All categories interviewed
Greece	Not interviewed: Category 6. Public sector caterer (Public catering is supplied by large private contactors)
Hungary	All categories interviewed
Italy	All categories interviewed
Poland	All categories interviewed
Spain	All categories interviewed
United Kingdom	All categories interviewed

As a result of this very high response rate, which fulfilled all the data collection expected for the PorGrow project, the comparative analysis of the country data in the present cross-national report can be assumed to be free of bias due to missing participant interviews in any particular country.

A second potential source of bias in the comparison of country results lies in the allocation of category 13, commercial sport and fitness organisations, which as noted in the previous section could be placed in either Perspective C or Perspective D according to the research team's perception of the relative size of the operation. Two countries – Italy and Finland – placed this participant in Perspective D and the remainder in Perspective C, and this should be born in mind when considering differences between Perspectives reported in sections 10 and 11 below.

The remaining source of potential bias in the comparison of country results is the differential response rate between participants to each of the options they were asked to appraise. In some countries, most of the participants appraised most of the options available, both core and discretionary, while in other countries larger number of participants appraised fewer of the options. These differences are considered in more detail in section 8.

7.4 Summary of main points

- Participants were chosen to include those for whom debates about public policy options for responding to obesity were both relevant and important, including those concerned with the food chain and physical activity.
- The project makes the assumption that public policy making is not decided and implemented solely by ministers and their ministries, but is also affected by wider networks of support and influence also known as 'policy networks',
- A general analysis of the policy networks with a stake in obesity as well as time and resource constraints led to the decision of limiting the number and category of

participants to about 20 in each of the 9 participating countries. This number was later increased to include at least 21 participants in each country.

- Each of the participants was then grouped into one of the following 7 Perspectives: A. Public interest, non-governmental organisations (NGOs); B. Food chain, large industrial and commercial organisations; C. Small food and fitness commercial organisations; D. Large non-food industrial and commercial organisations; E. Policy-makers; F. Public providers and G. Public health specialists.
- Three potential sources of bias were identified and taken into consideration in cross-country comparisons and in the collated results.
    - Missing participant interviews in particular countries. Only one country, Greece, omitted one category of participant – that of public sector catering – which was due to the practice in Greece of using large commercial caterers to provide publicly provided catering services under contract.
    - Participants from commercial sport and fitness organisations which could be classified as representing small organisations (Perspective C) or large ones (Perspective D). Only two countries (Italy and Finland) categorized their participants as coming from large commercial sport and fitness organisations.
    - Number of options selected for appraisal. Differences were apparent in the number of options that were scored by participants from each country.

8 Options for Addressing Obesity

8.1 Introduction

The MCM methodology requires the presentation to stakeholders of a set of policy options that are to be appraised by stakeholders in face-to-face interviews. At the start of the project it was, therefore, essential to select not only relevant stakeholder groups but also a set of policy options that the chosen stakeholders would be asked to appraise.

The task of selecting the policy options to be appraised was framed by the prior decision to differentiate policy options into 3 categories. The first category is referred to as the '**core options**' and they are options that all interviewees, from all stakeholder groups, were to be asked to appraise in all of the 9 participating countries. The second category is referred to as the '**discretionary options**' and they are options that would be pre-defined by the project team, but which interviewees would not be required to apprise but which they could appraise if they chose to do so. The third category is referred to as the '**additional options**' and they are policy options that the project team would not pre-define but which interviewees could specify and articulate as they see fit.

Since the project team recognised that interviewees might not always be entirely comfortable with the descriptions of the policy options that would be provided at the start of the interview, the interview protocol stipulated that interviewees were at liberty to appraise any re-worded version of the discretionary options that they chose to articulate in place of wording initially provided. In respect of the core options however, the protocol indicated that if interviewees did not like the wording provided, they were at liberty to appraise it unfavourably, in ways that reflected their reservations and concerns about the wording provided; and that they could introduce additional options explicated in terms of their preferred wording.

8.2 Scope of Process and Definition of Options

In advance of the formal start of the project, an attempt was made to identify as wide a range as possible of the policy options that were under consideration by public policy-makers and public health policy analysts for responding to the changing incidence of obesity. The scope of that examination included international organisations such as the World Health Organisation and the European Commission, and the governments of EU Member States, as well as national and EU non-governmental organisations representing industrial, commercial, consumer and public health organisations.

Since the unit of analysis upon which the PorGrow project was focussed was macroscopic i.e. national and EU-wide public policy options, options that might be primarily appropriate to local communities or individuals were discounted as too meso- or microscopic; the focus was on policy options at the macro-level.

In advance of the project Kick-Off meeting in September 2004, inter-partner exchanges had produced a set of some 28 policy options from which core and discretionary options could be chosen. All the partners in the 9 participating countries were asked to indicate which of those options could sensibly be considered relevant to their national contexts. The resultant set of options was then categorised into two sub-sets: namely those that were candidates for the role of 'core options' as those that were candidates as 'discretionary options', and those lists were tabled by the principal investigator at the first

project meeting. The chair of the Advisory Panel and the Project Officer attended that meeting and contributed to the discussion.

A debate resulted in a consensus that, despite the prior methodological preference for having not more than 6 core options, it was appropriate to settle on a list of 7 core options, and 13 discretionary options. That decision was taken to ensure that the set of core options, that would be appraised by all stakeholder interviewees in each of the 9 participating countries, would include options concerning both the food and physical activity aspects of the obesity problem, and would include policy options under most serious and active consideration by EU Member States and by the European Commission, and would include a relevant range of different types of policy instruments.

For each policy options, moreover, 3 levels of descriptions were developed. The first and briefest consisted of the minimum number of words required to indicate the characteristics of the options, normally in the form of a noun phrase. The second summarised that option in a longer phrase including a verb, and the third and fullest descriptions explicated the options in complete sentences so that interviewees would have a clear understanding of the options that they were being required and/or invited to appraise. The resulting list was rendered in English are shown below.

Since all the interviews were to be conducted in local languages, national teams were required to translate the texts of those options into their own local languages, and the result texts were then incorporated into the project's interview software.

8.2.1 Core options

1. Change planning and transport policies

Encourage more physical activity by changing planning and transport policies

Architects and planning authorities, in conjunction with transport policy-makers and the local community could design, or re-design, residential, recreational and working areas to encourage people to make greater use of public than private transport, and to walk or cycle more frequently and/or longer distances. Transport policies and town planning could provide improved facilities for walking and cycling. Local authorities could prioritise improving conditions for pedestrian travel to school and plan for the use of streets as social spaces rather than just for parking and driving.

2. Improve communal sports facilities

Improve provision of sports and recreational facilities in schools and communities

The development and improvement of sporting and recreational facilities for young people and the wider community through the provision of accessible and adequate facilities. A wide and diverse range of physical activities might be offered in schools, beyond traditional forms of physical education. These might include a wider range of games as well as dance and gymnastic activities, swimming, athletics and outdoor and adventurous activities.

3. Controls on food and drink advertising

Controls on the advertising and promotion of food and drink products

Policy attention could be given to promotional activities targeting shopping and eating habits, especially those targeted at children. This would include statutory regulations restricting the ways in which obesity-promoting foods can be advertised and promoted. These restrictions will refer especially to advertising and promotion targeted at children, particularly during and after children's television programmes, and the use of celebrities and characters or presenters from children's programmes in the advertising and promotion of food and drink products.

4. Controlling sales of foods in public institutions

Controls on the provision and sale of fatty snacks, confectionery and sweet drinks in public institutions such as schools and hospitals

Healthy eating initiatives are undermined when consumers, including children, encounter catering outlets and vending machines selling obesity promoting foods in public bodies, particularly schools, health centres and hospitals. Controls could be introduced to ensure that catering outlets and vending machines in public institutions sell only healthy foods; this would improve the quality of their provision and reinforce healthy eating messages.

5. Mandatory nutritional information labelling

Mandatory nutritional information labelling for all processed food, for example using energy density traffic light system

The rules governing the ways in which food and drink products are labelled could be changed to make it easier for consumers to know how well or poorly individual products might contribute to their health. Clearer and simpler labelling could, for example, include an energy density 'traffic light' system, with high energy density products labelled in red, low density products labelled in green, and intermediate products labelled yellow. Nutritional information panels could be made more useful, and legible. This would apply to all packaged foods and drinks. Such a system might make it easier for consumers to make healthy choices, and also provide incentives for food and beverage producers to reassess the composition of their products.

6. Subsidies on healthy foods

Public subsidies on healthy foods to improve patterns of food consumption

Change food prices to influence peoples' decision-making in favour of healthier foods by introducing subsidies to lower the prices of healthy foods, making them more affordable.

7. Taxes on obesity-promoting foods

Tax changes to alter patterns of food consumption, and to reduce consumption of obesity-promoting foods

Change food prices to influence peoples' dietary choices by increasing the price of obesity-promoting foods, including those high in fat and sugar to act as a disincentive for consumers to purchase them. Methods for increasing the price of obesity-promoting foods could include a 'fat tax', or extending Value Added Tax to cover some dairy foods, fast food and sweet food.

8.2.2 Discretionary options

8. Improve training for health professionals

Improve training for health professionals in obesity prevention and diagnosing and counselling those at risk of obesity

Health professionals may contribute to reversing the trend of the obesity epidemic, but only if they have the requisite skills, training and knowledge. Improving the skills and training of health professionals, should enable then to be more effective in helping their clients to avoid obesity or to respond appropriately to their changing weight.

9. Common Agricultural Policy reform

Reform of the EU's Common Agricultural Policy to help achieve nutritional targets

The European Common Agricultural Policy is currently contributing to the over-production of foods that are rich in calories and fats. Moreover, policies designed to diminish those surpluses, such as subsidised sales of surpluses to the food processing industry, are contributing to the over-use of those ingredients in processed foods, and consequently their over-consumption. The Common Agricultural Policy might be reformed to contribute to, and to reinforce, public health policies regarding obesity. Incentives to over-produce those foods that are already being over-consumed could be significantly reduced. Subsidies on sales of obesity-promoting ingredients to the food processing industry could be phased out. Incentives could be introduced to increase or maintain production and distribution of foods that could more effectively contribute to improving public health and diminishing the risk of obesity.

10. Improved health education

Improved health education to enable citizens to make informed choices

Health education would be improved to provide citizens with more information and an improved understanding to help them more effectively to control their weight.

This would include setting out clearly the health risks associated with being overweight or obese, and also highlighting those nutritional and lifestyle patterns that are most beneficial to weight control. These enhanced health education initiatives would use a broad range of forms and media, using not just leaflets and talks but also individual and community activities.

11. Controls on food composition

Controls on composition of processed food products

Governments would set health-focused compositional standards for processed food products. They might stipulate, for example, minimum amounts of fruit in jams and meat in sausages, and/or set maximum limits on the amounts of added fat and sugar in particular types of products.

12. Incentives to improve food composition

Incentives to improve food composition

The food industry could be given incentives to reformulate foods to provide healthier alternatives with a lower energy density (i.e. less fat, carbohydrates and sugars), and with increased nutrients. The incentives might include subsidies on healthier ingredients, and taxes on ingredients that are already being over-used and over-consumed. The introduction of new labelling requirements or options could also provide appropriate incentives. Governments could also publicly praise those companies that are making most progress, and identify those making least progress.

13. More obesity research

More research into obesity

More research into obesity would improve our understanding of how obesity could more effectively be prevented and treated. Research would address key areas of uncertainty and ignorance that could inform actions and policies. Such research might address issues concerning the benefits of physical activity as well as the causes and consequences of adopting particular dietary and life-style patterns, as well as social science research on why people find it so hard to control their weight.

14. Provide healthier catering menus

Encouragement and incentives for caterers to provide healthier menus

People are increasingly eating meals outside the home in a variety of catering outlets, customers should have the choice to eat healthily when eating out. Caterers can provide healthier food by: expanding the availability of healthier choices, for example offering low fat and low calorie sauces and dressing. They could also adopt healthier food preparation, cooking and serving practices, for example trimming fat from meat before cooking, reducing the amount of fat and sugar used in cooking, and allowing customers to add as much or as little as they wish of sauces, dressing and fat spreads.

15. Food and health education

Include food and health in school curriculum

In some countries, school curricula do not include food and nutritional health education. Schools and colleges can play an important role by helping children and young people to learn how to be healthy, and to appreciate the importance of food for health. Children need to learn to recognise and appreciate healthy dietary practices. They also need to learn how to prepare food healthily, and should learn about nutrition as well as understanding and interpreting food labelling and advertising.

16. Medication for weight control

Increased use of medication to control body weight

Pharmaceutical companies are developing and marketing drugs to help people control their body weight by various means. Drugs can be used, for example, to limit the absorption of dietary fat, or to block receptors believed to play a role in appetite and food cravings. Others contain hormones that induce the feeling of being full up and not wanting to eat more.

17. Substitutes for fat and sugar

Increased use of synthetic fats and artificial sweeteners

Several food and chemical companies have developed, and are developing, synthetic fat substitutes, as well as new artificial sweeteners to replace dietary fats and sugars. If consumers ingest foods and beverages containing increasing quantities of artificial sweeteners and fats, they may be able reduce the calories in their diets. Governments and the European Commission could encourage those developments, for example by seeking to ensure that maximum permitted levels of usage are set sufficiently high to enable increased usage and consumption.

18. New government body

Create new governmental body to co-ordinate policies relevant to obesity

Responsibility for responding to the epidemic of obesity in most European countries is divided and fragmented across several government departments and agencies. If, in each country, a new single body with overall responsibility for leading and co-ordinating policies related to the issue of obesity, concerning both food and non-food issues, then those policy responses would be more systematic and effective. The new body could set targets for reductions in the incidence of obesity, and monitor, report and evaluate progress, and the effectiveness of policy initiatives.

19. Control of marketing terms

Control the use of marketing terms such as 'diet', 'light', 'lite'

Regulations could be introduced to restrict the conditions under which terms such as 'diet', 'light' and 'lite' may be used in the marketing and labelling of food products. Those regulations should diminish the extent to which consumers make poorly informed judgements about the significance of what they buy and eat. When nutritional information is unclear or misleading, this could encourage the purchase of a product which a consumer would not buy if it were clearly labelled as 'high in fat' or calories. Improved controls might improve the match between how products are labelled and how shoppers and consumers understand those labels.

20. Physical activity monitoring devices

Increase the availability and use of pedometers or other physical activity monitoring devices, with physical activity targets

While people may be provided with targets for the amount of physical activity, such as walking, that they should aim to do, to help control their weight, it is often difficult for them to know whether or not the targets are being met or even exceeded. Monitoring devices such as pedometers are small inexpensive electronic devices that can be attached to a person's wrist or waist and measure levels of physical activity. If people had access to such devices they could monitor their levels of physical activity, and estimate whether they were sufficient, or whether they needed to take more exercise. Such monitoring devices have the potential to increase awareness of sedentary behaviour and thus promote physical activity, and have been shown to do so. Governments could preferentially distribute such devices to populations groups potentially vulnerable to obesity that might not otherwise buy or use them.

8.3 Grouping the options into clusters

It is possible to combine these policy options into groups – hereafter called Clusters – in order to organise and structure the analysis. At the project meeting of September 2005, it was agreed that all national teams would present an analysis of the options in an agreed list of Clusters, although national teams were free to examine alternative groupings of options in addition to the agreed list. The agreed list of Clusters is shown in the box below, along with the colour coding that is used to identify options within each cluster in the remainder of this report.

Table 8-1. Grouping of options into clusters

Green – Cluster 1: Exercise and physical activity-oriented
1. Change planning and transport policies
2. Improve communal sports facilities
20. Increase the use of physical activity monitoring devices options
Red – Cluster 2: Modifying the supply of, and demand for, foodstuffs
4. Control sales of foods in public institutions
6. Provide subsidies on healthy foods
7. Impose taxes on obesity-promoting foods
11. Control the composition of processed food products
12. Provide incentives to improve food composition
14. Provide incentives to caterers to provide healthier menus
Yellow – Cluster 3: Information-related initiatives
5. Require mandatory nutrition labelling
3. Controls on food and drink advertising
19. Control the use of marketing terms ('diet', 'light' etc)
Black – Cluster 4: Educational and research initiatives
8. Improve training for health professionals in obesity care and prevention
10. Improve health education for the general public
15. Include food and health in the school curriculum
13. Increase research into obesity prevention and treatment
Blue – Cluster 5: Technological innovation
16. Increase the use of medication to control bodyweight
17. Increase the use of synthetic fats and artificial sweeteners
Orange – Cluster 6: Institutional reforms
18. Create a new governmental body to co-ordinate policies on obesity
9. Reform the Common Agricultural Policy to support nutritional targets

8.3 Engagement with Options

All participants were asked to score the first seven options (core options). Participants were offered a further 13 options (discretionary options) that they could choose to score if they wished. Participants were also given the opportunity to propose further options (additional options) that had not been defined in advance.

As noted in Section 7, 21 categories of participants were interviewed in each of the countries (with the exception of Greece, where category 6 was subsumed within category 3) but not all categories of participant appraised all of the options. Participants were asked to appraise the core options (numbers 1-7) and to appraise any of the discretionary options (numbers 8-20) as well as being free to add further options if they wished. The

country-by-country pattern of appraisals of each of the options, expressed as a proportion of the total number of participant categories interviewed in each country, is shown in Table 8-2.

It can be seen from this table that compliance in the appraisal of core options was generally good, with virtually all countries obtaining appraisals of all the core options by all categories of participant. In Greece, the representative of the farming industry excluded core options 6 (Subsidies on healthy foods) and 7 (Taxes on obesity-promoting foods) on the understanding that *"it is totally unrealistic to even consider that these options are possible to be implemented"*, while the town and transport planner excluded option 4 (Controlling sales of foods in public institutions) *"due to its conflict with the principles of free and healthy competition, which could also be considered illegal"*. Those comments suggest that the interviewee was there applying what was defined above (in Section 6.2 on the MCM Interview) as a 'principle'.[84] That example was not recorded in the MCM software as the application of a principle, but it does illustrate the ways in which objections to options and/or negative appraisals of them, may have served in practice as grounds for choosing not to appraise particular discretionary options.

The number of discretionary options appraised by participants varied considerably between countries. In the UK, all the discretionary options were appraised by at least 50% of the participants, but in all other countries most discretionary options were appraised by fewer than 50% of participants (see table 8-2, below).

The options most often chosen for appraisal were options 10 (general health education) and 15 (school food and health education), which were appraised by 68% and 73% of all the participants, respectively. The options least often chosen for appraisal were options 16 (weight control medication), 17 (fat and sugar substitutes) and 20 (physical activity monitoring devices), which were appraised by fewer than one fifth of all participants. It will be seen in later results that the options being appraised by the largest number of participants were also the options that tended to attract the highest ranks, while those options appraised by fewest participants tended to be given the lowest ranks by those that did appraise them. This indicates that there the criteria used by participants for selecting and appraising an option were similar to the criteria used to judge an option to merit a high score – and these are discussed in section 9. Similarly, the criteria used for deciding not to appraise an option may have been similar to the criteria used for giving those and other options relatively low scores.

Appraisals by different categories of participant combined into Perspectives (see section 7.2) can be compared between countries and between options. Table 8-3 overleaf shows for each country and each discretionary option those Perspectives for which at least one participant gave an appraisal.

Table 8-2. Percentage of participant categories appraising each option

Policy option	Cyprus	Finland	France	Greece	Hungary	Italy	Poland	Spain	UK	*All*
1 Planning / transport policies	100%	100%	100%	100%	100%	100%	100%	100%	100%	*100%*
2 Improve sports facilities	100%	100%	100%	100%	100%	100%	100%	100%	100%	*100%*
3 Controls on advertising	100%	100%	100%	100%	100%	100%	100%	100%	100%	*100%*
4 Foods in public institutions	100%	100%	100%	95%	100%	100%	100%	100%	100%	*99%*
5 Mandatory nutrition labelling	100%	100%	100%	100%	100%	100%	100%	100%	100%	*100%*
6 Subsidies on healthy foods	100%	100%	100%	95%	100%	100%	100%	100%	100%	*99%*
7 Taxes on obesogenic foods	100%	100%	100%	95%	100%	100%	100%	100%	100%	*99%*
8 Training for professionals	38%	29%	52%	40%	52%	10%	33%	52%	90%	*44%*
9 CAP reform	19%	10%	19%	10%	19%	14%	0	33%	62%	*21%*
10 General health education	71%	67%	48%	85%	86%	14%	67%	86%	90%	*68%*
11 Food composition controls	48%	19%	19%	45%	43%	0	14%	24%	52%	*29%*
12 Food composition incentives	24%	43%	24%	30%	43%	5%	0	29%	67%	*29%*
13 More obesity research	48%	14%	19%	20%	14%	10%	5%	52%	76%	*29%*
14 Healthier catering menus	19%	29%	29%	40%	76%	0	14%	57%	90%	*39%*
15 School health education	71%	52%	52%	95%	86%	48%	81%	71%	100%	*73%*
16 Weight control medication	10%	19%	5%	0	24%	0	0	10%	81%	*17%*
17 Fat and sugar substitutes	0	0	5%	5%	10%	0	0	25%	71%	*13%*
18 New government body	43%	24%	5%	15%	19%	0	0	29%	71%	*23%*
19 Control of marketing terms	38%	19%	10%	35%	33%	5%	29%	52%	71%	*32%*
20 PA monitoring devices	10%	14%	5%	15%	14%	0	5%	29%	81%	*19%*
Average of discretionary options	*34%*	*26%*	*22%*	*33%*	*40%*	*8%*	*19%*	*42%*	*77%*	*34%*

Note: From a total of 21 categories of participant in each country, except for Greece (20 categories)

Table 8-3. Discretionary options for which appraisals were given by at least one member of a specified Perspective, by country

Discretionary policy option	Cyprus	Finland	France	Greece	Hungary	Italy	Poland	Spain	UK
8 Training for professionals	ABEFG	CDEG	ABCDEG	ABDEG	ABCDEG	AG	ABCDEG	ABCDFG	ABCDEFG
9 CAP reform	BEG	BG	AEFG	AG	ADEF	BE	--	ADEG	ABCDEFG
10 General health education	ABCDEFG	ABCDEFG	ABCDEG	ABCDEFG	ABCDEFG	ACD	ABDEFG	ABCDEFG	ABCDEFG
11 Food composition controls	ABCEFG	BFG	BCF	ABCDEF	ABCDEF	--	ABF	ABF	ABDEFG
12 Food composition incentives	BCDFG	ABCDFG	ABCEG	ABCDG	ABCDFG	B	--	ABDF	ABCDEFG
13 More obesity research	ABCDEFG	ABDG	ADG	ABDEF	ABD	BC	B	ABCDFG	ABDEFG
14 Healthier catering menus	BFG	ABDG	ACEFG	ABCDEG	ABCDEFG	--	BFG	ABCDEFG	ABCDEFG
15 School health education	ABCDEF	ABCDFG	ABCDEFG	ABCDEFG	ABCDEFG	ABCDEG	ABCDFG	ABCDEFG	ABCDEFG
16 Weight control medication	AD	BCDG	E	--	BDFG	--	--	D	ABCDEFG
17 Fat and sugar substitutes	--	G	E	E	DG	--	--	ABDF	ABCDEFG
18 New government body	ABCDG	CEFG	E	ABE	ADG	--	--	ABCDEF	ABDEFG
19 Control of marketing terms	ABCDFG	ABDFG	EF	ABDEFG	BCDF	A	BCDEF	ABCDEF	ABDEFG
20 PA monitoring devices	D	ACEG	E	CEG	ABD	--	F	ABDF	ABDEFG

Perspective identification:
A = Public interest, non-governmental organisations
B = Food chain, large industrial and commercial organisations
C = Small food and fitness commercial organisations
D = Large non-food industrial and commercial organisations
E = Policy-makers
F = Public providers
G = Public health specialists

All the core options were appraised by representatives of each of the Perspectives, in every country. For the discretionary options, although it may be possible to discern patterns in the table, it should be noted that the some Perspectives contained more categories of participant than others – for example Perspective A (Public interest NGOs) and Perspective B (Food chain operators) contained four categories of participant each, while Perspective C (Small health food and fitness operators) and Perspective E (policy makers) contained two categories of participant, and in the case of Perspective C in many cases only category of participant. Thus on a purely random basis, Perspectives C and E would be more likely to be included in table 8-3 as a missing Perspective than Perspectives A and B. The remaining Perspectives, D, F and G, contained three categories of participant each.

Table 8-3 shows that, although for some countries the numbers of missing Perspectives (for particular discretionary options) is high, taken as a complete set every option received scores from participants in every Perspective. Even those options that received very few appraisals (identified in the previous table as options 16, 17 and 20) generally received appraisals from a given Perspective in at least two of the nine countries.

8.3.1 Engagement with additional options

Besides the pre-defined options, participants were invited to add further options of their own. These additional options were then scored, by the participants who had introduced them, with the same criteria as the pre-defined options. The numbers of additional options introduced by participants in each of the country programmes are shown in table 8-4 below.

Table 8-4. Number of additional options appraised by participants.

Country	Additional options
Cyprus	7 proposed by 4 participants
Finland	13 proposed by 8 participants
France	32 proposed by 13 participants
Greece	0
Hungary	8 proposed by 6 participants
Italy	3 proposed by 3 participants
Poland	13 proposed by 9 participants
Spain	42 proposed by 18 participants
UK	14 proposed by 8 participants

For further details of the nature of these options and their appraisal by the participants, please see the individual country reports.

8.3.2 Potential bias towards discretionary options

As noted earlier in this section, caution is required in the comparison of ranks obtained for discretionary options. In some cases participants evidently chose not to appraise a discretionary option because they felt it was not relevant to obesity while in others they chose not to appraise a discretionary option because, although it may be relevant, there was a prior judgement that it would actually display relative low performance (for example it would be too costly, ineffective and unacceptable to be worth contemplating).

Yet others may have chosen not to score an option because their time was limited and the discretionary option was not deemed a high priority. Those considerations imply that a decision not to appraise a discretionary option might sometimes be equivalent to a prior judgement of low performance, and conversely that sometimes a choice to appraise a discretionary option may be an indicator of a prior judgement of relatively high performance. This does not apply to the core options, which all participants were asked to score. In consequence, a discretionary option is *ceteris paribus* likely to have a more positive set of scores than a core option. It also follows that *ceteris paribus* comparisons amongst core options may be more robust that comparisons between core and discretionary options.

This potential source of bias in the interpretation of the results may not be significant if the core options represented a fair selection of the full range available. In MCM generally, it is desirable that core options include a 'full envelope' of distinguishing characteristics.[85] However, in the present exercise – despite a larger number of core options being included than for any previous MCM study – the complexity of the issues in question meant that this was not the case. The core options did not include any of the educational cluster of options, nor either of the two technical options nor either of the two policy-related options. As a result some anomalies can occur: for example only two participants in Spain chose to appraise the option to use medication for weight control. One of these participants (from the pharmaceutical industry) gave this option a very high score, resulting in this option ranking third highest overall (under optimistic conditions) and highest of all (under pessimistic conditions) in Spain.

The interpretation of the findings in the following sections with regard to discretionary options should bear this potential source of bias in mind.

8.4 Main summary points

- Policy options were chosen based on the decision to differentiate among them using 3 different categories:
    - Core options: pre-defined options which all were asked to appraise.
    - Discretionary options: pre-defined options whose appraisal was optional.
    - Additional options: options to be specified by participants as they saw fit.
- For the pre-defined options (i.e. core & discretionary), a wide range of macro-level options under consideration by policy-makers and public health policy analysts were discussed among partners from the 9 participating countries and narrowed down to 28 options. After further deliberation, these were narrowed down to 7 core options and 13 discretionary options to reflect those options which included both food and physical activity aspects of the obesity problem as well as those policy aspects under the most serious consideration by the EU and the European Commission.
- The pre-defined options were further grouped into the following clusters: A. Exercise and physical activity-oriented; B. Modifying the supply of, and demand for, foodstuffs; C. Information-related initiatives; D. Educational and research initiatives; E. Technological innovation; F. Institutional reforms.

- Compliance with the appraisal of core options was generally good. The only exception was that of two participants from Greece, one of whom did not score option 6 (subsidies on healthy food) or option 7 (taxes on obesity promoting foods) and one who did not score option 4 (controlling sales of food in public institutions).
- Participants from most countries did not engage with all the discretionary options, with most being appraised by fewer than 50% of participants. Only in the UK we all discretionary options appraised by at least 50% of participants.
- Each of the discretionary options was scored by at least one participant from each Perspective, despite the fact that some Perspectives were made up of a greater number of participant categories than others.
- Additional options were selected and appraised by participants in every country with the exception of Greece, and ranged from 3 additional options proposed by 3 participants in Italy to 42 additional options proposed by 18 participants in Spain.
- Discretionary options that were appraised by the largest number of participants were also the options which tended to attract the highest ranks (such as those from the education & research cluster), while those options appraised by fewest participants tended to be given the lowest ranks by those that did appraise them (such as those from the technological innovation cluster). Because all the core options were necessarily appraised, this phenomenon did not occur in a balanced manner across all clusters of options given that the core options did not include any related to the education & research, technological innovation or institutional reform clusters. This caused some anomalies to occur which are further discussed in the report.

9 Criteria for evaluating options

9.1 Introduction

In order to evaluate the extent to which the various policy options are favoured, participants are asked to rate the options according to criteria. These criteria – such as cost, or effectiveness, or impact on inequalities – were chosen by the participants from their own experiences and their positions in relation to the issue of obesity. One of the strengths of the Multi-Criteria Mapping technique is that it allows participants to select their own preferred criteria for judging the various policy options before them. There is no requirement for a participant to accept or use particular approaches to judging a policy option: quite the opposite – in the appraisal process a participant is encouraged to judge the various policies on any basis they choose.

However, criteria had to be selected that could be applied across the range of options considered by the participant, including the seven core options, as well as any of the discretionary options they select or additional options they volunteer. Thus participants were asked to consider the range of options before being asked to consider how they wished to appraise them. After viewing the policy options, participants were then encouraged to select criteria for appraising these options.

An example of the use of criteria was provided by an experienced senior public servant in the UK, Professor John Krebs who was chair of the UK Food Standards Agency for five years from its inception in 2000. He gave a commentary on how he judged policies and interventions at a conference on obesity at the Royal Society in London (19th October 2005).[86] In summary, he stated that the effects of policies could be weighed up against three criteria:

Utility – the benefits, for example to individuals or population groups

Infringements – the loss of rights or liberties for certain members of society

Equality – the effects should not increase discrimination or disadvantage

In addition, Krebs identified four further criteria for evaluating specific interventions:

Effectiveness – the likelihood that it will achieve the intended result

Proportionality – the costs are acceptable for the benefits gained

Necessity – the requirement for, e.g. legislation, if other options are not viable

Public accountability – the processes are open to independent scrutiny

These dimensions for appraising policies could be adopted or rejected, and other criteria can be proposed. Such differences in views are an important element in the formation of policies by a mixture of stakeholders in practice, and this is an important principle in the Multi-Criteria Mapping (MCM) procedure: namely that differences of view can be accommodated in the evaluation of policy options, and indeed increases the validity of the process. By allowing participants to choose their own appraisal criteria, the MCM procedure encourages inclusiveness – the participants are assured that their viewpoint is fully represented in the findings.

9.2 Issues

Examples of the different appraisal criteria used by the various participants are provided in Table 9-2 (extracted from the UK survey). They show a wide variety of viewpoints on what constitutes the most important concerns on which options should be judged. Observations about the participants' choice of criteria, the nuances in interpretation, and the types of criteria chosen by participants grouped into Perspectives, can be found in the individual country reports.

It can be seen from Table 9-2 that there are evident similarities in many of those criteria. Over 100 criteria are listed, but these can be clustered into similar types of criteria, or **Issues**, representing the underlying themes corresponding to the main dimensions of appraisal.

At a meeting of the PorGrow research teams in 2005 it was agreed that criteria would be organised into the Issues listed in Table 9-1 below, for the purposes of consistent reporting by all the PorGrow research teams. (Additional clustering of criteria could be undertaken beyond the one listed here if the teams wished to undertake this.) The issues are listed in the left-hand column of Table 9-1 and types of criteria they refer to are indicated in the right-hand column.

Table 9-1. Grouping of criteria into Issues

Issue	Types of criteria
I Positive societal benefits	Includes equity, reach into sub-populations, benefits to environment, human rights and freedoms, gives value, raises education, mobilises for gains (but excluding additional health benefits see II below)
II Additional health benefits	Health benefits other than obesity, includes psychological benefits, well-being
III Efficacy in addressing obesity	Includes probability of technical success, sustainability, implementation, pertinence
IV Economic costs to public sector	Costs to the state, e.g. health services and loss of tax revenues
V Economic costs to individuals	Prices, lost employment
VI Economic costs to commercial sector	Includes corporate and shareholder losses, (profits)
VII Economic costs - unspecified	Ambiguous or non-attributed costs
VIII Practical feasibility	Includes political or technical implementation, cooperation of agencies, departments, sectors, supported by parliament, legislation, practical feasibility.
IX Social acceptability	Includes social, cultural or individual acceptability, popularity, will not meet resistance
X Miscellaneous	Not included in issues 1-9, e.g. urgency, priority

Table 9-2. Examples of criteria chosen by participants for policy appraisal (taken from the UK report)

A. Public interest, non-governmental organisations	B. Food chain, large commercial organisations	C. Small food and fitness commercial organisations	D. Large non-food commercial organisations	E. Policy-makers	F. Public providers	G. Public health specialists
• Effectiveness • Greatest impact on largest number of people • Consumer acceptability • Practicality • Ability to address health inequalities • Partnership across local and national government • Social, cultural and economic benefits • Public accessibility, understanding and acceptability • Societal impact • Personal impact • Cost-benefit • Safety • Access • Availability • Support network • Employment issues • Occupational health, safety and welfare issues • Societal interactions • Family support	• Cost effectiveness • Equity • Impacts upon other spheres • Effectiveness • Not draconian • Egalitarian • Portfolio benefits • Understandable and realistic • Based on sound science • Ease of implementation • Efficacy • Empowers individuals • Informative • Facilitating cultural change • Feasibility • Consumer awareness • Fiscal policy • Accessibility • Public health indices • Regulatory controls	• Public health • Cost effectiveness • Cost benefit • Reduction in crime rate • Improvement in educational standards • Community values • Efficacy • Impact on society • Impact on child health and positive lifestyle • Impact upon adult health and positive lifestyle	• Morbidity improvements • Mortality improvements • Cost to society • Cost to insurance industry • Effectiveness of option on insured population • Timescales: short term partial fix • Timescales: long term behavioural change • Consumer preference • Costs to industry • Feasibility • Will it make people thin? • Benefit/costs • Individual rights • Immediate impact upon levels of obesity • Sustained impacts upon levels of obesity • Public engagement • Evidence based policy • Cost effectiveness	• Long term health benefit • Effectiveness • Cost benefit • Impacts on local communities and economies • Economic costs and benefits to the UK as a whole • Costs and benefits to government • Costs and benefits to tax payers • Costs and benefits to companies • Cost effectiveness • Efficacy	• Credibility • Cynicism • Understanding • Citizen engagement and accessibility • Effectiveness • Safety • Cost resource implications • Sustainability • Cost • Resistance • Timescales	• Efficacy • Reducing inequalities • Cost efficacy • Sustainability • Timescale • Funding and resources • Evidence base • Individual vs manufacturing industry • Health inequalities • Cultural acceptability • Day to day quality of life • Feasibility • Consumer costs • Political will • Effectiveness • Focused action • Social benefits

9.3 Weightings

Further information on the relative importance of their chosen criteria was elicited from participants by asking them to assign weightings to each of their chosen criteria. Weightings modulated the scores the participant gave to each of the policy options when using their chosen criteria. The weightings are intrinsically subjective judgements reflecting the participants' priorities and values, and they allowed the participants to refine their judgements of the various policies, increasing their sense of ownership of the results of the appraisal process.

Details of the range of weightings given by participants as individuals and grouped into Perspectives within each country can be fund in the individual country reports. In this report we discuss the range of weightings given by participants grouped into Perspectives, viewed across all countries simultaneously.

The analysis can be illustrated graphically, with respect to standardised groupings of mutually related criteria that were arrived at as an output of qualitative analysis, and which are referred to in MCM as 'issues'. In the figures below each coloured band indicates the extremes from the left hand end, reflecting the lowest average weighting any participant gave to criteria within the specified Issue, to the right hand end, reflecting the highest average weighting any participant gave to criteria within the specified Issue. Thus a narrow band indicates a relative degree of agreement on the importance of the criteria within the Issue.

Figure 9-1 shows the results for 36 stakeholders across all nine countries comprising the Public Interest NGO Perspective (A) and suggests that these participants showed agreement on the importance of criteria concerning the extra health benefit that the policies might lead to, and that some participants gave high weightings to societal benefits, practical feasibility and efficacy, whereas economic impact was less strongly weighted.

Figure 9-1. Weight extrema for public interest NGOs – Perspective A

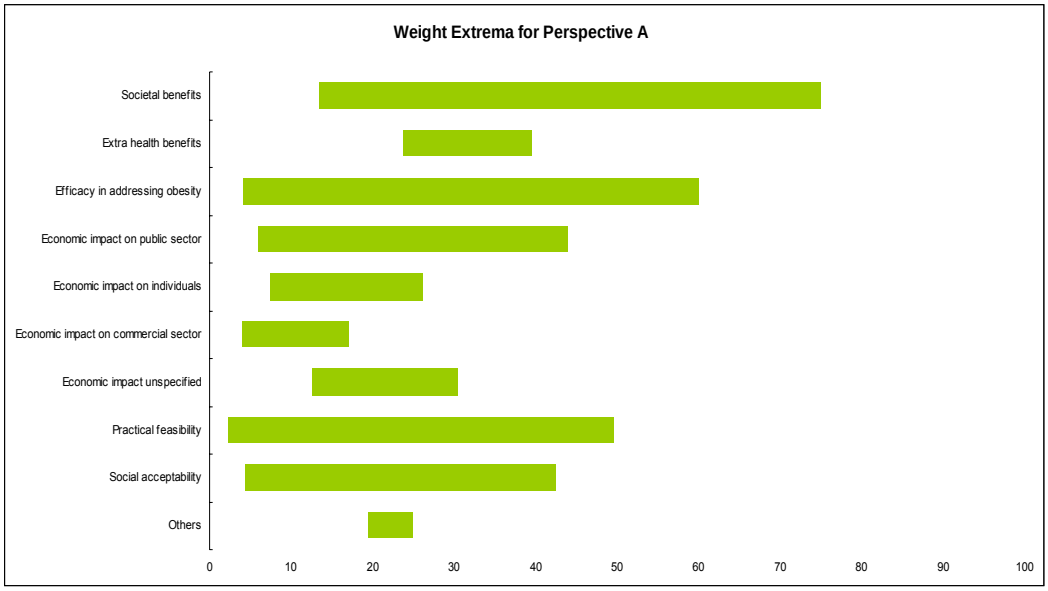


Figure 9-2 indicates that 36 stakeholders comprising the Food Chain Perspective (B) in all 9 countries tended to agree that the economic impact of policies, either on individuals or on the commercial sector, were relatively unimportant. Some members of their Perspective considered that criteria such as societal benefits, additional health benefits, efficacy and feasibility were important criteria to use in appraising the options.

Figure 9-2. Weight extrema for food-chain large industrial and commercial organisations – Perspective B

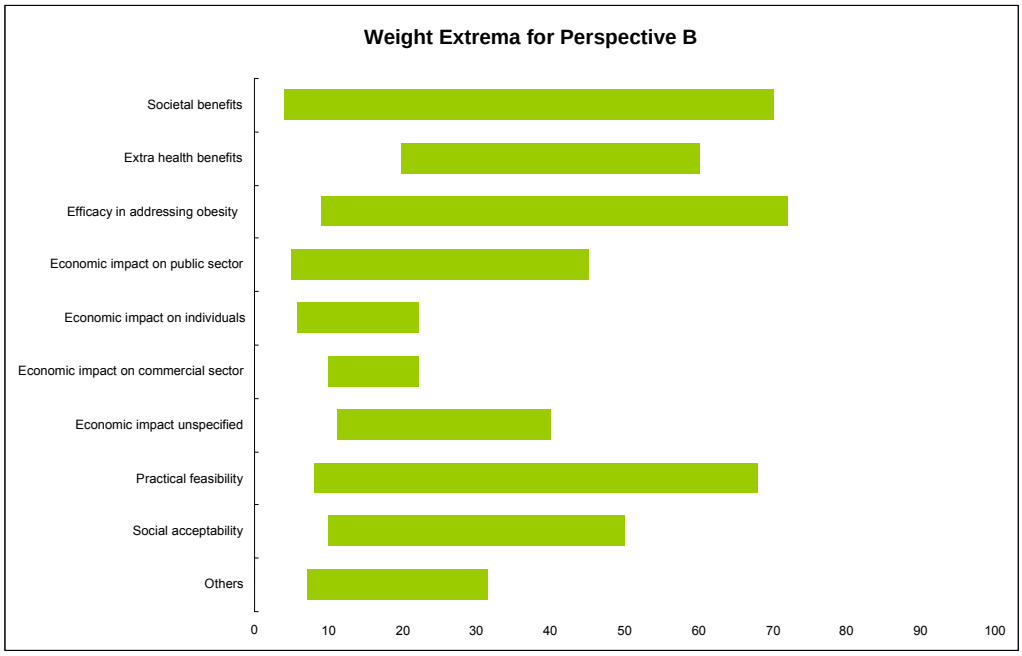


Figure 9-3 indicates that stakeholders comprising the Small Food and Fitness Enterprises (C) tended to give low weightings to criteria judging the policies on the basis of their economic costs, that societal and health benefits were more important, and some members felt that efficacy was the most important.

Figure 9-3. Weight extrema for small food and fitness commercial organisations– Perspective C

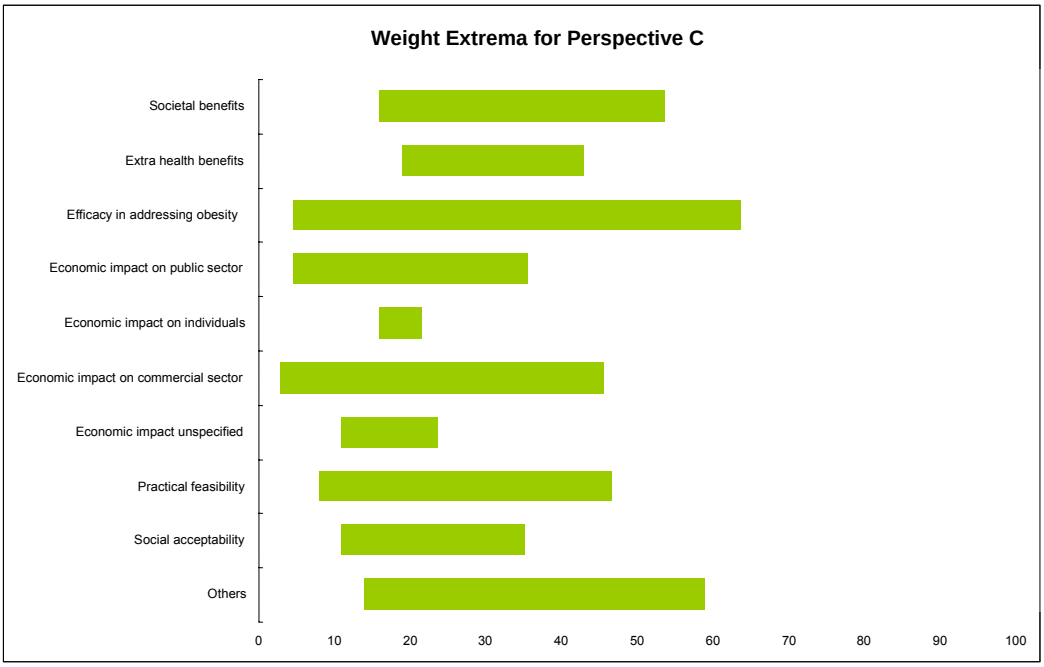


Figure 9-4 indicates that stakeholders comprising the Non-food Commercial Perspective (D) agreed that the cost of policies to the commercial sector was important, but that for many members other criteria were more important, including societal benefits, health benefits, efficacy and social acceptability of policies.

Figure 9-4. Weight extrema for large non-food industrial and commercial organisations - Perspective D

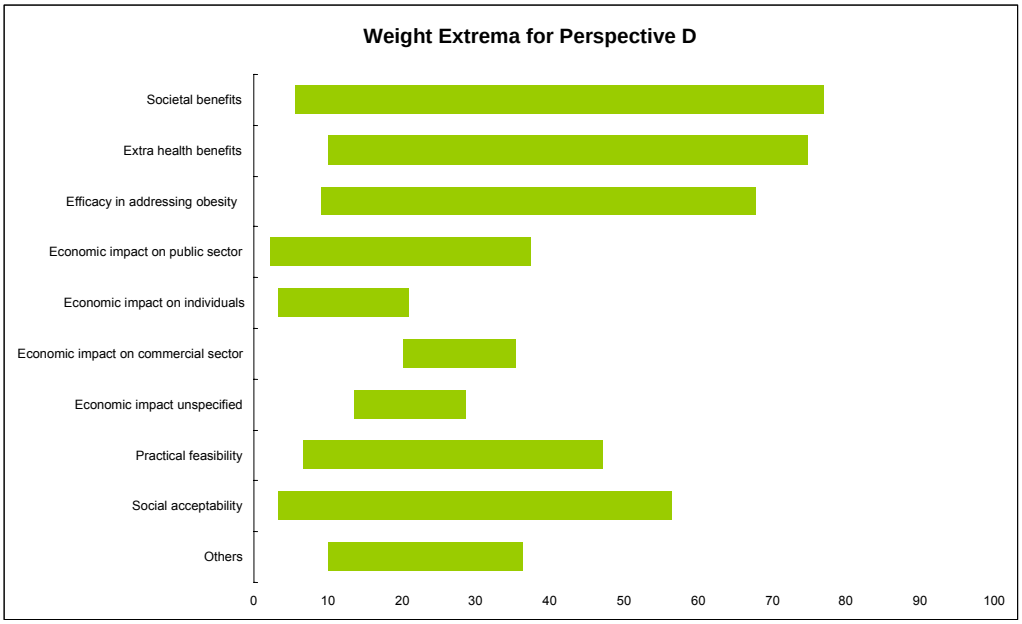


Figure 9-5 indicates that 18 Policy Makers in 9 sets of government office (Perspective E) were less concerned about the cost of the various policy options to the commercial sector or to individuals, although more concerned about costs to the public sector and non-specified costs. They were strongly agreed on the importance of additional health benefits that the policies may bring. Several were also relatively concerned about efficacy.

Figure 9-5. Weight extrema for government policy-makers - Perspective E

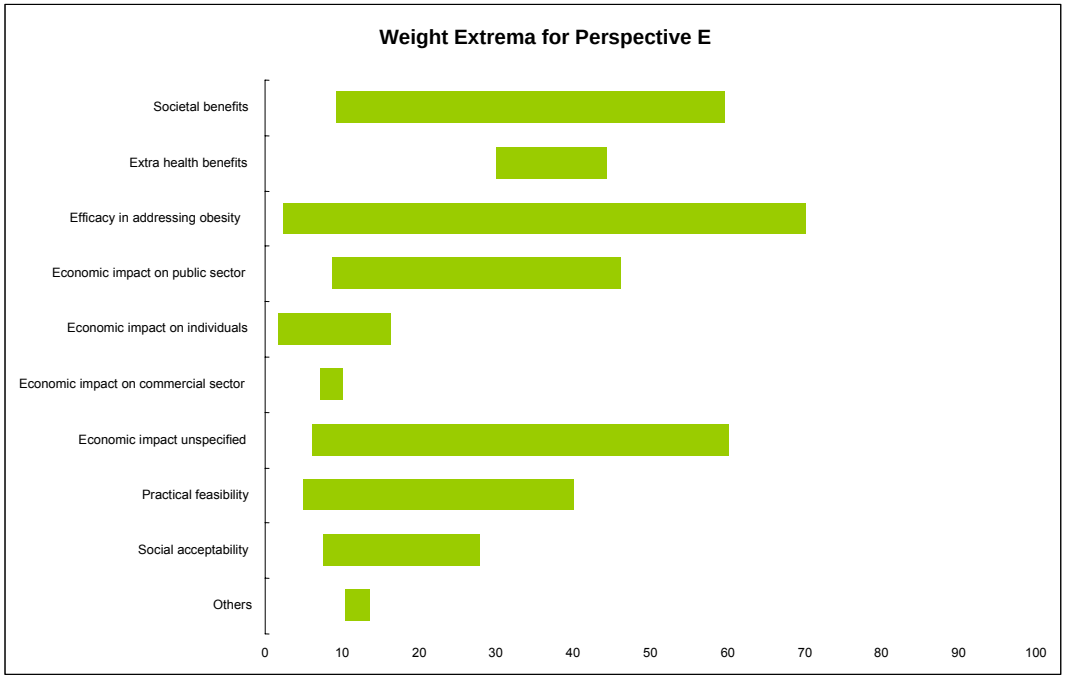
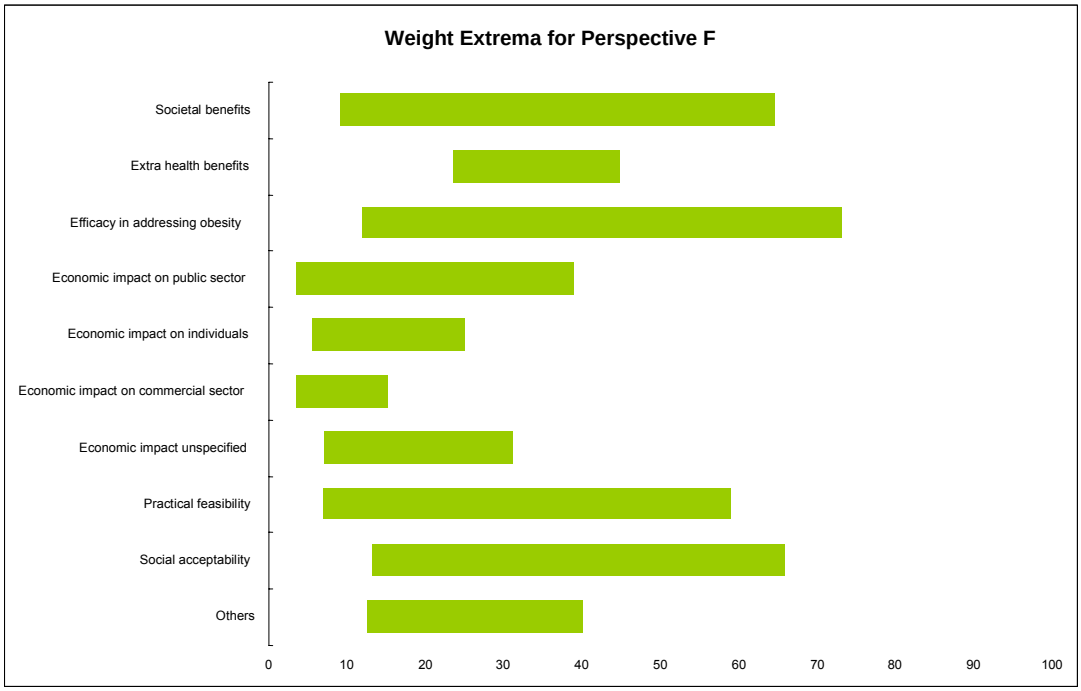


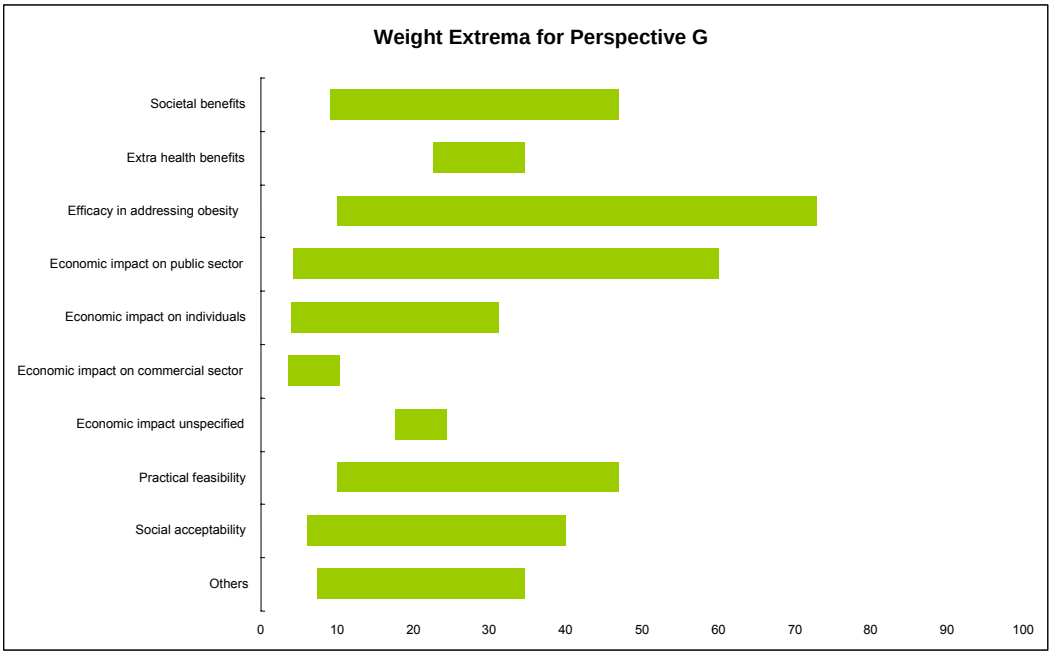
Figure 9-6 shows the weight extrema given by 27 participants in the Public Providers Perspective (F) across the 9 countries, which included local authority planners, teachers and school caterers. These participants also agreed on the relative unimportance on costs to any sector, but were agreed on the need to consider additional health benefits. Several members were also concerned about the efficacy of policy measures, their social acceptability, the societal benefits they may bring and the feasibility of putting them into practice.

Figure 9-6. Weight extrema for public providers - Perspective F



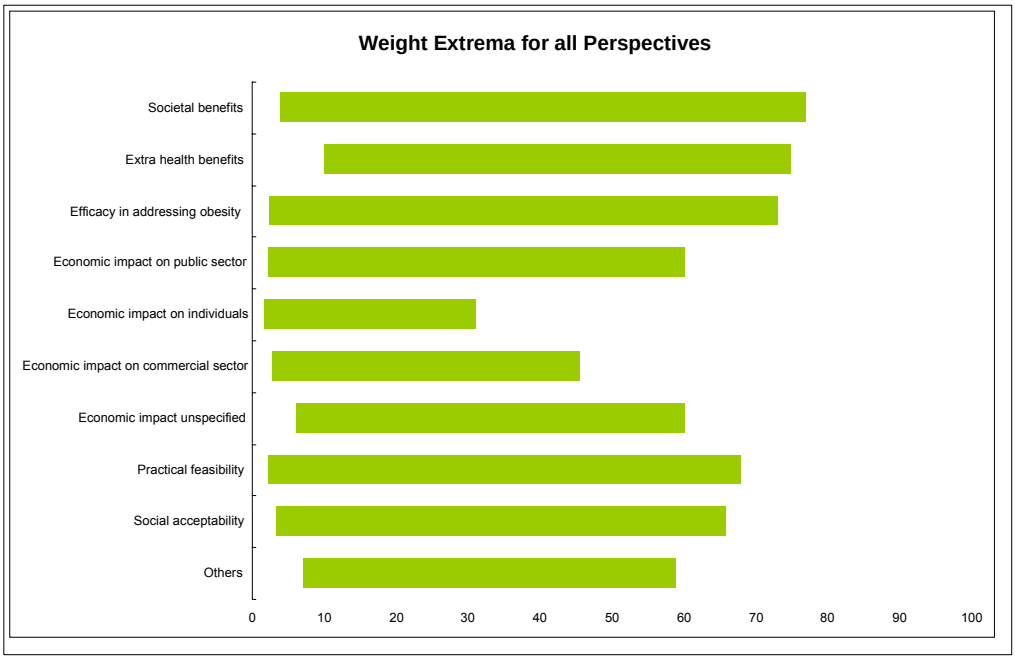
Lastly, Figure 9-7 shows the results for Perspective G, Public Health specialists, showing that those 27 interviewees across the 9 countries considered the economic costs to the commercial sector to be of least concern, while the costs to individuals was more important. The additional health benefits from anti-obesity policies was agreed to be significant, and several participants also rated efficacy and costs to the public sector to be particularly important.

Figure 9-7. Weight extrema for public health specialists – Perspective G



Taking all participants together (Figure 9-8), across all Perspectives for all countries combined, the weighting bands show a broad consensus that the costs of the various policies were less important than the social and health benefits, efficacy, acceptability and practical feasibility of the options. It is likely, given the seriousness of the obesity problem, that many participants believed that the costs of not intervening to prevent obesity would be far higher than the costs of the policies being considered.

Figure 9-8. Weight extrema for all participants



9.4 Main summary points

- The MCM technique allows participants to choose their own criteria, based on their own positions related to obesity, to judge the various policy options. However, the criteria chosen must be applied to all the options considered by the participants.
- The criteria selected by the participants were grouped into 9 different Issues: I. Positive societal benefits, II. Additional health benefits, III. Efficacy in addressing obesity, IV. Economic impact on public sector, V. Economic impact on individuals, VI. Economic impact on commercial sector, VII. Economic impact unspecified, VII. Practical feasibility, VIII. Social acceptability and IX. Miscellaneous.
- Weightings were also assigned to each of the criteria by the participants and provide further details as to the relative importance of the chosen criteria.
- When examined by perspective, good agreement was noted on the importance of additional health benefits of anti-obesity policies (such as psychological benefits and well-being) among the Public Interest NGO Perspective (A), the Policy-

makers (E), the Public providers (F) and the Public health specialists (G). Good agreement was also noted among members of the Food chain industry perspective (B) on the lesser importance of economic costs to the individual or (somewhat surprisingly) to the commercial sector, whereas in contrast, those representatives of the Non-food commercial perspective (D) showed a general consensus on the importance of costs to the commercial sector as a criterion for rating the options.

- A number of members of each of the perspectives also assigned high weightings to societal benefits (equity, benefits to environment, human rights and freedoms, etc. -- especially perspectives A & D) and efficacy (probability of technical success, sustainability, etc. – especially perspectives B, C, E, F & G), as well as social acceptability (popularity, will not meet resistance, etc.) and practical feasibility (.political or technical implementation, cooperation of agencies, etc.). Some members of the Policy-makers perspective (E) and the Public health specialists' perspective (G) also weighted economic costs to the public sector (and unspecified economic costs, in the case of perspective E) highly.
- When all participants were grouped together, weighting assigned to criteria indicated that costs were not viewed as particularly important when compared to societal benefits, additional health benefits, efficacy, practical feasibility and social acceptability of the options.

10 Appraising option performance (scoring)

10.1 Introduction

The key aim of the PorGrow Multi-Criteria Mapping (MCM) process was to analyse the views of stakeholders on the performance of policy options for responding to the growing prevalence of obesity. This section considers each of the options in turn and considers the participants' appraisals and comments, while the following section (Section 11) looks at the results more broadly, comparing the appraisals across different options, the opportunities for consensus and the areas of disagreement.

10.2 Eliciting scores for options

As described in Section 6, having identified the options they wish to appraise, and the criteria they will use to appraise the options, participants then scored each option under each criterion, using numerical scores. These scores could be based on any linear scale with which the participants felt comfortable (e.g. 0-5, 1-10, percentage), and the MCM software normalised the scores to make them comparable.

A significant feature of the MCM procedure is that it asks the participant to assign two performance scores to each option under each criterion. One score was given to reflect the performance of an option under the most optimistic assumptions and the second score represented the performance under the most pessimistic assumptions. The appraisal process also elicited comments and opinions on the options and these were recorded and used in the present report to illustrate the range of views of different participants on the options they examined.

10.3 Appraisal of options

Participants were provided with information on the options as shown under each of the option headings above (see section 8.2), starting with the brief description and expanding on the supplied text if the participant wanted clarification. In turn, participants understood the options to have certain meanings and interpretations and made their appraisals accordingly. The output from this process is a ranking of the options by each participant showing their most favoured and least favoured options, according to their scores under all the criteria they used to evaluate – and showing both the score under optimistic scenarios and pessimistic scenarios. An example of the summary output is shown below in figure 10-1, and further consideration of the results in this format can be found in the next section (section 11). In this section we consider each of the options in turn and examine their different interpretation and their rankings by the participants, grouped into perspectives.

The following figures provide examples of the principal output from the MCM process, illustrating an individual participant's ranking of the options under all criteria combined. The bar indicates the range between the upper score (score under optimistic scenario) and lower score (score under pessimistic scenario). Individual scores are normalised to a standard scale 0-100. The colour coding of those bars corresponds to the categorisation in Table 10-1 below.

Figure 10-1. Example showing scores sorted by option cluster

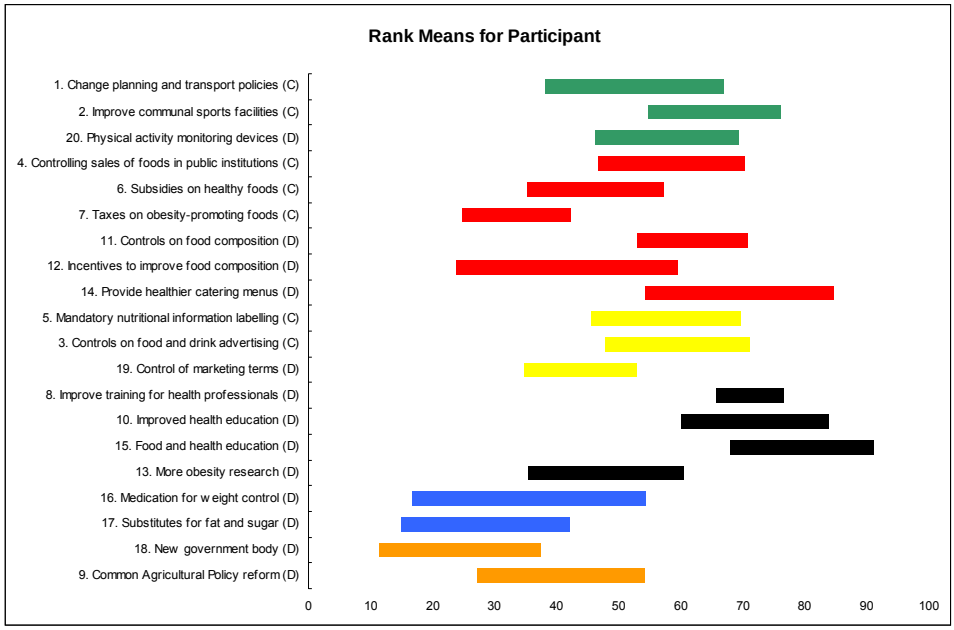


Figure 10-2. Example showing scores sorted by option preference (ranked by average score under optimistic scenario)

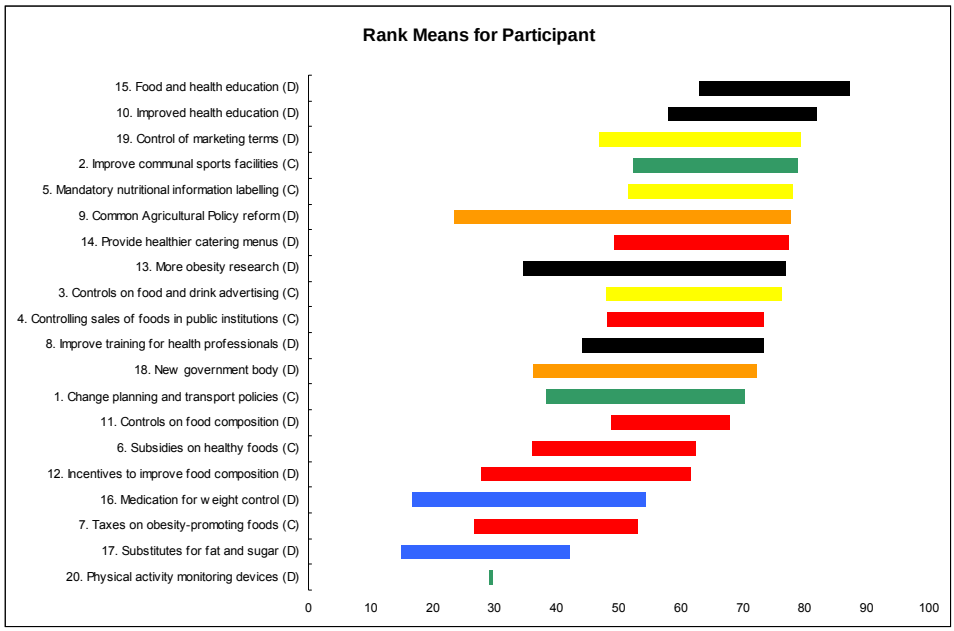


Table 10-1 Colour-coding to show clusters of similar options (reproduced from section 8.3)

Green: Exercise and physical activity-oriented initiatives
1. Change planning and transport policies
2. Improve communal sports facilities
20. Increase the use of physical activity monitoring devices options
Red: Modifying the supply of, and demand for, foodstuffs
4. Control sales of foods in public institutions
6. Provide subsidies on healthy foods
7. Impose taxes on obesity-promoting foods
11. Control the composition of processed food products
12. Provide incentives to improve food composition
14. Provide incentives to caterers to provide healthier menus
Yellow: Information-related initiatives
5. Require mandatory nutrition labelling
3. Controls on food and drink advertising
19. Control the use of marketing terms ('diet', 'light' etc)
Black: Educational and research initiatives
8. Improve training for health professionals in obesity care and prevention
10. Improve health education for the general public
15. Include food and health in the school curriculum
13. Increase research into obesity prevention and treatment
Blue: Technological innovation
16. Increase the use of medication to control bodyweight
17. Increase the use of synthetic fats and artificial sweeteners
Orange: Institutional reforms
18. Create a new governmental body to co-ordinate policies on obesity
9. Reform the Common Agricultural Policy to support nutritional targets

10.3.1 Caveats concerning the comparisons of scores within an option

Much of the rest of this section, Section 10, is taken up with a discussion of each option in turn and how each option was viewed by the participants. The discussion includes figures showing the ranks for all core and discretionary options yielded under the various Perspectives (averaged for all countries) and by the various countries (averaged for all participants in each country).

These figures represent a variation from the way in which MCM results are normally presented, and they should be interpreted with caution.[87] The extremes of the horizontal axes in the graphs reflect: (on the left hand side) the minimum possible rank if an options scores universally lowest under all criteria; and (on the right hand side) the maximum possible rank if an option scores universally highest under all criteria. The position of the coloured bars therefore shows (for each perspective or country in question) where in relation to those extremes the overall performance for each particular option lies. In this way, we can view in indicative terms, whether an option tends to be scored near the high or the low end of the performance scales under the perspective in question.

Caution is required in the interpretation of these charts because the actual scoring is conducted by interviewees, in practice, in a comparative fashion, with the positioning of each option located in relation to the others. This comparison across options is the form used in many of the charts displayed in subsequent sections of this report. For this point until the end of Section 10.4, however, the ranks are displayed option-by-option, across countries and perspectives, because this representation provides a quantitative backdrop to detailed discussions of important qualitative findings that the MCM interviews also produced. It is important that these qualitative comments are taken into account when considering the later quantitative graphic representations of all rankings taken together.

10.3.2 Appraisal of core options

As shown in Table 8-2 (see section 8.3) the core options were appraised by every participant in every country with the exception of Greece, where three of the core options were not appraised by one of the 20 participants in that country.

The core options consisted of two related to physical activity (one at general environmental level and one at local community level), two related to information (one controlling marketing and one providing label information to consumers) and three related to food supplies (one setting standards and two suggesting financial incentives or penalties). They were presented to participants in the following order:

1. Change planning and transport policies
2. Improve communal sports facilities
3. Controls on food and drink advertising
4. Control sales of foods in public institutions
5. Require mandatory nutrition labelling
6. Provide subsidies on healthy foods
7. Impose taxes on obesity-promoting foods

10.3.3 Core option 1: Change planning and transport policies

Participants expressed support for this measure but their scores tended to be tempered by doubts about the implementation. Support was generally based on the positive health and social benefits from improved environments.

> *"Time spent in a car translates quickly into body mass increase. Good transport system creates favourable conditions for the increase of physical activity. Cycling paths are also essential provided that they have been properly marked."* (Poland, insurance company)

> *"This is an option of vital importance because we are living in densely populated cities and our country experiences a huge drift of population in large cities."* (Cyprus, pharmaceutical industry)

> *"Towns need to be liveable, so that children and adults alike dare go out to the streets*" (Hungary, food manufacturer)

These changes will need comprehensive long-term planning:

> *"This is definitely a positive option but the question is whether it is attainable. I think that efficient implementation would be feasible in thirty years, and*

therefore, other efforts should be undertaken until this option succeeds. It is very important that this option targets the whole society." (Cyprus, trade union)

"This policy will definitely have a huge economic burden; this cost will certainly be covered by imposing increased taxation." (Cyprus, food manufacturer)

"…I don't know whether we can change the town planning. We will need to destroy many buildings in order to achieve it but this is not realistic. In addition the land value is huge at the moment." (Greece, farming industry)

Several participants indicated that there is a need for substantial improvements to the existing infrastructure but that more could be done to improve the use of the existing infrastructure. Existing and new structures may not be used without cultural changes:

"*I can build the ideal city to walk, but then people might spend all day sitting and watching television*" (Italy, town planner)

The optimistic notions were especially encouraged by the possibility that this option could target most of the population – including high-risk groups and children, which were important to many.

"This will have a real impact on all socio-professional groups. It'll touch the whole of the population." (France, food manufacturer)

"People with low income move less by car and thus the improved light traffic routes might benefit them more in terms of increasing lifestyle physical activity." (Finland, public service provider)

There were concerns that the effects on obesity and weight loss may not be great, and that the political and economic costs may be high.

"*Permanent increases in lifestyle activity can be achieved in many people, but the effect on weight management is quite small as the effect of physical activity on body weight is quite modest*." (Finland, non-food large company)

"*This option involves a lot different interests and thus politics are greatly involved. And politics is about compromise. Health is not an important factor in planning and it is unlikely that it would become one. In many cases it is not even possible to plan areas with health in mind as they are already planned*." (Finland, non-food large company)

"*In larger cities this will be hard to do because it would disrupt the possibilities of heavy traffic. For example, business sector would not like if the city centre is changed to walking district*." (Finland, public interest NGO)

"Planning and development is determined largely by commercial considerations… would a shopping centre discourage cars if it means customers don't purchase more than two bags of shopping? No they won't. There's an essential conflict here." (UK, public health NGO)

Overall, most participants believed that if this option were well executed it would bring about beneficial effects on body weight and health. But it was not among the highest ranked options because of doubts concerning the anticipated high costs, troublesome political decision-making processes (feasibility) and some concerns of social

acceptability were also raised. The success of the option would require a long-term vision and a strategy that put health at the forefront of changes in transport systems and redesigning the urban environment.

A cross-European comparison of Perspectives shows no apparent large differences in the scores given. A comparison of scores for each country averaging all the participants indicates that this option scored especially poorly in Cyprus, Greece and Hungary, even under optimistic assumption, while in Finland and the UK a relatively broad range of scores were given, according to the conditions and assumptions for the conditions of this option's implementation. For example, the largest manufacturing company in Italy manufactures cars, while young people in Italy are permitted to ride small motorbikes (scooters) from the age of 14.

Figure 10-3. Option 1: Rank means for Perspectives

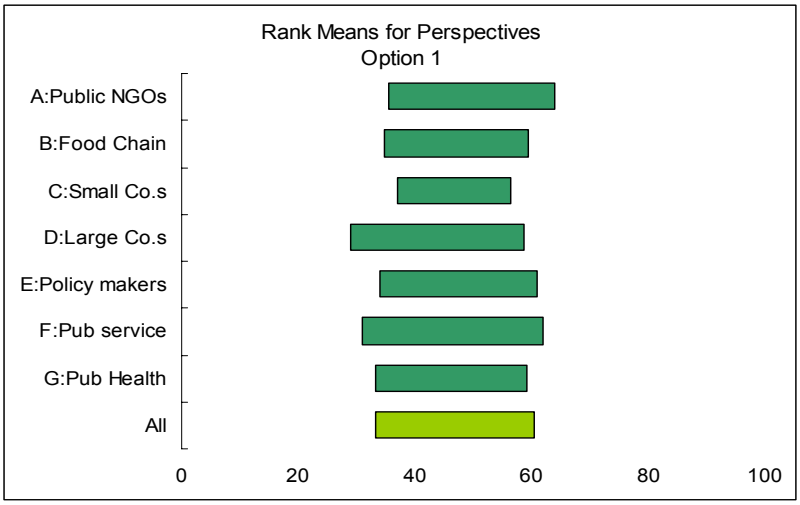
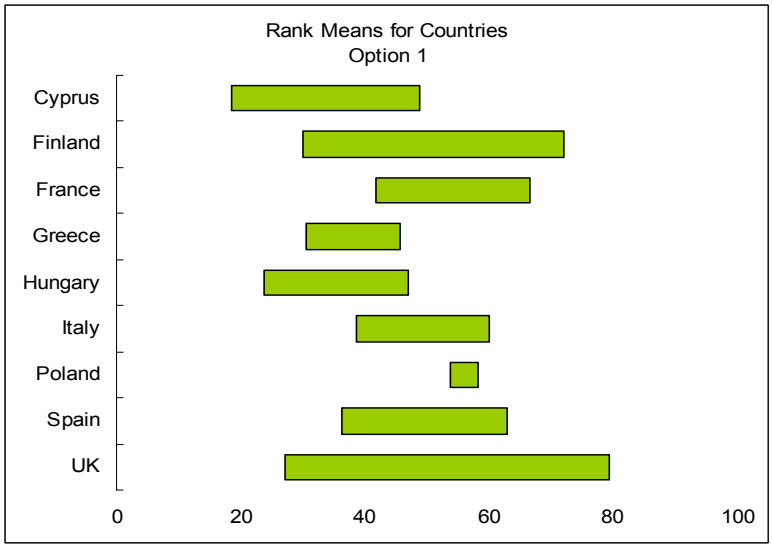


Figure 10-4. Option 1: Rank means for countries



"In other countries you can carry your bicycle on the train; in Berlin even in the metro. It proved very effective in helping people to take more physical exercise. It would be great, but in Milan it's just a dream: the tube is so crowded… In Milan cycling paths were begun and then abandoned because they were too annoying for car traffic" (Italy, health journalist)

"*Yesterday I was in Amsterdam. I went cycling around for 3 hours. Even mature people did it. It would be just unthinkable in Rome*." (Italy, insurance company)

"*If you go outside a school in Northern Europe you see 150 bicycles. If you go outside a school here you find 150 scooters and motorbikes. In Italy getting a scooter when you are 14 is something obvious, not even discussed*." (Italy, public health professional)

"It is not a problem in Poland. People walk a lot. For our country this idea is not very essential." (Poland, advertising industry)

10.3.4 Core option 2: Improve communal sports facilities

Many participants looked favourably on this option and scores were relatively high. This option appears to be politically and socially well-accepted and its impact could be readily monitored. Furthermore it may not very costly to implement, especially if existing resources are better used.

"*The goal should be to make it easier for citizens [to have] access to already existing facilities, besides building new ones. The example is school: many gyms and sporting venues are used only during school hours, in the morning, whereas in the afternoon they are deserted*." (Italy, health ministry official)

On the negative side, participants expressed concern that it may have little effect in tackling obesity prevalence, especially for more disadvantaged groups.

"I would differentiate between schools and communities here. I think it's important that schools provide these facilities but in the community the message about sport if the wrong one. It's better to build physical activity into daily lives." (UK, finance ministry official)

"…there should be a reallocation, however, of funds and priorities. A striking example is the huge funds expended by the football clubs to acquire talented football players instead of investing on building infrastructure to encourage children and adolescents to engage with the sports and therefore recruit a large number of football player candidates." (Cyprus, public health official)

The emphasis on sports was considered too narrow, with alternative forms of activity being preferred by some participants.

"We need to include diverse activities: dance, weight training, yoga, Tai-Chi." (UK, sports NGO)

"What really matters is the community effect, you do not really need huge high-tech investments. Adults should set a good example (e.g. unemployed teachers could organize and lead such sport/recreational groups for children) … A nice and enjoyable environment would attract more people to use public venues for

sport and other healthy recreational activities. Today, sports facilities are almost exclusively used by professional sportspeople, they are practically inaccessible for ordinary citizens." (Hungary, farming industry)

However, providing the facilities was only part of the package, as the cultural context also needed to be adapted:

"*The mere existence of facilities does not allow me to use them: I need time, and I need a life and a society allowing me free time*." (Italy, consumer NGO)

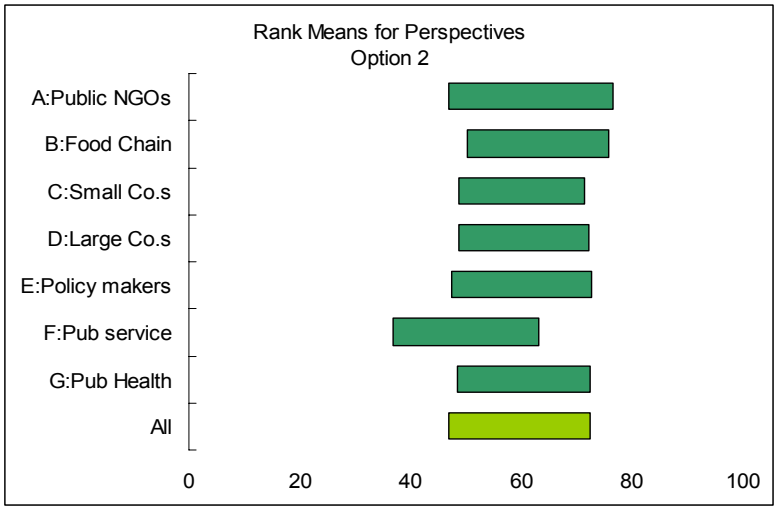
"Improving sports facilities without intervening in culture does not achieve good use of them and the facilities will be of no use, nothing will be achieved from these facilities" (Spain, school teacher representative)

"Recreation is not actually dependent on facilities but mostly on teaching." (Greece, town planner)

"People will not be thinner just by looking and admiring the facilities, but they will need to learn to use them." (Greece, food manufacturer)

In sum: most interviewees found this option useful and important for the prevention of obesity, especially if coupled with increased efforts at education and motivation.

Figure 10-5. Option 2: Rank means for Perspectives



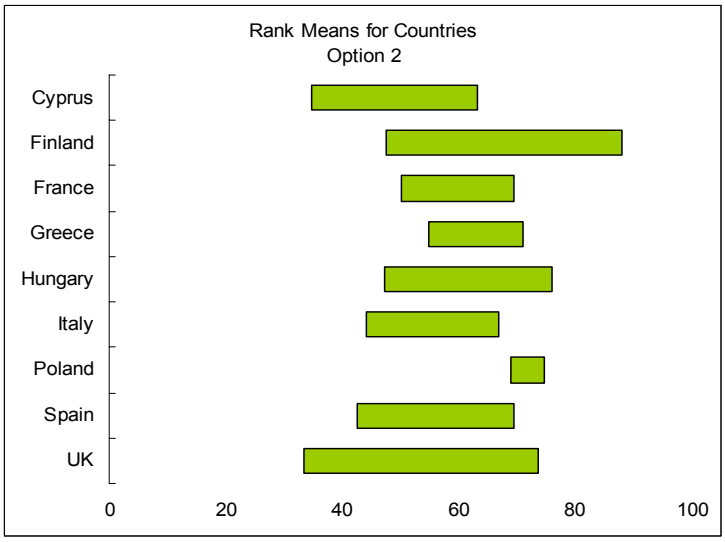
As far as the scores among the individual perspectives were concerned, there was not much variation. Lowest scores were given by members of the public service providers Perspective for whom this was a mid-raking option (see figure 11-9). This option is often promoted by food chain industry sector (Perspective B), and comments from members of this Perspective supported this, even though participants from the commercial sports and fitness Perspective (C) was not so certain:

"The basic cause of obesity is that people don't exercise enough… so anything that increases activity is actually directly addressing the problem." (UK, farming industry)

"This is more a matter of burning the fat we eat rather than eating little." (Spain, food manufacturer)

"*There are only so many people that would enjoy sport and play sport, now there's definitely capacity there that you can move into… if you want to make the biggest impact on activity in society, well that's just one part of the solution, it's not the solution. Transport and planning will have a far bigger impact, but then again, the cost will be absolutely enormous."* (UK, sports company federation)

Figure 10-6. Option 2: Rank means for countries



Interviewees in Finland, Poland and Hungary showed strongest support for this option, assuming optimistic conditions for the implementation and use of the facilities. However, variation in countries' already-established resources and facilities may influence the results in this respect.

"In Poland at present the sports facilities infrastructure is very poor. Every effort should be taken to expand it and the existing infrastructure should be made available." (Poland, farming industry)

Where facilities are available they may not be effective in encouraging healthy weights, as participants in France and Italy noted:

"…there are already plenty of facilities, they are everywhere. In all towns… gyms are everywhere, swimming pools, they are everywhere... People who are obese are depressed most of the time, they withdraw from a social life so you'll never find any in sports centres." (France, small food or fitness company))

"*Millions are wasted to build facilities that remains unused. In Rome the velodrome built for the Olympic Games has never been used after them.*" (Italy, health journalist)

10.3.5 Core option 3: Controls on food and drink advertising

This option led to a diverse range of opinions and appraisals. Among the most commonly recurring points in favour of this option were that it was not expensive to implement, that it could be put into practice relatively quickly and that it would help to promote more positive lifestyles. One participant was keen to extend advertising controls to other health-*related issues:*

> *"It would have been better if the control on food and drink advertising were integrated in a more general approach of advertisements affecting health, like the control on cigarette advertising, or cholesterol or other chronic diseases."* (Greece, public health professional)

Criticisms of the option were that it assumed a need for governments to 'parent' or 'nanny' the population, that it may not reach far enough if only television advertising was controlled, and that there was no evidence that advertising controls would have any beneficial effect.

It may be assumed that the food manufacturers would be antagonistic to marketing controls, as might the advertising industry representatives, although some recognised the need for relevant restrictions:

> *"Prohibition is not the solution, it does not lead anywhere, on the contrary, 'forbidden fruits' are more desirable. It is counter-productive. The only viable solution is the self-regulation of the advertising and food industry. Big advertisers are already conscious of their responsibilities, smaller ones should be made to realize this too. The food industry and the advertising agencies should not be vilified by the government as 'enemies of the people': a softer but more effective approach is to make them realize their responsibilities and let them regulate themselves. The government often has the impression that "big business" is not cooperating, but that's only because businessmen don't like to throw money out of the window, and they don't like to spend money and effort on programs that are completely useless (and they regard most of the recent government initiatives as such); but as far as really effective policies are concerned, big business IS willing to cooperate."* (Hungary, food manufacturer)

> *"It is total rubbish. It should not be like that. One should prove first that in fact the advertising and promotion of foodstuffs affects obesity. The implementation of such measure would violate consumer rights. Each consumer has a right to be informed and to make his own choice. If he is not informed his choices will not be genuine. Do the advertisements encouraging frequent eating of a certain product exist at all? The introduction of such controls seems to be inappropriate. Another issue is the ethics in advertising, however, control over ethics is exercises by the industry itself through self-regulatory system. The industry acts to the benefit of consumers. The self-regulatory systems – yes. Censorship – no!"* (Poland, food manufacturer)

Several participants suggested that key parts of the food industry may accept regulation (even if the advertising industry were not keen) on the basis of a 'level playing field'.

> **"***We get this nonsense, the only god is the market. It doesn't matter if we destroy the world as long as the market's there to divide up the salt grains that are left. You know, if you want a market, and I'm not against the principle of a market, but all you have to do is regulate the market to keep a fair playing field for all. That's why this sort of thing is important. If you ban advertising of junk food to children, then you've regulated the market, it's an even playing field."* (UK, school teacher representative)

> *"The food industry have indicated that they'd rather have regulation than voluntary codes of conduct, or what we call it, voluntary codes of practice. They want to be told what to do."* (UK, public sector caterer)

One food industry representative acknowledged that benefits were attainable, especially for lower-educated groups:

> *"It could actually have a larger impact on disadvantaged groups, because they have a less questioning attitude towards [advertising] messages. So it is an option that could, we can admit be slightly effective, more effective in disadvantaged socio-professional groups than others."* (France, food manufacturer)

Several participants were cautious in their support for this option, either because they felt it was unnecessary or because they felt it would not be enforceable or sustainable.

> *"When option 15 (to include food and health in the school curriculum) and 2 (Improve communal sports facilities) are implemented first, and so children are well aware of all the myths about nutrition and all the health effects of an 'unhealthy' nutrition and lifestyle, then they would not be influenced by the advertisements."* (Greece, insurance industry)

> *"Advertising is very clever. It always goes ahead the administration and always finds ways to cheat."* (Spain, farming industry)

> *"Sustainability is absolutely zilch isn't it, because a new government could come and change it, plus you've got internet and texting and all the other messages."* (UK, public health professionals)

> *"If it's a voluntary agreement... then you know for sure that loads of them are not going to do it, and they've got to compete with each other, so it'll all fall apart."* (UK, school teacher representative)

Rather than limit marketing, several participants saw the value of using marketing for positive, educational purposes, which modulated their scoring of this option. Others recognised the problems in defining what could and could not be promoted.

> *"We are the nation prone to advertising and under-educated on nutritional issues. The constraints will provide give any gains, education is important e.g. forcing producers to educate through advertising."* (Poland, insurance industry)

> *"Advertising in itself is educational, it promotes habits and behavioural changes regarding consumption."* (Spain, public health NGO)

"When all products are good or bad depending on the doses … it is very complicated to assess which products or foods would have to be controlled." (Spain, pharmaceutical company)

The application of this option was considered conditional on several factors, such as whether advertising seen by children during non-children's TV programming would be included, and whether non-TV marketing to children was included.

"Most of the advertising children see is outside of children's programming… and marketing isn't just television advertising." (UK public health NGO)

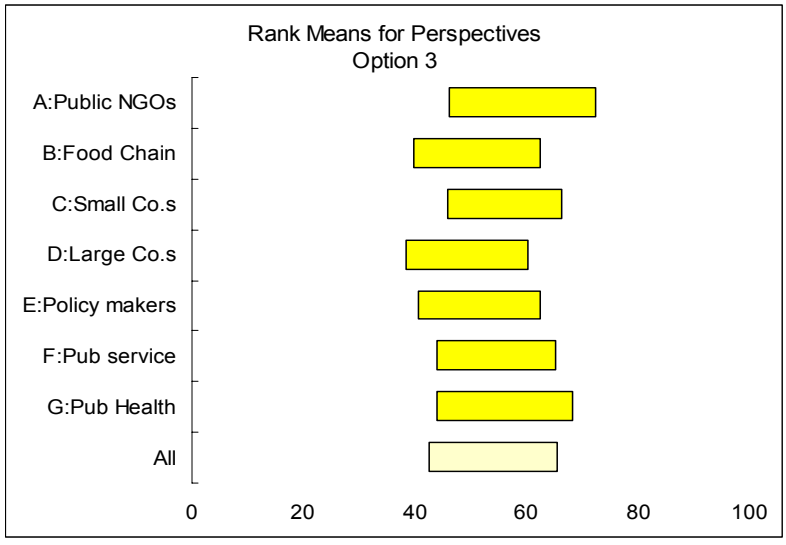
"It's not just the advertising it's marketing… things like food sales in organisations like McDonalds, with toys and parties and things like that." (UK public health NGO)

This option led to greater diversity among the Perspectives than was seen for several other options. Lowest scores for this option were given by Perspective D followed by Perspective B. Perspective D, non-food commercial operators, includes advertising agencies while Perspective B includes food manufacturers, retailers and large catering companies, all of whom may consider their interests threatened by this option, as suggested by the first quotes cited above. Advertising companies were particularly defensive of their practices:

"The UK has the strictest mandatory codes, almost anywhere in the world. But reading this [option text] you just think it is a free-for-all." (UK, advertising industry)

"The idea is idealistic, ill prepared and too restrictive" (Poland, advertising industry)

Figure 10-7. Option 3: Rank means for Perspectives



Stronger support for this option was voiced by Perspective A, which included consumer groups and public health NGOs.

"*In children, controlling advertising could be effective. Less big effects can be expected in the adult population*." (Finland, public interest NGO)

"Advertising can confuse and cause wrong ideas regarding what is a healthy food, it influences the consumption habits and the creation of myths or misleading ideas regarding a balance diet, over all it causes a major effect in the young population." (Spain, consumers' organisation)

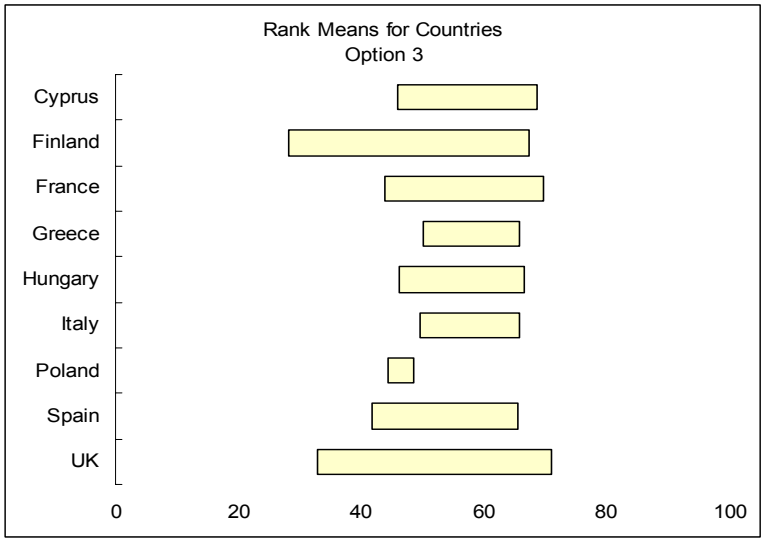
"We have to have a European-wide regulation, because at the moment we're all affected by our neighbours and the examples we're looking at, Sweden, Ireland, so-on, do not actually have sovereignty, there's no longer sovereignty over the broadcasting within national boundaries." (UK, public health NGO)

From a different perspective, a journalist (and parent) saw the value of restricting the promotion of certain foods to children in terms of reduced 'pester power':

"The benefits there are to the parents, who are not being brow-beaten. Those are quite tangible economic benefits aren't they? ... I don't care if children's television is closed down totally, if they can't afford to make any children's television programmes, I don't care about that argument. I think children watch far too much television anyway." (UK, health journalist)

With the exception of the Polish participants, there was generally consistent, strong support for this option across countries, viewed under favourable conditions, but the scores ranged downwards for several countries, especially Finland and France, indicating doubts about the success of this option under pessimistic conditions.

Figure 10-8. Option 3: Rank means for countries



"The demand in our less conscious society is shaped, to a large extent, by advertising. We cannot abandon advertising, but advertising should come along with informational values." (Poland, small health food company)

"...aggressive advertising is addressed at vulnerable people, but somehow I do not believe that [controls on advertising] would be effective. It is not a legal issue, since it is easy to find ways to bypass it; it is rather the question of self-

regulatory mechanism. In Poland, this is rather not implementable" (Poland, pharmaceutical industry)

"There should be a precise and tight normative…but Italy is not so good at respecting rules."(Italy, public health professional)

10.3.6 Core option 4: Controlling sales of foods in public institutions

Although many participants considered that this option was primarily concerned with the provision of meals services to school children, they recognised that other aspects of school food services, such as vending machines and food sold near to schools, were also relevant, and that catering in other social institutions, including kindergartens, colleges, hospitals, prisons, military services and old people's services were all relevant and, importantly, capable of both setting examples to the community and of using their purchasing power to improve food supplies.

With the primary focus on school meals, the strengths of this option were said by participants to be ease of implementation, parental support for nutritious foods, and able to promote healthier habits for all classes in the community and that extend beyond the school environment.

"This is a unique chance to change their lifelong attitude to healthy eating" (Hungary, insurance industry)

"Effectiveness can be very important in so far as the child has fewer options and the cost is relatively low." (Spain, public health NGO)

The drawbacks were identified as low effectiveness if most obesogenic foods are eaten outside school hours, of low relevance where meals services or vending machines were not in place, easily undermined if children can choose unhealthy options – but a restriction on consumer freedom if unhealthy options are banned.

"We are trying to ban smoking from public places, so why not do the same with unhealthy foods?" (Greece, sport and fitness NGO)

"Legislators have no right to ban some products when other nearby stores sell them freely. These products will have to be banned from the market as a whole otherwise they will be allowed everywhere. This strategy is against the principle of free competition." (Greece, town planner)

"Vending machines do not have a direct impact, but [this option] is part of an overall synergy of interventions. So I will put a good score because even if it isn't directly effective, it is so inexpensive and it contributes towards a coherent image and activities. It doesn't cost anything, I think the effectiveness is the coherence in this particular case." (France, public health professional

The conditions under which this option might be implemented were spelled out by catering professionals who had practical experience of implementing healthy menus in school canteens.

"You've got to engage the community: for example if there is a chip shop next to the school selling large portions to children at lunchtime. We've asked a chip shop not to serve children and he said 'You're not telling me what to do'. We

don't want local shops to go out of business, we want them to sell something different." (UK, public sector caterer)

"It's not just looking at what's for sale, it's what children bring to school, so schools have got to tie this to a whole school policy." (UK, public sector caterer)

"This is an important measure but is not feasible because food consumption cannot be controlled from the public administration. This is a measure that must be accompanied by other factors as education." (Spain, public health NGO).

Other participants also recognised the conditionality of this option in terms of the prevailing culture that encourages children towards unhealthy food choices.

"The cultural obstacle relates to the need of pleasing myself in every hour of the day and the night, having always something in my hand…The idea is: food non-stop." (Italy, health journalist)

"Some resistance may be experienced if people do not find anymore Coke or snacks, but yoghurt, milk and fruits." (Italy, public health professional)

The criteria for defining what should be included in a healthy menu were challenged by the food companies, who also expressed fears that government controls were reminiscent of the era of centralised command economies:

"This strategy is trying to categorise foods into 'good' and 'bad'. In our opinion, there are no 'good' and 'bad' foods, but only good and bad food practices and lifestyle choices. In this context, we do not understand what makes a cheese pie healthier than a biscuit, or why white milk is better than chocolate milk. We also have doubts about the criteria used to determine foods as 'unhealthy'. We believe that all legal products satisfy a number of criteria and therefore they should not be banned." (Greece, food manufacturer)

"Alcoholic beverages, coffee and tobacco should be banned, I agree with this, but the sale of other products should not be curtailed. Prohibition never quite works: if someone can't get what they want to eat during the day, they will simply buy it after work/school and maybe eat even more of it (because they've been hungry for it all over the day) … The unhealthy dishes should not be prohibited: the important thing is to give consumers the right to choose. That's democracy: it is the individual who is responsible for their own life, there is no "Big Brother" ordering them what to do or what to eat." (Hungary, food manufacturer)

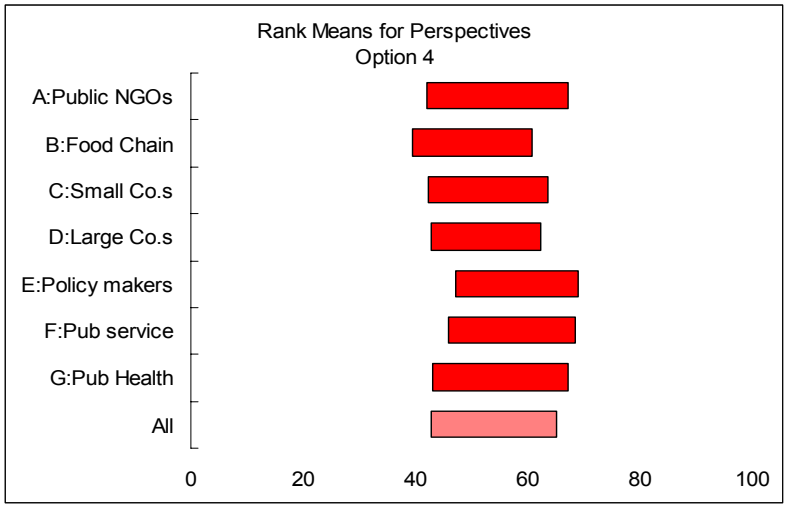
"This idea resembles a comeback to the previous system where they tried to impose on the society what should be eaten, how people should be dressed, what people have to think and to watch. It cannot be like that. We should focus on providing CHOICE." (Poland, food manufacturer)

School teachers, who were generally supportive of moves to improve catering for children were also cautious about the implementation of restrictive controls:

"When we are talking about 'healthy' foods what do we mean exactly? Who is going to decide on the criteria for healthy foods and who is going to monitor whether they are in fact healthy or not? This strategy might cause more problems during its implementation." (Greece, school teachers)

"More important is society awareness and an opportunity of making a free choice – making a decision about purchases. The top-bottom imposing of control resembles 'communist', times, the limitation of man's freedom" (Poland, school teachers)

Figure 10-9. Option 4: Rank means for Perspectives

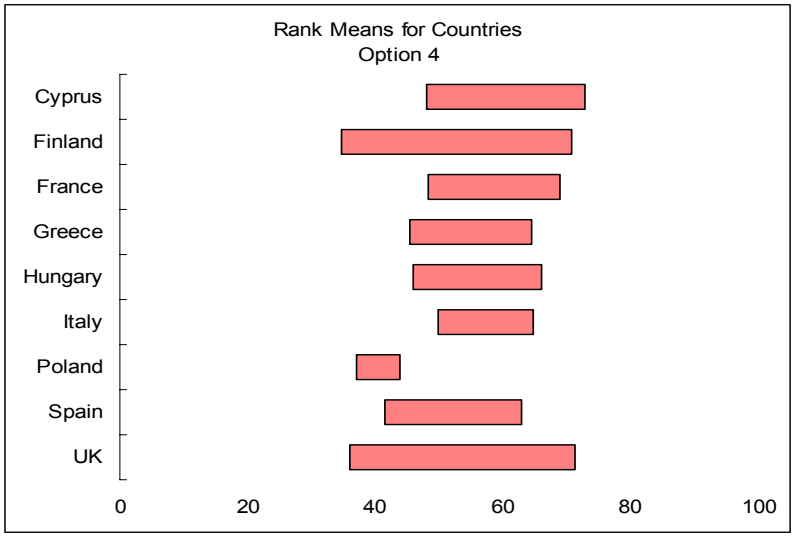


The commercial sector perspectives (Perspectives B and D) showed least enthusiasm for this option, while state-sector perspectives (Perspectives E and F) were generally supportive. The issue was one that several ministries of health recognised as being relevant to their duties:

"We've been talking with the schools, hospitals, prison service, Ministry of Defence… where there's institutional procurement." (UK, health ministry official)

"We have just proposed a similar piece of legislation, but there were huge protests, interest groups etc. It would be a difficult job to push it through." (Hungary, health ministry official)

Figure 10-10. Option 4: Rank means for countries



Country views are likely to differ according to the context: for example school food nutrient specifications exist in some countries, such as Cyprus, and are being introduced in others, such as the UK. Vending machines are more widely used in schools in some countries, such as the UK, than they are in others, such as Finland.

> "*Vending machines are a marginally used in Finland, and therefore this option may not affect body weight much*." (Finland, public service provider)

> *"There are regulations for controlling sales of foods in school canteens. A consulting committee determines the allowed food composition, e.g. in fat and sugar; for instance, foods whose caloric content in sugar exceeds 10% are prohibited. The aim is to provide healthy and nutritious foods that are, in other words, extremely important for young children. Ice cream, for instance, is available only during spring and summer months, and is only available in the second break, so as to ensure that students have a nutritious breakfast during the first break. What we have learned from this past experience is that a strong legislation is necessary, which can impose penalties in case of violations of these regulations. It is also very important that school canteens provide the same foods both for students and school personnel. [However,] this legislation should include a provision for prohibiting selling unhealthy foods at all times [from school premises]; at present the control is applied until the end of the school day and after this the prohibited foods are promoted, as there is no control afterwards'.*(Cyprus, nutrition expert adviser)

10.3.7 Core option 5: Mandatory nutritional information labelling

Most participants recognised that although some nutritional labelling was currently required for certain products, this was too limited and, more importantly, was presented in a confusing and overly-technical format.

> *"This option should be immediately introduced in a simple and understandable manner. If a survey was undertaken regarding the use of the current labelling system, I am confident that the results would be disappointing. Labelling system should be simple and targeted towards all social groups enabling fast interpretation by the consumers independently of their level of education."* (Cyprus, health journalist)

As a policy option, clearer and simpler labelling fitted well with a 'consumer choice' approach to improving dietary patterns while putting pressure on manufacturers to improve the formulations of their products. Additional strengths of this option were that was unlikely to be costly and was politically feasible and socially acceptable. A drawback expressed for this option was the doubt that it would be effective at tackling obesity:

> "*Probably will not affect the food selection that much anyway. Perhaps in the long-term it could raise people to awareness and result in minor effects*." (Finland, ministry official)

Food industry interests were also concerned that a 'traffic light' format would penalise specific products when the balance of the diet was the problem:

> *"The problem is that mandatory nutrition labelling, if it is the traffic light system, will mean that we obviously risk demonising certain foods, when all foods have a place in a balanced and varied diet."* (France, food chain organisation)

> *"One needs to reflect on the fact that the products marked 'red' will not be easy to sell and so it will have a consequence on industry."* (France, food chain organisation)

> *"You don't need to read the label and understand the detail if you've got three or four red marks on it. And that's what industry fears, that the choice is going to be so obvious that people will start to move away."* (UK, public health NGO)

There were also doubts expressed over the use of labels as a place for health-related information

> "*People do not read these, and even if they would it would not affect much their shopping behaviour."* (Finland, Perspective D)

> *"Consumers don't read labels… I believe more in educating people but I don't think that this option would help prevent obesity."* (France, ministry official)

> *"Because we are completely submerged in pictograms that we are asked to put on products, that leads to weariness… the more you put them on, the less people notice them."* (France, non-food commercial sector)

For this option to have an impact on obesity a number of conditions would need to be met, including the need to help consumers understand and use the label information, based on clear presentations on the labels. This point was understood by food chain companies, as well as by others.

> *"I think you need to combine front of pack sign-posting on key messages with back of pack detail, the back of pack being made more legible, more*

understandable, getting rid of some of the confusing factors that exist." (UK, food retailer)

"At the moment [people] have got far too much information which is basically very, very technical and you need a science degree in order to understand it, and the majority of people unfortunately read the label, misinterpret what that is telling them." (UK, large catering company)

Better understanding of nutrition issues and how these translated into food choices was suggested by many, as an accompanying option to ensure the labelling was useful. Some categories of consumer – younger people, those unfamiliar with labelling information or with language or reading problems – may be especially in need of support for this option to be effective.

"It seems to me that such system could be implemented, I think that it is a good idea, the consumer is informed and takes a conscious and independent decision. It requires good informational system supplemented with good explanation." (Poland, pharmaceutical industry)

"The information labelling without education does not help at all…" (Spain, public health NGO)

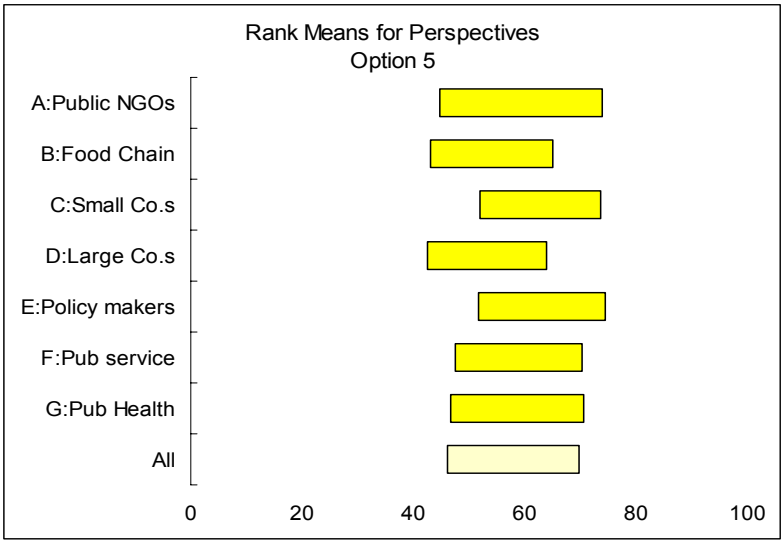
"It does not help information labelling if there is not an education." (Spain, farming industry)

"The labelling does not benefit the community, without previous information about the meaning of each concepts, it is in vain to put much information, because the effect can "scare the consumer." (Spain, large commercial caterer)

"The traffic light system does not seem to be well adapted to the French culture with this red light business…there are doubts about the capacity [of people] to react to this kind of message. I think that perhaps teenagers will be less receptive… with all the problems of rebelling against what is forbidden." (France, public health professional)

"Constant exposure to this type of information informs and increases awareness of consumers…. The traffic light system is even better because it refers to citizens of any educational background….This strategy could be linked with strategy 3 (Controls on food and drink advertising) and so intense advertisement of foods and drinks could be based on the content and the label of the product. Strategies 3 and 5 could become one or they could be two steps of the same notion." (Greece, town planner)

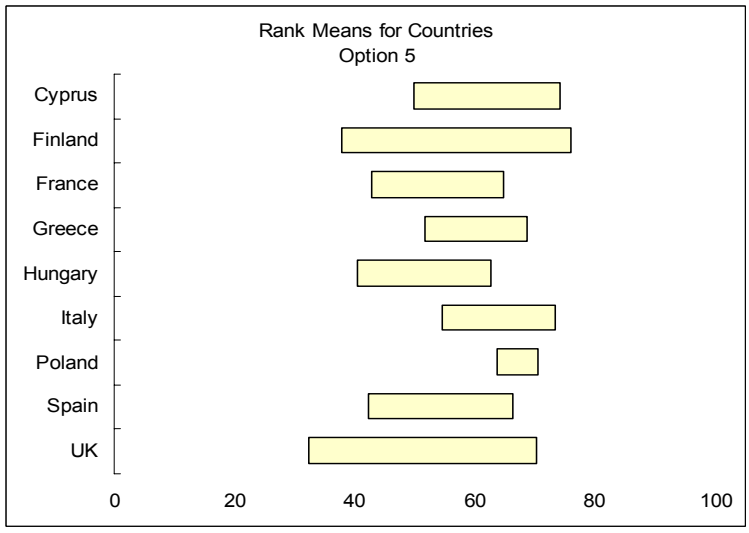
Figure 10-11. Option 5: Rank means for Perspectives



Mandatory nutritional information labelling performed relatively well for most perspectives although participants from the food chain and non-food commercial sectors (Perspectives B and D) were less enthusiastic.

> *"I believe that the implementation of traffic lights food labelling system is erroneous, it is enough to have full and complete nutritional information, with full nutritional and calorific values specified; I do not agree with such unequivocal labelling, the marketed products used in the balanced diet do not represent health hazard."* (Poland, food manufacturer)

Figure 10-12. Option 5: Rank means for countries.



Cyprus, Italy and Poland all scored this option highly – and comparison with figures 11-13, 11-18 and 11-19 in Section 11 shows that this is upheld for the within-country comparisons of options, where all three countries list this option among their top five most favoured options under optimistic conditions.

10.3.8 Core option 6: Subsidies on healthy foods

The use of public money to support the consumption of healthier foods received a mixed response from participants. Most were concerned at the effectiveness of price as a mechanism for influencing consumption patterns, and about which foods would merit subsidy and which would not.

> "*Pricing policy is a powerful tool to change behaviours*." (Finland, public sector services)
>
> "*Price is an important factor when people choose their foods*." (Finland, non-food commercial sector)
>
> "*Vegetables are now expensive and if they become cheaper, people will buy them. Price is an important factor affecting shopping*." (Finland, public interest NGO)
>
> "*Price is not a major determinant of shopping and thus will not change behaviour. Vegetables are already very cheap*." (Finland, ministry official)
>
> *"If it is related to fruit, vegetables, fish, chicken, meat, great! If it relates to foods with health claims, well frankly isn't it better to eat an apple than a yogurt fortified with vitamin D with health claims."* (France, ministry official)
>
> "*Healthy food means nothing. Biological means all and nothing. Even macrobiotic food gets pollution from the air*." (Italy, public health NGO).

The use of public money to influence personal choices was questioned, but some participants connected this option with the option on CAP reform, as both are concerned with the use of support systems for food supplies:

> *"Every artificial intervention of the state in the product price market is inappropriate. The free market should decide. I am against subsidizing anything, due to the fact that in the market economy such tools as artificial price differentiation should not be used."* (Poland, large food retailer)
>
> *"At the moment there are very few subsidies applied to fruit and vegetables. In fact the EU expenditure in fruit and vegetables is largely involved in removing them from the market place, not providing them to the market place, so we want to see a rationale in any continuing subsidy arrangements which switches from the fat, sugar, oils basis to the healthier fruit and vegetables."* (UK, public health NGO)
>
> *"The whole of the food chain has been involved in the last half-century with subsidies on the wrong things… we have this system which has historically subsidised the raw ingredients of junk food."* (UK, public health NGO)
>
> *"I think that it is very difficult to start campaigns promoting fruit and vegetables when people have economic problems and cannot buy them, at the same time we subsidise products that have no obvious effect on health."* (France, public health professional)

Subsidies were also considered a target for manipulation by industry, with a potential for corrupt practice.

"A very bad idea, incredibly expensive, there will be many ways to abuse the system. It may have positive effects, but at an incredibly huge cost." (Hungary, finance ministry official)

"Whenever you get government intervention, you get huge lobby groups who try and sway the nature of the intervention towards their own interests… and it's a huge problem with all government interventions …There are huge interest groups, and farmers and the pharmaceutical industry and the aerospace industry and defence, and they're all a nightmare in terms of trying to grab hold of government policies." (UK, finance ministry official)

"I am in favour, but I have concerns about the honesty in the implementation of such idea, I am against distribution of money without control. It is also important what will be retail price at the point of sale, whether the seller does not consume the subsidies through higher margins." (Poland, insurance industry)

"Lovely idea, but the subsidy system would cause more damages – temporary effect but creating opportunities for many abuses." (Poland, advertising industry)

As with many options, a successful strategy requires a consumer education and health promotion for maximum benefit.

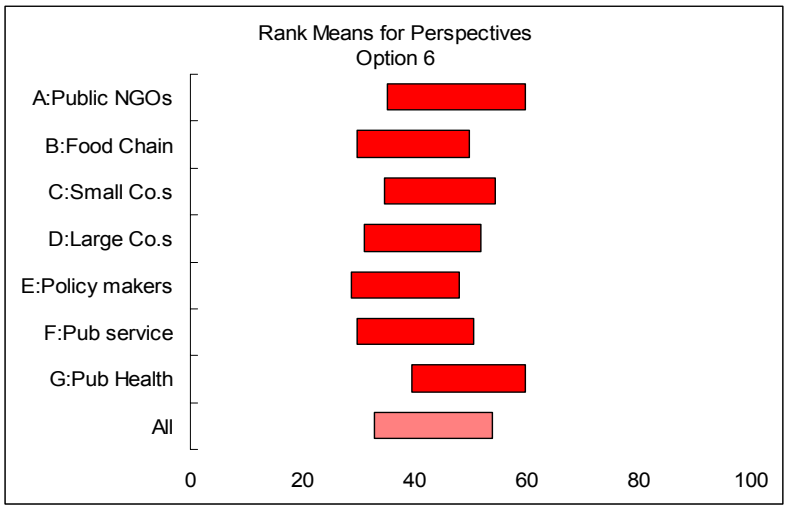
"People react quite sharply to price changes. I don't know, how this could be put into practice, but if that is possible, it would surely work: price is a decisive factor in consumer choice of course. It has to be communicated effectively to avoid traps: e.g. cheap products often have a negative connotation, people should be told, that these products are cheap because they are healthy, and not because they are of bad quality or anything." (Hungary, commercial caterer)

"*All marketing policy for traditional Italian food has as its slogan the term Quality, thus raising the price of these products. Therefore, if people go to the supermarket and see lower price, they think these are poor quality products, not genuine. People buy the most expensive things with the idea they are the best*." (Italy, nutrition expert adviser)

"*In Western Countries food is largely available, easy to get for people. Thus the point is education.*" (Italy, health journalists).

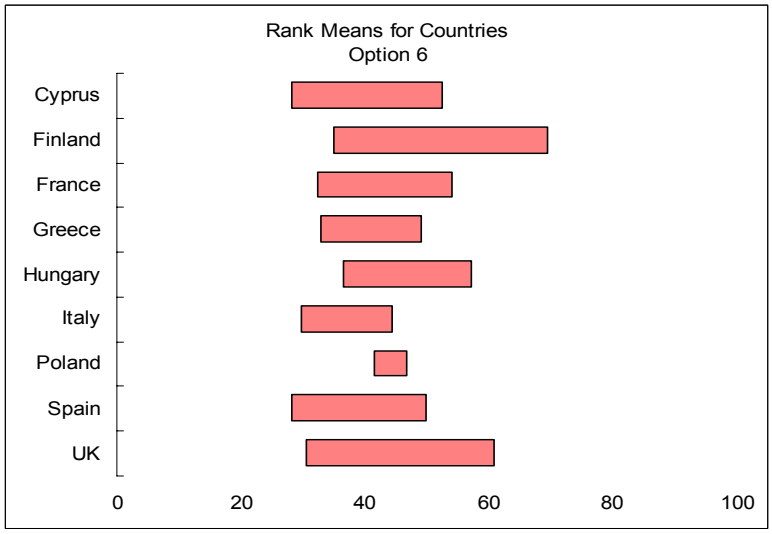
"*But you must have a cultural policy to make this policy accepted*." (Italy, school teachers)

Figure 10-13. Option 6: Rank means for Perspectives



While workers in public health (Perspectives A and G) were broadly in favour of this option, the food chain and those in public services (Perspective B and Perspectives E and F) expressed some doubts on both the principle of subsidies and their practical implementation (see quotations above).

Figure 10-14. Option 6: Rank means for countries.



The contrasting patterns in the country profiles may in part be due to local market conditions for fruits and vegetables. These are considered relatively cheap in some southern European countries, such as Spain, but relatively expensive in northern countries such as Finland (see quotations above).

> *"Healthy food is not expensive in Spain and it has been proved that affordable prices have not promoted consumption."* (Spain, insurance industry)

10.3.9 Core option 7: Taxes on obesity-promoting foods

This option was interpreted similarly to the previous option concerning subsidies for healthier food, as being part of a 'stick and carrot' set of policies using financial interventions to alter food prices. Doubts were expressed over the use of any market intervention strategy as well as problems defining what should and should not be taxed. Perhaps inadvertently, one food company representative showed that taxation might actually work in persuading companies to reformulate their products:

> *"What I fear most is a kind of 'parrot's ladder', which basically means that an item is defined as encouraging obesity, so it is taxed; so I invent a new item, I change the recipe of my biscuits so that it is no longer subject to the tax, 6 months later new rules and my biscuits are taxable [again]. So I invent a third [recipe], there is a sense of running in front to avoid the tax, to chase the subsidy, which does not seem very healthy to me."* (France, food chain company)

One of the specific concerns with the taxation option was the impact on low-income people, for whom food costs are a significantly greater part of their total expenditure than the average.

> *"I think it's a very regressive tax because it's taxing people with less money, because people with less money are more likely to buy high fat, high sugar foods. And also, I think the price [effect on] demand for fat is probably pretty low, I think it's a pretty elastic demand for fat, so I don't think it'll make much difference."* (UK, insurance industry)

As with the option to subsidise healthier products, the measures should be supported with education and health promotion interventions.

> *"I think there's an argument that unless you change people's awareness and understanding of the issue, then what you're actually going to do is prejudice lower income families... whose diet actually is traditionally less healthy, and is more about processed foods. So unless you persuade them to change first, then there's going to be an adverse impact, financial impact on those people, which seems to defeat the object of it all."* (UK, food retailers)

> *"Strategies 3 (Controls on food and drink advertising), 5 (Mandatory nutritional information labelling) and 7 (Taxes on obesity-promoting foods) could be parts of a common strategy with 3 different steps."* (Greece, town planner)

> *"This strategy could be combined with nutritional labelling or the use of the traffic light system and therefore those products that are unhealthy could be labelled with a red 'unhealthy' sign. So it will be up to the consumers to buy them or not."* (Greece, sport and fitness NGO)

Some participants recognised that food products were already being taxed at differential rates through the Sales Tax or Value Added Tax system which impose a purchase tax on specified foods and other products:

> *"We already have different VAT-rates for different classes of products, so the system could accommodate the implementation of the option. It should be clearly defined which products get into which group and why. Theoretically, there is*

nothing wrong about influencing people's choices through the tax system." (Hungary, finance ministry official)

"It's a question of how selective you could actually be and what criteria would [apply to] one band of VAT against another band of VAT, and then what do you classify as unhealthy and what do you classify as healthy? I'd see quite a lot of (a) political, and (b) practical problems in introducing something of this nature." (UK, large catering company)

"For example, VAT of products in Greece is not the same in all areas. Several areas and small islands have 11% VAT instead of 19% which exists for the mainland. Therefore, several problems will emerge and the computing of such an attempt will be extremely time-consuming." (Greece, town planner)

Both the government officials expressed fears that taxes would encourage tax avoidance, unless the taxes were uniform within the EU:

"Everyone will be going over to France to get their chocolate, like there are people going over to get their cigarettes or wines or whatever." (UK, health ministry official)

However, taxation was supported if it provided funding for health promotion:

"It's not necessarily that the tax would have a direct effect in achieving its objective and discouraging consumption, but we can use that tax revenue as a source to fund some of the [health promotion] activities that otherwise people will say we can't do." (UK, public health NGO)

Figure 10-15. Option 7: Rank means for Perspectives

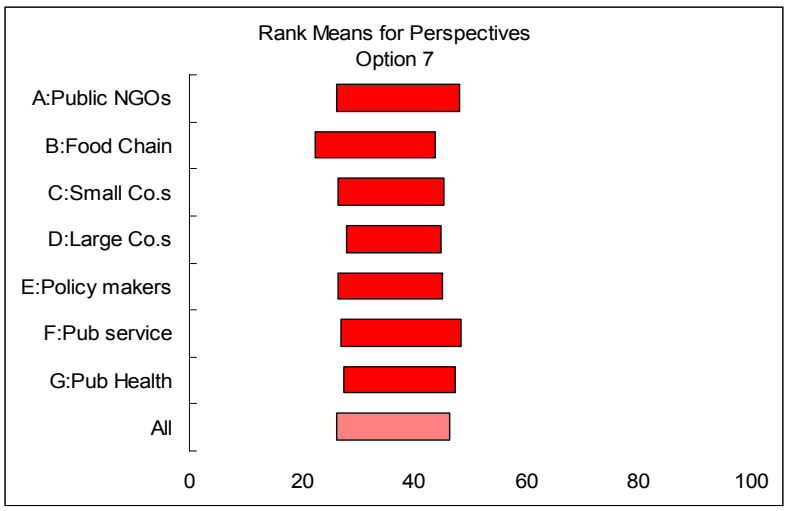
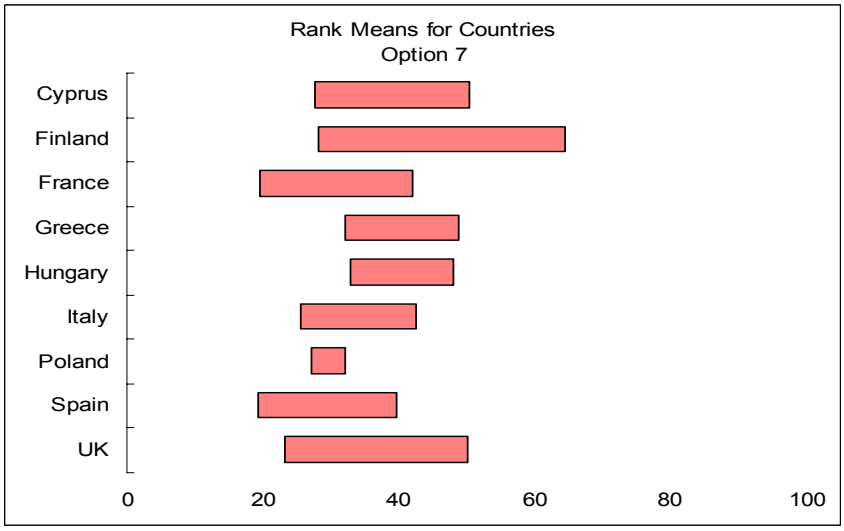


Figure 10-16. Option 7: Rank means for countries



Differences in country perspectives may be due to the prevailing food costs and taxations systems already imposed, and the relative cost of food in household expenditure. Producer interests in food prices may also shape the national perspectives, as in this case from France:

> *"Taxing high fat foods: I am from the Périgord [region]: my duck fat, my foie gras; listen you make me want to cry! It's on fat that is absolutely good for you…but it is just a question of quantity."* (France, small food and fitness companies)

10.4 Appraisal of discretionary options

These options were offered to participants for appraisal, but in many cases they were rejected by significant numbers of participants. For details on the proportions of participants and the missing Perspectives for each of the countries in respect of option appraisal, see Section 8.3, tables 8-2 and 8-3.

10.4.1 Discretionary option 8: Improve training for health professionals

This was a relatively popular option, with few voices of dissent. However, various interpretations were put on this option in relation to the type of health workers needing training, the skills they needed and the clients who would benefit. For example, some participants wanted to ensure the training focussed on nutrition, while one felt that a new cadre of health workers would be needed to tackle obesity:

> *"Improve training in nutrition, not in obesity prevention and diagnosis. It's a game of symptom treatment, while most health professionals have no training in nutrition."* (UK, health food company)

> *"I think that it will be effective if health professionals have better training in nutrition…so I think it's a very important option."* (France, health ministry official)

> *"Doctors receive nutritional information, but they never put it in practice, because nutrition is seen somehow as a second-rank science. Not only in Italy."* (Italy, nutrition expert adviser)

> *"It's not just training current health workers. There needs to be a whole new tier of behaviour change counsellors that can assist professionals."* (UK, sports NGO)

Generally, the strengths of this option were that training would be relatively easy to organise, and that health workers carry significant authority in primary care and health promotion, so that members of the public would take their recommendations seriously. A weakness was the need to reward medical practitioners when they undertake preventive work.

> *"Improving training of health professionals will enable detection of high risk groups. It would be important to emphasise the training in medical specialists that are not directly related to obesity treatment. Devoted well-trained health professionals can have a huge impact on individuals in several settings – away from their medical offices. Health professionals are the professional group that particularly organise or actively participate in educational meetings that target individuals and therefore they must be well trained and skilled."* (Cyprus, trade union official)

> "*People will view this as a reasonable option and it does not cost a lot. Therefore it will be fairly easy to decide and implement*." and "*If professionals are given enough resources for preventive actions, then the effects would be really good as the health professionals' network is so wide*." (Finland, public health professionals)

> *"The problem is not that physicians do not get the right kind of training. Rather, the trouble is that they do not use their knowledge, as the health care system provides too few incentives for them to do so. At present, doctors and hospitals are not interested in prevention since at present, the treatment of diseases is much more lucratively financed by the state health insurance authority than is prevention."* (Hungary, public health NGO)

As with many of the options, a positive appraisal for this was conditional on several other options also being implemented, with health workers being the last resort once obesity is established. Furthermore, training is more than theoretical, it needs to be put into practice and that may require further resources.

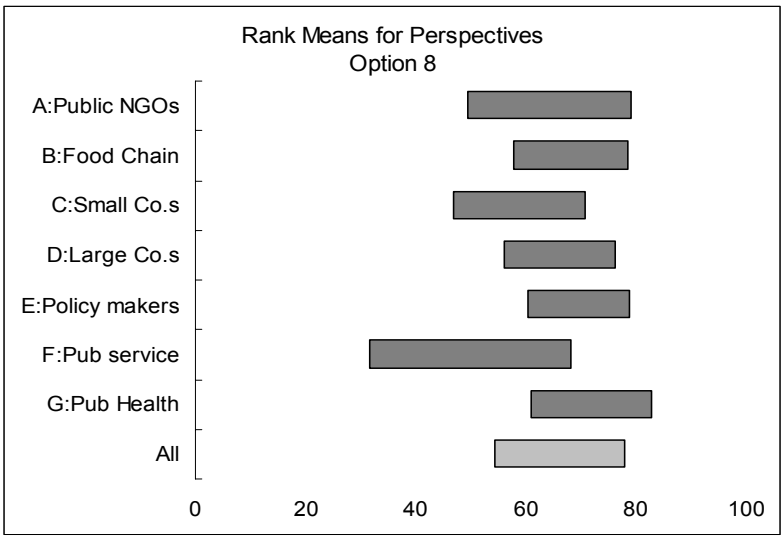
> *"I was a health visitor once and it's good but it's very time intensive. I think for clinically obese, you definitely need a targeted training force to deal with them ...but I think the over-riding things are the food industry, the social marketing and the big players... [My score for this option] would be low unless it's very firmly targeted on those who are clinically obese and in need of real help..."* (UK, public health professional).

> "*This option should be part of a general reshaping of society: if everything remains the same, the benefits would be limited; if everything is reshaped, then the role of doctors would be effective. But the contribution of the health system to*

the well-being of individuals is only around 20%. Environment, education, capabilities matter [more]." (Italy, trade union official)

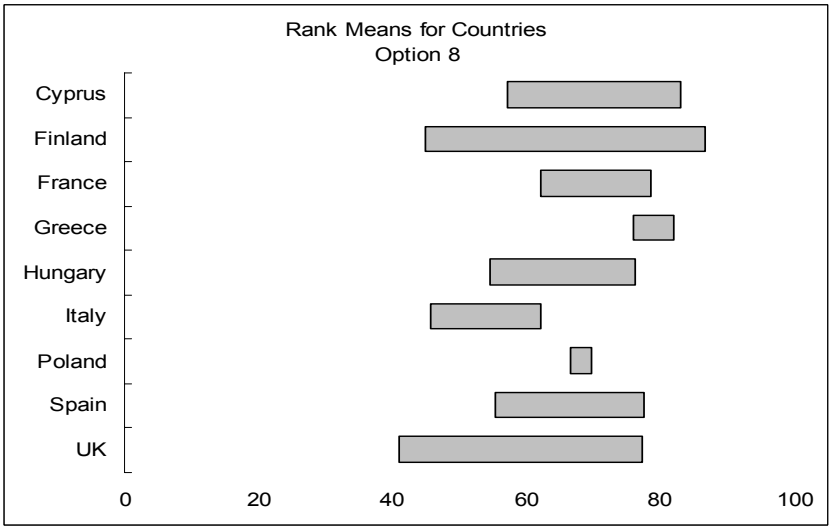
"I think there's a reality issue here, in costs… the average GP has only six minutes to see their patients." (UK, advertising industry)

Figure 10-17. Option 8: Rank means for Perspectives



All Perspective groups scored this option well, under optimistic conditions. The apparently lower-scoring Perspective, public sector workers (Perspective F), gave this option a relatively high ranking compared with other options, putting it seventh of the 20 options offered (see Section 11, figure 11-9,) – indicating the caution needed when interpreting the comparative figures here.

Figure 10-18. Option 8: Rank means for countries



High scores were also given by most countries in their overall average ranking, although Poland put this option sixth and Italy tenth of the options offered. Variations in scores

may reflect different health care delivery systems and the location of health promotion services (e.g. in the education sector rather than the health sector) in each country.

10.4.2 Discretionary option 9: Common Agricultural Policy reform

The majority of participants declined to appraise this option, with some expressing their ignorance of the complexities of the Common Agricultural Policy and some stating that recent reforms meant that no further reform was likely in the near future, and therefore the option was not feasible.

> *"It's such a complicated policy that understanding it is mightily beyond… well me, anyway."* (UK, finance ministry official)

> *"The common agricultural policy was already reformed and approved in 2003, which is why this is not a feasible option."* (Spain, farming industry)

There has been some debate about the impact of the CAP on prices, especially at consumer level. The evidence that fruit and vegetable prices might be artificially high because of CAP measures has concerned Public interest NGOs for some years, and the representatives were keen to put health criteria at the front of EU policies:

> *"One of our main campaigns is to have the CAP scrapped altogether. It should be replaced with a more consumer-friendly food policy."* (UK, consumer NGO)

One food manufacturer argued that while a reformed agricultural policy regime in Europe might produce less meat and dairy products, which could be more expensive and might result in reduced consumption on animal fats, reform of the sugar regime would almost certainly produce sharp reductions in the price of sugar in the EU, which in turn might result in the food industry using more rather than less of it. Consequently, if CAP were reformed in ways that triggered a sharp reduction in the price of sugar, or for that matter saturated fats, there might be a distinctive case for a transitional tax, to try to ensure that the price change did not aggravate the obesity problem.

Other contextual conditions also affected participants' views on this option. For one participant, CAP reform would have a small effect on prices and would not affect purchasing patterns on its own:

> *"Necessary condition but not enough to change habits, this does not mean that automatically people reduces the consumption."* (Spain, finance ministry official)

A representative of food retailers believed other factors would have a greater impact on prices:

> *"It's not necessarily the primary production that's an issue, it's what you then do with it in terms of the products."* (UK, food retailer)

Figure 10-19. Option 9: Rank means for Perspectives

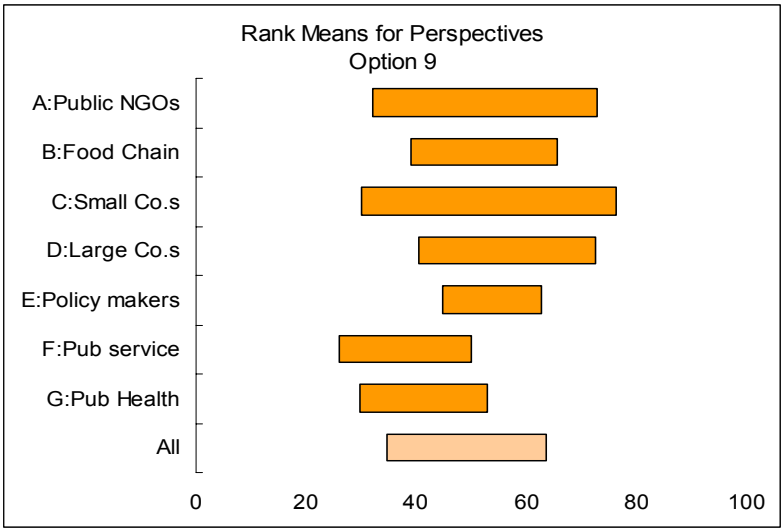
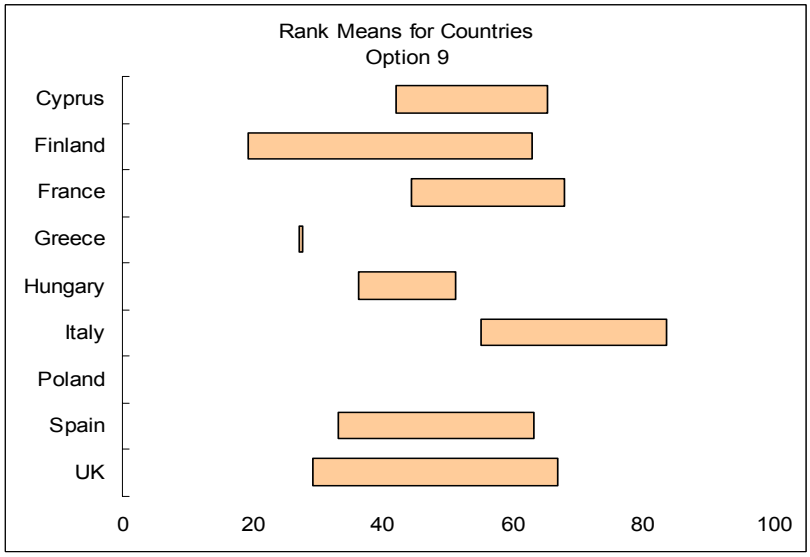


Figure 10-20. Option 9: Rank means for countries



The small numbers of participants who scored this option makes cross-Perspective and cross-national comparison unreliable.

10.4.3 Discretionary option 10: Improved health education for the general adult population

This option, along with that of school health and food education (option 15) was amongst the most frequently selected of the discretionary options offered to participants. The two options also scored highly, being among the top five ranking options (under optimistic assumptions) for all Perspectives and virtually all countries.

One of the advantages of this option is that nobody is against it: health education is part of general education and should be offered to all as a right. Health education also fits into

the prevailing market-led 'consumer choice' model which underpins European economic and political ideology.

The main problems expressed with this option were in its realisation. The provision of health education alone does not necessarily empower individuals to actually make the healthy choices – especially if there are cost considerations in choosing, for example, a diet of healthier food items or gaining access to a fitness club. In these circumstances health education can lead to a widening of health inequalities as those social classes that can afford to follow the recommended advice do so, and those who cannot afford to follow the advice fall behind.

> *"In Greece there are no concerted efforts as regards this strategy. Usually the ones who are interested in dietary issues are those of high socio-economic status, so currently information reaches those who have better access to this kind of education. On the other hand, people with low SES are still following unhealthy diets and lifestyle."* (Greece, health journalist)

A second problem lies in the potential corruption of health messages for commercial purposes, such as can be found in respect of health claims for food products, or the weakening of health messages through contradiction by apparent experts.

> *"People have wrong information or nutritional information due to the advertising and to erroneous concepts, people have strange ideas, special manic, a diverse information but very confusing at the same time… there are different opinions, there is such a diversity of concepts that there is a sort of 'mental pastry'."* (Spain, small health food company)

> "*Food education is the most important thing, but it takes a long time to re-educate people… [but] some TV programs dealing with nutrition should be kept under control, because they say everything and its opposite.*" (Spain, sport and fitness industry)

> *"The option is very important. This is indeed the most efficient way to change people's way of life, to promote a healthier way of life. But it's a very tricky thing – one has to be careful so that private firms, sponsors etc. do not promote their own agendas and products under the guise of promoting a healthy lifestyle in general."* (Hungary, finance ministry official)

> *"The present situation is chaotic, people receive a lot of unstructured information on health issues, often conflicting pieces of information…. There should be some overall authority to coordinate the flow of information, but I really don't know how to bring this about in practice."* (Hungary, sport and fitness NGO)

> *"Most people know, at least vaguely what they should do. Almost everybody I think knows broadly speaking what they should eat. It's much more about how do we protect our citizens from the bombardment of messages telling them to eat all the other stuff."* (UK, school teachers)

Most significantly, perhaps, and the reason for the general approval of this option, is that many of the other options depend on a well-informed public for their success. Teaching citizens about health may not be enough in itself, but it forms an essential component of

almost all options as well as being a significant measure in making the other options more socially acceptable and politically feasible.

> *"If society know how to have a healthy life, the set of measure that technicians want to introduce will be more beneficial."* (Spain, large commercial caterer)

> *"In adults, education does not particularly help. What is intended with a public health campaign is to inform with the objective to change the perception, to change the attitude, but [at best] it influences the perception of the risk, but it rarely achieves a change of attitude."* (Spain, trade union official)

Figure 10-21. Option 10: Rank means for Perspectives

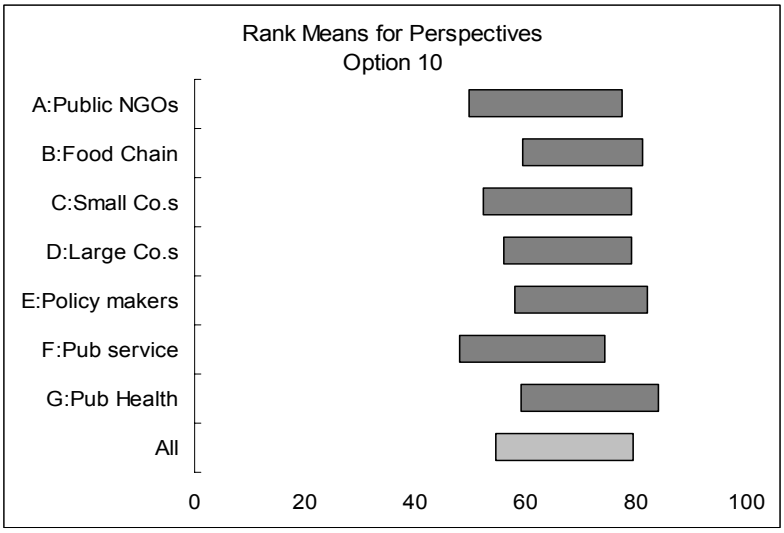
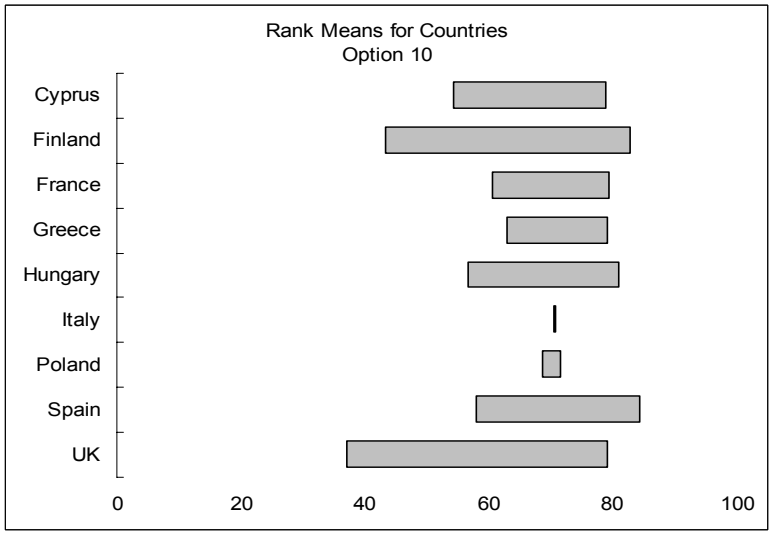


Figure 10-22. Option 10: Rank means for countries



10.4.4 Discretionary option 11: Controls on food composition

and

10.4.5 Discretionary option 12: Incentives to improve food composition

These two options cover very similar ground and can be taken together. The essential difference between them is the methods used to encourage manufacturers to improve the formulations of commonly consumed foods – either through some form of control, such as a regulation or a code of practice – or through incentives designed to encourage change, either in financial terms through, for example, product development subsidies or the use of government purchasing contracts, or in non-financial benefits through, for example, favourable publicity from award schemes or product labelling endorsements.

Regulatory controls were perceived to have an advantage in terms of ensuring uniform compliance and, in creating a level playing field, were felt by some participants to be most acceptable to industry.

> *"Relatively easy because it involves determining norms and regulations. There are discussions, between manufacturers, public sector, consumers; but once the norms are determined, the actors just have to apply them; and we are in a compulsory framework, we have already done it regarding the definition of a certain number of products with [European] community regulations...like jam..."* (France, food chain representative)

> *"...what the food industry want is regulation, despite what might be heard from certain sectors. They told me they prefer to have regulation, they prefer to know what's required of them, because they feel that if it's just left to them to agree amongst themselves, there's always going to be somebody who won't, and then they've all got to compete against each other."* (UK, public sector caterer)

However, controls were considered too much of an imposition by some sectors, who felt that informational approaches would be sufficient, and that information was enough to drive the market in the right direction:

> *"It would limit the freedom of producers. We should not aim at over-standardizing products, we should rather promote diversity and innovation. It is more important to ensure that ingredients are properly indicated and to provide information enabling people to make informed choices."* (Hungary, advertising industry)

> *"A lot depends on how this measure is used. Controls should be aimed at improving the level of information and ensuring consistency between labelling and composition, however, there are enormous technical difficulties in setting 'suitable' maximum, minimum or average limits in the composition of each of the foods."* (Spain, large food retailer)

> *"This strategy is not in priority. This means that when we manage to inform people about healthy composition of foods, then all the companies, without being given financial incentives from the government, will have to follow this tactic in order to be able to sell."* (Greece, health journalist)

"I support all sorts of positive incentives but it will only be effective if coupled with education." (Hungary, public health professional)

"First, we should create a demand for healthy food products in our society by making people aware of the importance of eating healthy food. Producers would then automatically follow to meet this new demand and they will start offering healthier food products. Subventions and prizes for healthy products could help people realize the importance of healthy eating habits." (Hungary, pharmaceutical industry)

Financial incentives were supported by food manufacturers but not by some other participants:

"This option would only be feasible if the production of healthy products were subsidised When firms design new products, they calculate the cost of production, the price they can sell the product at etc.; so the cost of ingredients (and the cost of production in general) is a very important factor. This is a very good idea: if it can be put into practice, it would surely improve the composition of food products." (Hungary, large commercial caterer)

"The best incentives for producers would be tax breaks." (Hungary, food manufacturer)

"*Should be given incentive to food industry? Not at all. Forget it! Absolute disagreement."* (Italy, nutrition expert adviser)

*"This is a classic food industry thing. It's coming through regularly. We have to give them incentives to do healthy things...What?! They say: '*We will continue doing what we're doing unless you give us the money, otherwise we'll continue to supply things that aren't healthy'*...Well, it should be like the tobacco industry, if they don't sort themselves out then they have to bear the costs of lung cancer, heart disease etc."* (UK, public health NGO)

The appraisal of these options was also dependent on the degree of change required and the types of foods involved.

"The definition is very general. Whether you are talking about a permanent or a sampling control and how many products will be included in this control would influence the criteria scoring to a great extent." (Greece, consumer group)

"The problem there is the definition of healthier foods. Something like turkey could be seen as a low fat food and therefore healthy, and to be encouraged. [But] if that means Bernard Matthews [makers of Turkey Twizzlers] gets a government subsidy then I'm against it so, No, unless there is a very clear definition of what healthy foods are, and to me healthy foods needs to exclude processed foods…I don't trust the food industry … I think they need to be told, and I think you get into problems again with what's healthy. All they'll do is put in artificial sweeteners instead of sugar." (UK, health journalist)

There also suggestions that negative incentives might be used:

"Incentives should include going to jail. Incentives should include bearing the cost [of treating obesity]." (UK, public health NGO)

"Negative incentives may have the effect that some big firms simply leave the country, which may have huge negative consequences (rising unemployment, less tax revenue etc.)" (Hungary, small food retailer)

Figure 10-23. Option 11: Rank means for Perspectives

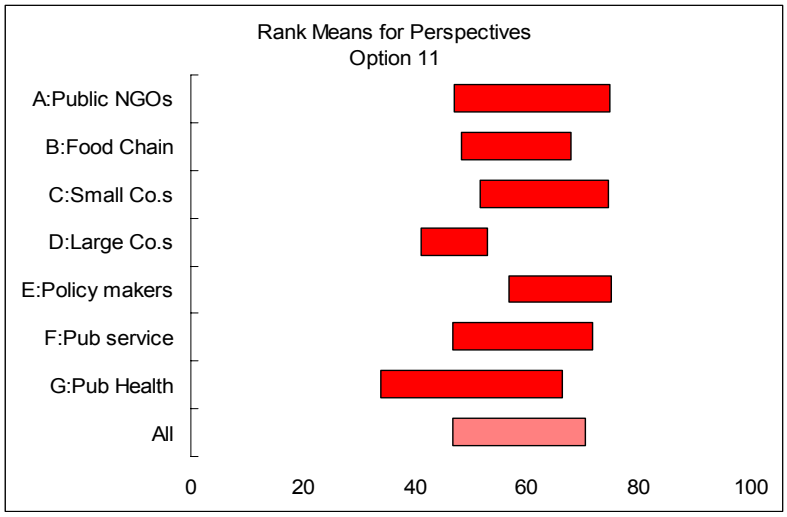
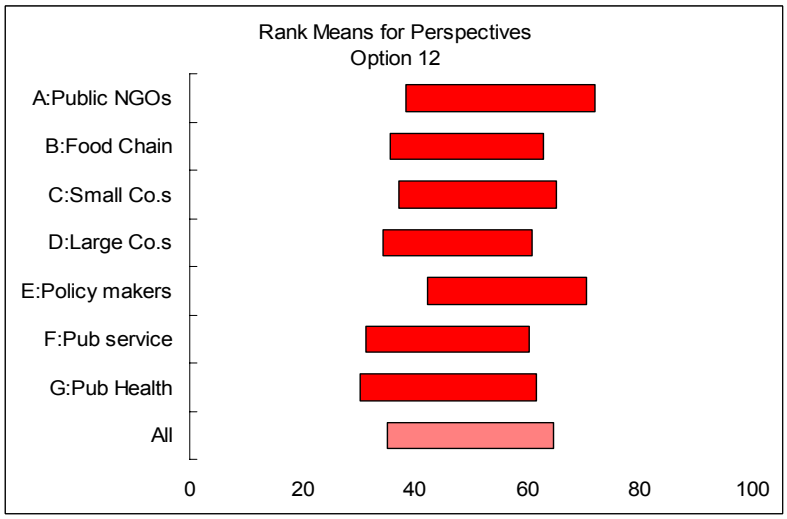


Figure 10-24. Option 12: Rank means for Perspectives



Interviewees in many perspectives supported controls on the formulation of food products, although larger non-food commercial operators were not keen on this option, giving even lower scores than food chain commercial operators. Reference to figures 11-4 to 11-10 indicates that food chain operators ranked this option 9th overall, whereas non-food operators ranked it 18th of the 20 options. Small food companies were more in favour than large ones, possibly because they can see advantages in a level playing field for quality controls – reference to figure 11-6 shows this sector ranked this option 5th out of 20 options they appraised.

Formulation incentives achieved lower scores overall with policy-makers and public interest NGOs ranking this comparatively highly. All Perspectives gave a relatively broad

range between ‘optimistic’ and ‘pessimistic’ scores, indicating that the success of this option is believed to be significantly dependent on the context and conditions in which the option is implemented.

Figure 10-25. Option 11: Rank means for countries

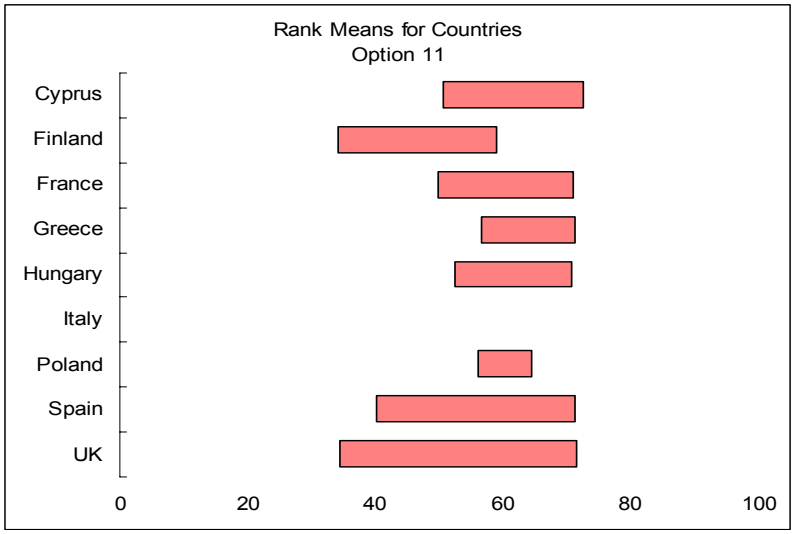
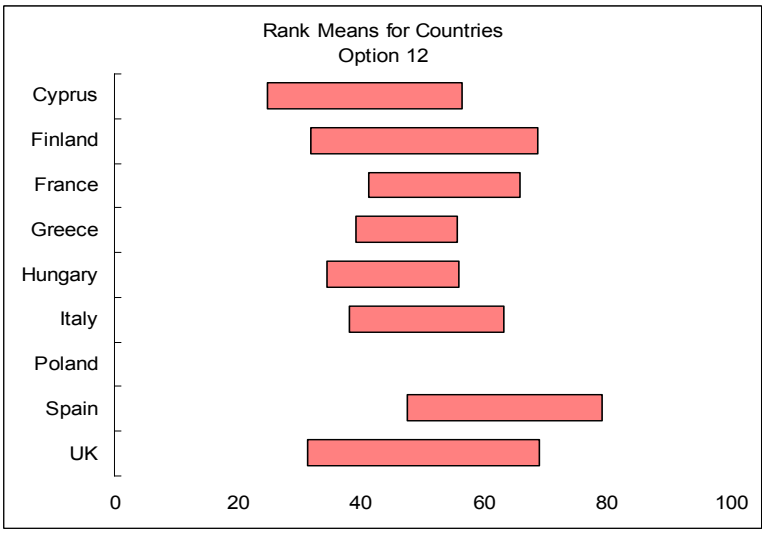


Figure 10-26. Option 12: Rank means for countries



The option to control food formulations scored relatively poorly with Finland (and reference to figure 11-14 indicates that Finland gave this a very poor ranking compared with the other options – putting it 19th out of 19 options appraised.

The option to provide incentives generally scored worse across all countries than the previous option. Finland gave this option a better ranking (13th out of 19) and Spain was particularly in favour (figure 11-20 indicates that Spain ranked this option 4th out of 20 appraised options).

10.4.6 Discretionary option 13: More obesity research

The wording of this option – in its title and the detailed description – led participants into a specific understanding of the option, namely that the research "…might address issues concerning the benefits of physical activity as well as the causes and consequences of adopting particular dietary and life-style patterns, as well as social science research on why people find it so hard to control their weight" (see section 8.2). Several participants felt that further research on the medical aspects on obesity were largely unnecessary, although politically popular.

> *"There's a lot of lobbying to spend a lot of money on drug research and that sort of stuff and I'm not entirely convinced that that's the way we should be going on this one, but the political pressures to do that are enormous…"* (UK, finance ministry official)

> "*OK for more research, but not as a trick to further postponing interventions against obesity. There is still much to understand on obesity, e.g. on energetic balance, but we cannot say: let's wait for fresh results before acting*." (Italy, nutrition expert adviser)

A few participants suggested that this option could include research into the links between advertising and diet, between food pricing and shopping choices, or between agriculture policy and food pricing. Research could also address the relative costs of different intervention policies, how interventions might affect different groups in the community, and the effectiveness of different types of intervention at local and population-wide level.

> *"I think awareness of the health benefits or of physical activity or problems arising out of obesity, is quite high I would have thought by now. I think where we don't know, is how we get people to change… So research on behavioural change…and what is an effective, sustainable intervention, is where the research gap is."* (UK, health ministry official)

> *"As a researcher myself, I would very much like to say this is important. Yet, as far as fighting obesity is concerned, I do not think new research into obesity is crucial here. In any case, the objectivity of many pieces of research is questionable, since they are financed by pharmaceuticals who are not always impartial. I would rather concentrate on the psychological and sociological context of obesity: heavy eating is often correlated with psychological or societal problems."* (Hungary, public health NGO)

> *"The research needs to be about why people make nutritional choices, not about obesity."* (UK, school teachers)

The conditions attached to the option for further research meant that Perspectives generally gave a broad range between optimistic and pessimistic scores, as is shown in the Perspectives figure (figure 10-27). Public service providers tended to give the lowest ranks, but inspection of figure 11-9 shows that, for this group, the option was ranked midway of the full range of options, ranking 11th out of the 20 options appraised.

Figure 10-27. Option 13: Rank means for Perspectives

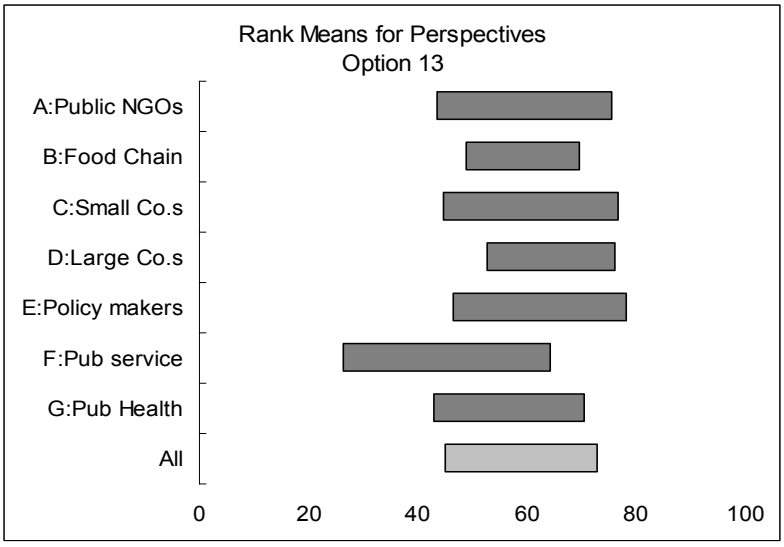
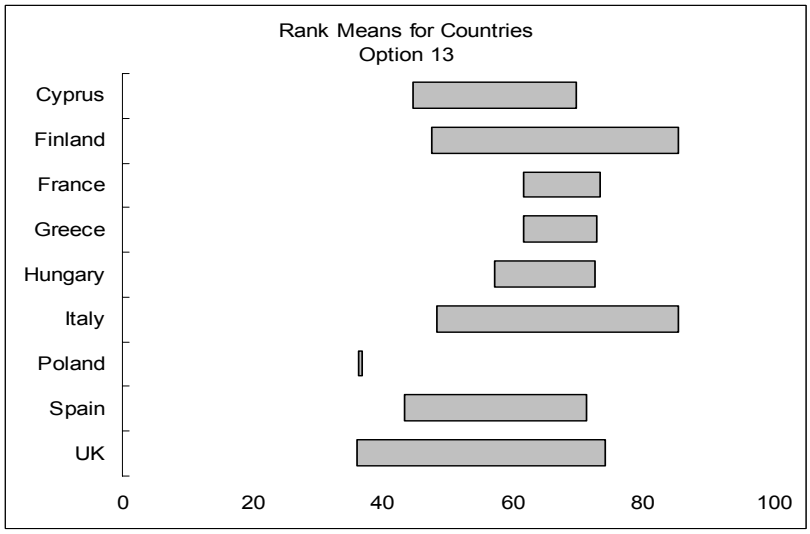


Figure 10-28. Option 13: Rank means for countries



Country rankings showed some variation, but this was partly due to low numbers of participants – in Poland for example only one participant appraised this option, and in Italy only two. Specific country concerns related to the costs of research as a part of the national budget, the history of national public health research programmes, and specific cultural changes (e.g. the loss of the traditional local diet) that may have occurred in some countries more rapidly and recently than in others.

> *"Research in our country is still in the foetus state, especially when compared to other EU Member States. Research has long been given a low priority and this is exacerbated due to the fact of lack of medical school, resources and support."*
> (Cyprus, town planner)

"*In the long-term, large national studies can increase awareness and examples that encourage to healthy lifestyle and thus affect weight. North-Carelia Project is an example of this kind of study*." (Finland, -)

"What are the causes of the epidemic? In Spain, this problem did not exist 20 or 30 years ago, so what has changed? Research into lifestyle is very important for clarifying things and even though there is already a lot of research, we need to know more about how to encourage healthy eating habits, which are the most effective methods and this too requires studies. The offer of processed foods has multiplied in recent decades in the countries around us, 'eating well has never been so easy but never so difficult either'." (Spain, health journalist)

10.4.7 Discretionary option 14: Provide healthier catering menus

Several participants interpreted this option to be the counterbalance of option 4 (controlling sales of food in public institutions), in much the same way that options 11 and 12 concerned controls and incentives to influence food compositional standards. Encouragement to the state sector to provide improved catering, e.g. in schools and other institutional settings, was generally welcomed, while for the private sector – which included restaurants and fast food stores – there was some reluctance to provide financial incentives if the market could be influenced some other way.

"Some state subsidies [for school meals] are absolutely necessary. Adults already have their preferences which are difficult to change later on, that's why it is important to start offering healthy dishes as early as possible." (Hungary, insurance industry)

"This option could bring about a huge change at schools: children have no choice, they must eat what they are given, so the implementation of this option could shape their attitudes to healthy eating deeply." (Hungary, finance ministry official)

"*If this is meaning people eating out in restaurants then it is very Big Brother. But in schools this definitely does have a role, because school dinners are absolutely shocking."* (UK, pharmaceutical company)

"What does incentive mean here? Because, you know, the market will dictate, I mean, look at McDonalds they've already produced [healthier menus]… I agree that there should be healthier foods for children, totally agree with that. But the government has to stump up the money." (UK, advertising industry)

Catering companies were happy to endorse the idea, so long as it was compatible with their primary aims of attracting customers.

"My argument [is that] all the food we serve has got to be healthy. You can't serve unhealthy food. So I think that there are options for teaching chefs for instance how to cook slightly differently and not use so much salt. But we will still want to produce items on the menu that will attract people to come in and have a good night out and a good meal out." (UK, commercial caterer)

"It is a form of education on its own. Even McDonalds prepare a huge campaign to this direction and they prompt even me, who doesn't go to these places, to think about going..." (Greece, advertising company)

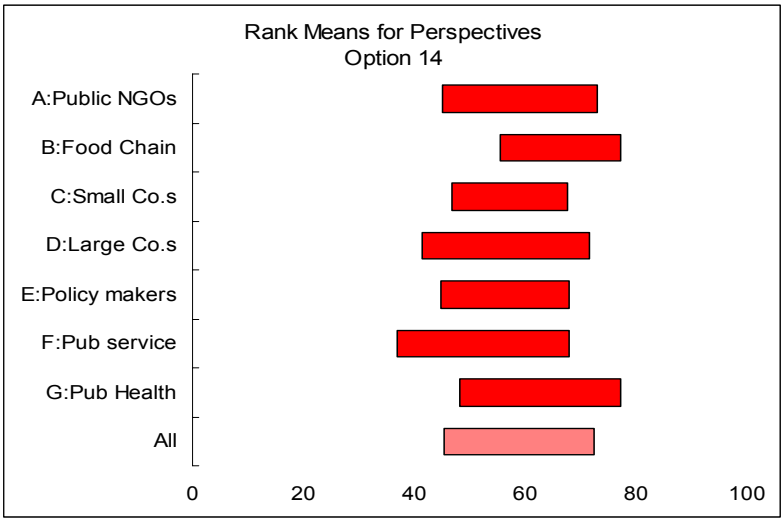
"Caterers have made a lot of progress lately in providing healthier menus. This progress has not been influenced by politico-economical constraints. This progress can be even more successful if several cultural aspects in our society are further improved." (Cyprus, commercial caterer)

The option was seen as conditional on public acceptance that healthy food could be attractive.

"It is generally believed that healthy menus are not so tasteful as the others and this is something that needs to be overcome." (Greece, health journalist)

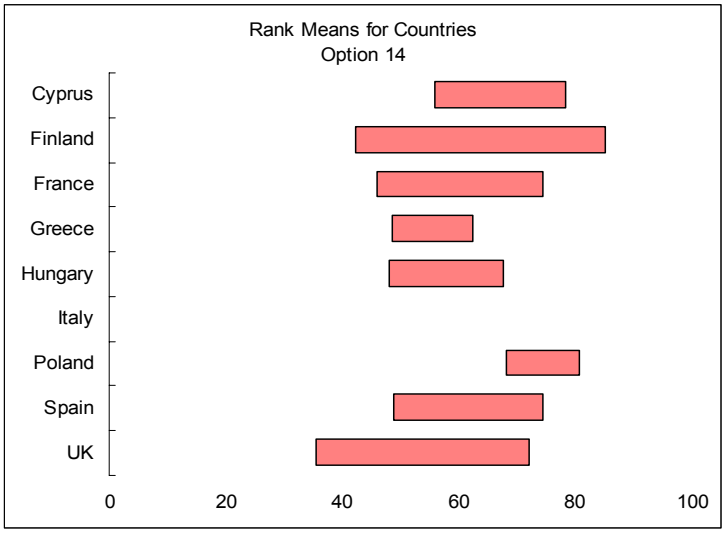
"This is an issue of having the appropriate education. Increased awareness of consumers will turn them to making healthier choices, then there will be increased demand of healthier menus and finally there will be increased profit for the restaurants." (Greece, health ministry official)

Figure 10-29. Option 14: Rank means for Perspectives



This option was favourably scored by both the food chain Perspective (Perspective B) and the public health professional Perspective (Perspective G). Reference to table 11-2 indicates that Perspective B ranked this option in 5th place, while Perspective G ranked this option in 4th place. The fairly broad bands indicate a range of scores depending on the conditions under which this option is introduced.

Figure 10-30. Option 14: Rank means for countries



This options appeared to score particularly well in Finland and in Poland, although only six participants appraised this option in Finland, and only three in Poland. No participant in Italy appraised this option, although the issue of school meals quality is one taken seriously, at least in terms of using the purchasing contracts to support local suppliers:

> "*In Italy every Provincial Health Agency monitors the catering menu for schools. In the Region Friuli Venezia Giulia there is a law to promote local and biological [organically grown] products in school canteens. If you offer 60% of such products, you get funds from the Region. In my municipality the level is 67%. The presence of regional products is also occasion of discussion between pupils and teachers on healthy habits. At least school canteen must be healthy, since at home with food people make disasters.*" (Italy, public health NGO)

10.4.8 Discretionary option 15: Food and health education in schools

This option, along with discretionary option 10 (improved health education to the public), was selected for appraisal by the largest number of participants and achieved generally high scores. As with option 10, there was no argument against the principle of increasing education about health and diet, and strong ideological support for ensuring consumers had the skills to make appropriate choices.

> *"In my view unless people know something about food, etc, they will not be in a position to do any of the other options mentioned or be in a position to judge the reasons why."* (UK, large commercial caterer)

> *"…Education at schools is the basis for everything else we want to do and will ensure the effectiveness of all the other strategies."* (Greece, food manufacturer)

> *"This is one of the most important policies, and I believe that health education should start as early as possible, even in toddlers, so as to ensure culture and awareness among young children that will enable them to adopt a healthy lifestyle regarding nutrition and physical activity."* (Cyprus, insurance industry)

"The most important thing is to enable people to make informed choices: people make very important choices regarding eating all the time, so a sound basis of knowledge on healthy eating should be built at primary school already." (Hungary, large commercial caterer)

"It's undeniable, it comes back to improving health education in all sectors, notably with really young children because they will take a certain amount of information home. It's like a snowball effect and I support it a lot." (France, non-food commercial operators)

Some supporters of this option expressed concerns that the school curriculum was already crowded or that the teaching could be poorly undertaken or confusing. Others felt that food and health education would need to be backed up with training in other life skills.

"*Could be effective if food and health education are better taken into consideration throughout the school curriculum in several topics, not just a new topic in school curriculum…*" (Finland, public service provider)

"I think this is the number one option for me. It is important the real experts do the teaching, with practical exercises such as cooking, food tasting, the presentation of food products and meals. It should be part of the curriculum in kindergarten and at school, even at the expense of other subjects… Habits and attitudes developed at a young age are decisive in later life." (Hungary, large commercial caterer)

"We have to look at the full range of life skills… money management, understanding the nature of shopping, advertising, all those things." (UK, school teachers)

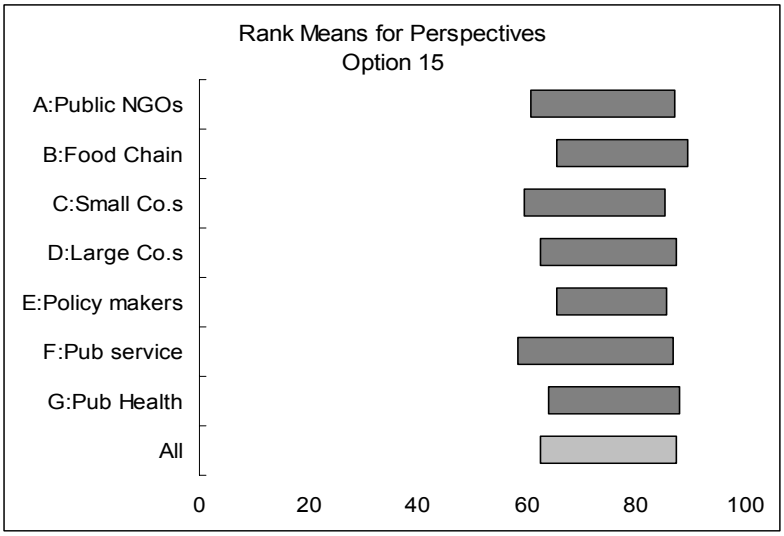
"It's more than just education: we need to be changing the way we view health. When I was a student we used to smoke on the Underground, you couldn't see the end of the carriage. It's completely unacceptable today. Drink driving is increasingly unacceptable." (UK, town planner)

" 'Improved health education*' - to me, that's limp. This is about behavioural change, and it's about, in simplistic terms, having a multi-media communication programme, which is television advertising, posters, radio, in other words, huge amounts of advertising, so the consumer says,* 'I want to be like that*'. ...* 'Improved health education' *is a typical sort of civil servant statement. What you need is something much more visionary, something more inspirational, multi-media ... You've got to inspire them to want to change."* (UK, advertising industry)

Some voices of dissent were concerned that this option alone would not be sufficient to ensure behaviour change:

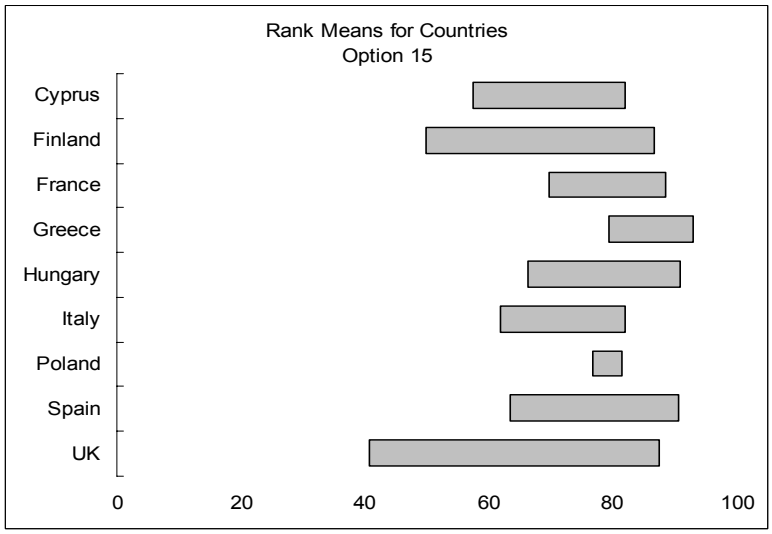
"Good but limited by the context. We drink and we eat also depending on our context, anthropological and contextual dimensions, and not only depending on our knowledge." (Italy, food manufacturer)

Figure 10-31. Option 15: Rank means for Perspectives



Widespread support was reflected in the uniformly high scores offered across the range of Perspectives. Reference to figures 11-4 to 11-10 shows that every single Perspective placed this option as their first-ranking choice.

Figure 10-32. Option 15: Rank means for countries



All countries gave this option a relatively high ranking (and inspection of figures 11-13 to 11-21 shows that this option came in the top three options for all countries).

10.4.9 Discretionary option 16: Medication for weight control

Few participants believed that medication has a useful role to play in the prevention of weight gain by healthy people. Several interviewees interpreted the option to refer to treatment after obesity had become established and the individual was in need of medical attention.

"If it is understood that obesity is a problem, the best way to acknowledge it is for the government to fund this medication, like it funds any other. The medicines available for treating obesity, of which there are two at the moment, are not funded by the Social Security." (Spain, pharmaceutical industry)

"When you say weight control, I'm reading it as being for someone who doesn't want to be overweight: and that sounds rather broad. Drugs have a place for a minority of the obese population, where people have miserably failed. They should be the last resort." (UK, Health ministry official)

"*I am totally against this, because only 1-2% of cases are so serious. The problem must be solved changing food habits.*" (Italy, public health NGO)

"If the other options work, proposals such as the one for medication would be superfluous." (Spain, school teachers)

Some participants believed that medication had a role if it assisted people in making changes to better lifestyles, but it was unlikely to be a sustainable, long-term solution. There were no drugs currently available that would allow over-indulgence without any penalty, but even if such a 'magic pill' could be developed, the suggestion that it should be used as a general, population-wide policy for preventing overweight aroused strong opinions.

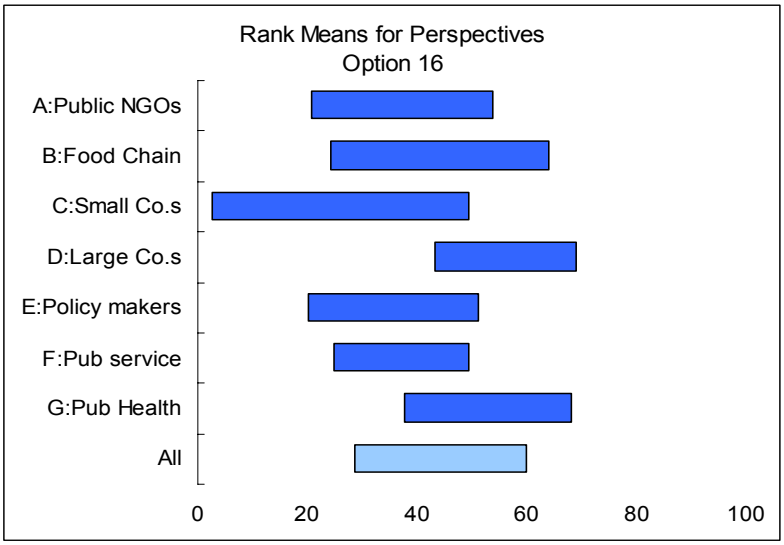
"If they discovered new drugs which would control weight and didn't have any harmful side effects, it would have a big effect wouldn't it? I mean, I can't see a necessary down-side provided the drugs themselves were safe… If people eat too much then why shouldn't they be allowed a drug to stop them wanting to eat. I can't see a problem with that." (UK, farming industry)

"This is completely unethical. The use of medication in certain medical conditions is a valued practice when other alternatives have failed; the wide use of these medications however for preventive purposes should be strictly avoided. This means that there should be a cautious use of such medication and not a careless overuse." (Cyprus, advertising industry)

"This is completely at the wrong end of what people should be doing, with the exception of particularly obese people at the moment. It sort-of creates this impression that you can do anything: you can eat anything you want and it'll be OK." (UK, large food retailer)

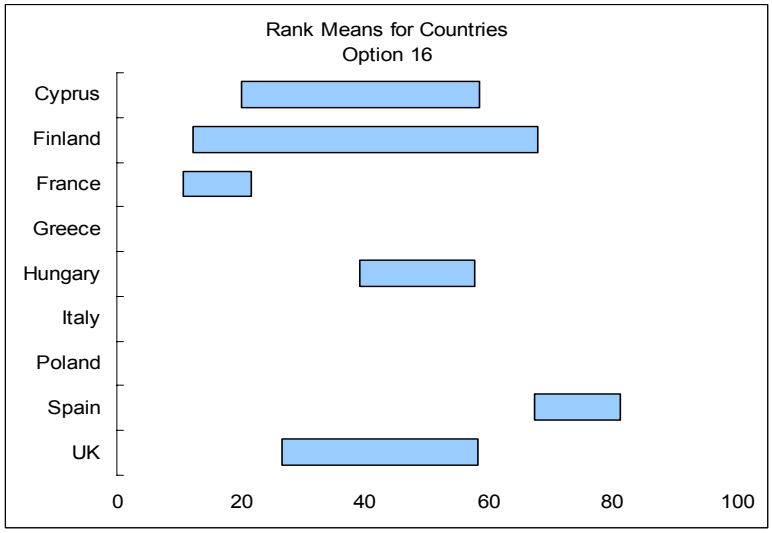
"It's just a gravy train for the pharmaceutical industry." (UK, health journalist)

Figure 10-33. Option 16: Rank means for Perspectives



Most Perspectives gave this option a low ranking, although the broad range of scores indicates the degree of conditionality attached to the interpretation of this option and its implementation in practice. Perspective D gave relatively high scores, possibly because this Perspective included representatives from the pharmaceutical industry, some of whom ranked this option among their most favoured (e.g. in Spain). Perspective G also gave this an apparently high score, but reference to Figure 11-10 indicates that this Perspective gave higher scores to many other options, with this option ranking 10th out of 20 appraisals under optimistic assumptions, and ranking 14th out of 20 appraisals under pessimistic assumptions.

Figure 10-34. Option 16: Rank means for countries



For three countries, all participants rejected his option for appraisal. In five countries this option ranked among the lowest of those appraised. Only in Spain did this option achieve

a relatively high score, and this was because only two participants appraised this option, and one (from the pharmaceutical industry) gave it the highest scores of any option.

10.4.10 Discretionary option 17: Substitutes for fat and sugar

As with the previous option, many participants chose not to appraise this option, with several participants stating they were confident that substitutes for fat and sugar had no useful role to play in combating the rising incidence of obesity. Those that did appraise the option gave a number of different views, most of which indicated significant reservation of the sustainability and efficacy of this approach to obesity prevention.

> *"The trouble is that this option won't change eating habits, it doesn't direct people to genuinely healthy food products. Synthetic fats are still very much an experimental thing: we don't yet have synthetic fats which could be used widely without side effects."* (Hungary, nutrition expert adviser)

> "W*e have to re-educate the person not to look for products rich in fat, sugar, or salt, or even their substitutes. People get the habit of searching for things fatter and fatter, sweeter and sweeter, thanks to the consumption of such industrial products. We must re-educate our own taste.*" (Italy, nutrition expert adviser)

> "*Using such substitutes is absurd and mad. We should rather inform on the long-run effects of using too sugar and fats.*" (Italy, public health NGO)

Artificial ingredients also aroused concerns over safety:

> *"I think the move towards more artificial sweeteners is potentially problematic and I think there's a risk of adverse affects from those in certain cases. It's a bit like the medication thing - there could be too much emphasis on a technical solution to this as opposed to a social solution. And … it doesn't necessarily change people's dietary habits for the better."* (UK, large food retailer)

> *"If you are going to promote healthy eating, then using chemicals – that would come way down my list."* (UK, trade union official)

> *"I think we eat so much processed food now that what we should be doing is going back to natural food and eating it in moderation rather than creating chemical substitutes."* (UK, pharmaceutical industry)

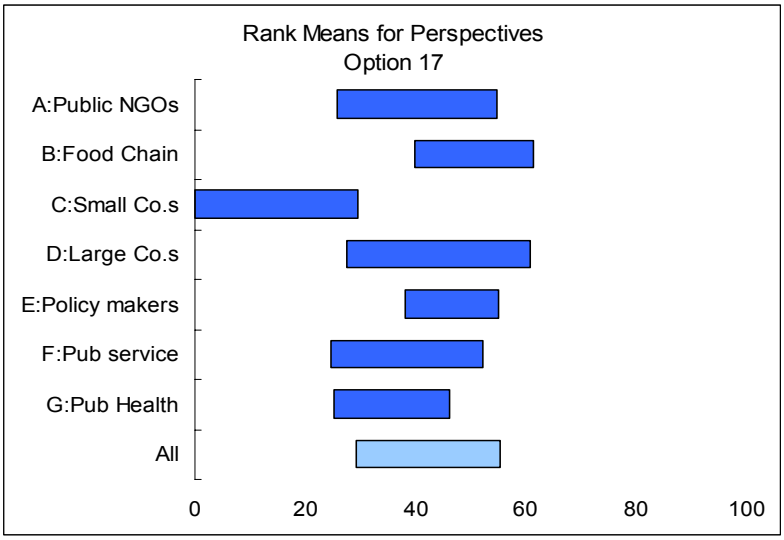
> *"You would never put paraffin in a car engine, or diesel fuel in a petrol engine – or you would never get very far!"* (UK, small food company))

Several participants noted the lack of evidence for any link between the use of low-calorie foods and the incidence of obesity:

> *"It doesn't have any effect. If you plot the increase in calorie-reduced products against the obesity increase they are a perfect straight line."* (UK, food manufacturer)

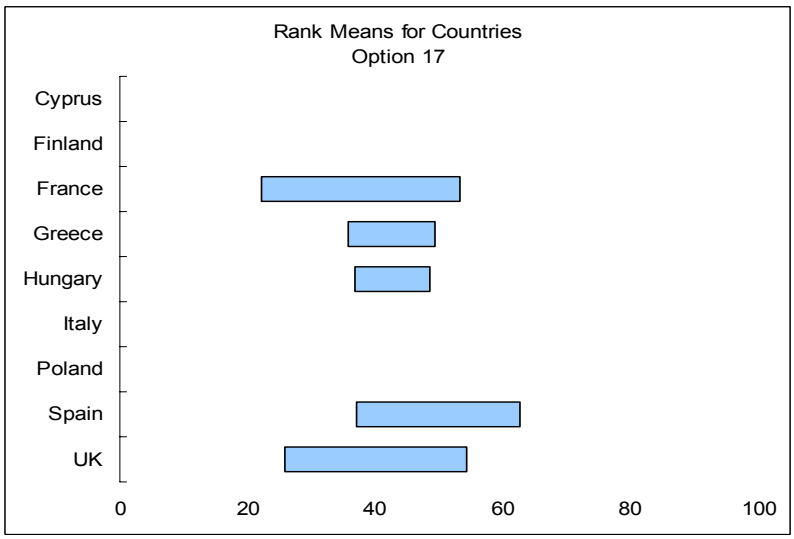
> *"When the obesity rates and overweight rates were lower, half a century ago, it wasn't because we had artificial ingredients to solve the problem."* (UK public health NGO)

Figure 10-35. Option 17: Rank means for Perspectives



Low scores were generally given for this option, with small food and fitness companies (Perspective C) giving especially low scores. This Perspective included small health food retailers, who generally pride themselves on natural and healthful ingredients in their products and would be expected not to support the widespread promotion of synthetic food ingredients.

Figure 10-36. Option 17: Rank means for countries



In four countries no participants appraised this option. In three further countries (France, Greece and Hungary) either one or two participants appraised the option. Only in the UK and Spain was the option appraised by a quarter or more of the participants (see table 8-2).

For those countries that take particular pride in their cuisine, the idea of promoting substitutes for real ingredients was not attractive:

"If we find ourselves with this option, we will completely change food and eating. We become functional food eaters, and in cultural and pleasure terms, and what food represents in French society today, this is really too far from that. (France, ministry official)

"Strategies 16 and 17 seem dangerous to me. It is better to use natural products but to a lesser extent. For Greeks and French eating is a cultural thing. We cannot replace this with some artificial thing." (Greece, farming industry – explaining the reasons for not appraising options 16 and 17)

10.4.11 Discretionary option 18: New government body

Although some doubt was expressed over the value of instituting a government body tasked with tackling obesity ("it will solve nothing" – Finland, food chain operator; "it means total inactivity" – Greece, pharmaceutical industry; "experience … of similar committees has been extremely disappointing" – Cyprus, health ministry official) some participants were opposed to the idea because they felt there was already sufficient activity in government:

"What is really important is to give greater powers to the agencies that already exist. There is no need for completely centralising everything into a single department." (Hungary, consumer group)

"We already do that, we do have a cabinet office committee …a cross departmental one. It's public health, but the target that has been set will be monitored by that committee. So that committee has got all the cabinet ministers from the relevant departments in it. …It is a three departmental target, so all three will be held accountable for it, with the treasury." (UK, health ministry official)

Under various conditions, or interpretations of the option, some participants expressed the potential for positive benefits of a body targeting obesity prevention:

"The governmental body should include not only members of the political parties but also psychologists, advertisers, representatives of the food industry, of parental and teacher associations, scientists and others. This team will operate in very specific time limits with very specific goals… A major assumption is that there will be political honesty (transparency)." (Greece, consumer groups)

"It should be a nutrition council, not just about obesity. It's about diet-related disease in general." (UK, consumer group)

"It should not be a government body, it should be an independent body because research shows people don't trust the government." (UK, sport and fitness NGO)

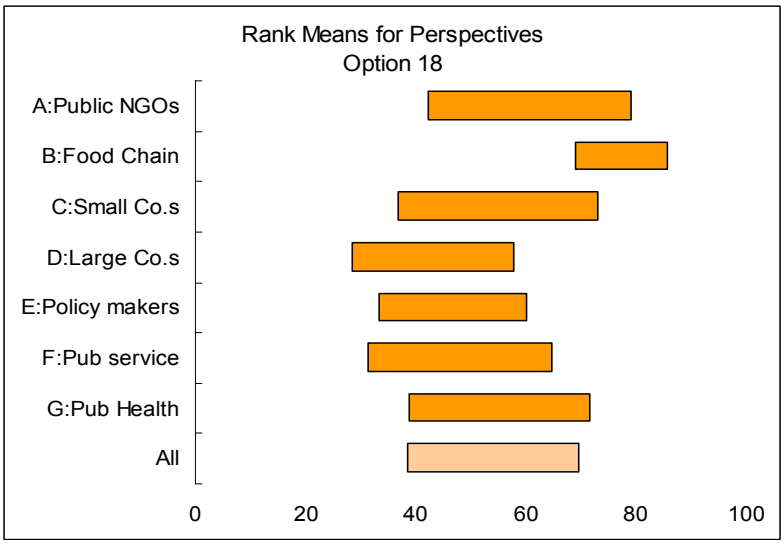
Some felt that such a body was an essential condition for the implementation of the other policies discussed in this report:

"It is an absolutely necessary condition, without it, all the different policies just go uncoordinated, haphazardly. In order for the other options to work, this option must be first implemented." (Hungary, nutrition expert adviser)

One also expressed a warning:

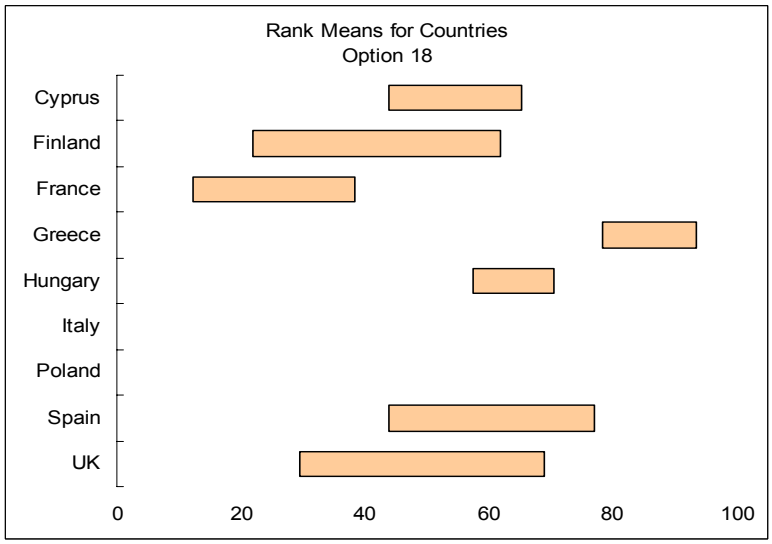
"There is a danger that such a body gets captured by vested interests and wastes lots of tax-payers money." (UK, finance ministry official)

Figure 10-37. Option 18: Rank means for Perspectives



This option was particularly well supported by members of Perspective A (public interest NGOs) and Perspective B (food chain operators) and reference to figures 11-4 and 11-5 shows that this option was ranked third and second respectively by these Perspectives, out of the 20 options each appraised. The relatively broad range between scores under optimistic and pessimistic assumptions indicates significant concern that this option would only be appropriate in certain conditions.

Figure 10-38. Option 18: Rank means for countries



In two countries this option was not appraised by any participants. In Greece, which gave this option a relatively high score, only three participants appraised the option. In Spain over half the participants appraised the option, and its

favourable ranking may be linked to the launch of the government's obesity action plan in early 2005, which included a proposed Obesity Observatory charged with monitoring the progress being made in obesity prevention.

10.4.12 Discretionary option 19: Control of marketing terms

Most participants were aware that these commercial operators could use terms misleadingly and that some controls were needed, and indeed was the subject of possible action under the Claims Directive. However, participants disagreed on whether this option would have an effect on consumers' food choices or on the prevention of obesity.

> *"There's one thing about them actually meaning what they say, and being properly defined, but you also need nutrient profiles for the types of food that you're then allowing those claims to be made on… You don't want a product that says low in fat or 'lite' and then you find out that it's really high in sugar. Or a product that is saying, 'Helps you to have a healthy heart', or whatever the wording is, and then you find it's actually high in salt."* (UK, consumer group)

> *"It will only affect a small segment of the overall range of food products."* (Hungary, food manufacturer)

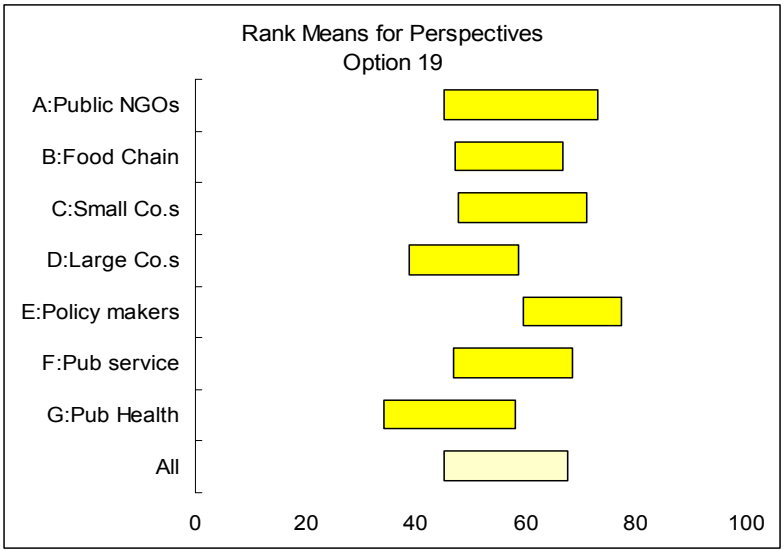
> *"The impact is small but immediate.*" (Hungary, large commercial caterer)

> *"Terms like light or diet are very much used in ordinary life today, and so they do influence people who buy diet products and feel they do enough for their health."* (Italy, sport and fitness NGO)

> *"The present confusing situation should be cleared up very quickly, before the false impressions get imprinted in people's minds. Otherwise, even health-conscious people will be misled by these expressions and their efforts at reducing their weight will be thwarted."* (Hungary, small food operator)

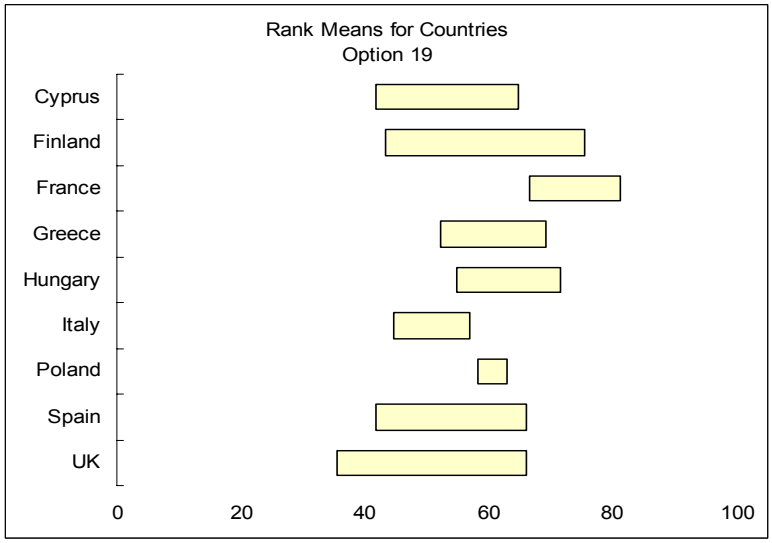
> *"It is essential that what is declared on the label be compliant with the truth. This should be controlled very closely. Such swindles are dangerous."* (Poland, school teachers)

Figure 10-39. Option 19: Rank means for Perspectives



This option received some support from Perspective E (policy makers), which rated this option 5th out of 20 appraised, while relatively low scores were given by Perspective G (public health professionals) – although it should be noted that in six of the nine countries there were no participants from Perspective G wishing to appraise this option.

Figure 10-40. Option 19: Rank means for countries



This option received relatively high scores from participants in France, although in this country there were only two participants scoring this option. The arguments put in favour in the French evaluation suggest that the participants found this option to be feasible, with no cost for the public purse, and as giving citizens information they need to make food choices.

10.4.13 Discretionary option 20: Physical activity monitoring devices

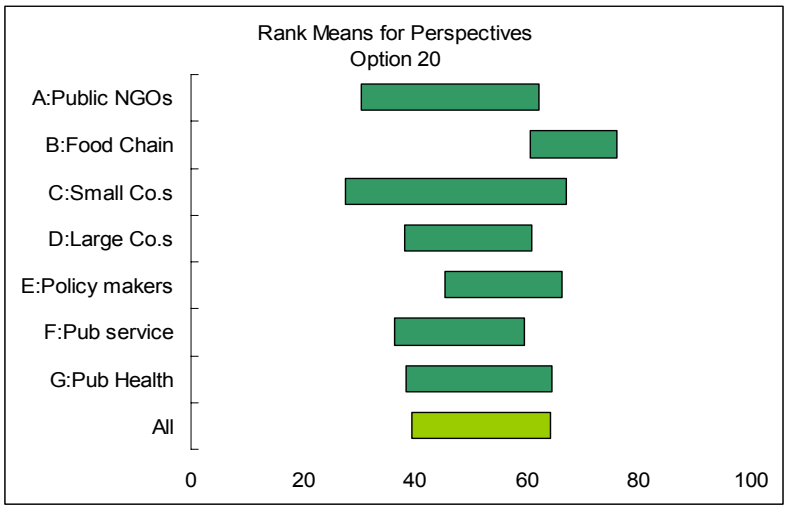
Participants appraised this option having been given the example of 'using pedometers' that led some participants to be concerned that, although this may initially raise people's awareness about the need for more physical activity, it would not be sustainable as a means of preventing obesity.

> *"It's a training method. Nobody uses them for long."* (UK, public health professional)
>
> *"I know I've got a pedometer. It's in the drawer."* (UK, public sector caterer)
>
> "*It is possible that people who are interested in these kind of products are those who already are physically active...Hardly anything significant is achieved with these devices."* (Finland, sport and fitness NGO)
>
> *"It's a nice gimmick and stuff. I mean obviously it would be negative if all these things are handed out by Walker's crisps or McDonalds, I mean, because the amount of exercise needed to walk off a McDonalds… is enormous."* (UK, finance ministry official)
>
> *"It's a bit like saying there should be weighing scales everywhere you go, because weighing scales makes you aware of what your weight is. Pedometers make you aware of what your activity is; but in themselves, you know, they don't necessarily do much."* (UK, nutrition expert adviser)

The use of such equipment might be sustained if it is supported by continued training, while it might be useless when the environment frustrates physical activity:

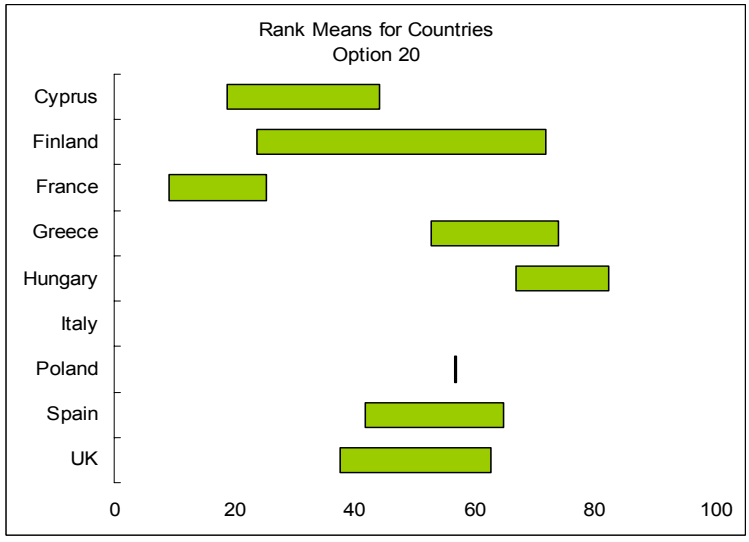
> *"Simple, easy to use. Pedometers have been proven to be quite effective, of course. People need some instruction and motivation, otherwise they would just put it on the shelf and never really use it." (Hungary, sport and fitness NGO)*
>
> *"I once tried to walk ten thousands steps, but I found it very difficult, because of lifts and moving staircases everywhere."* (Italy, sport and fitness NGO)
>
> *"It's helped me to quantify how much I need to do, certainly… I used it for about a month, and then I know now what I need to do to fit in with my pattern of work. But winter's come and…"* (UK, health ministry official)

Figure 10-41. Option 20: Rank means for Perspectives



Food chain operators (Perspective B) appeared most in favour of this option, and indeed were also among the strongest supporters of option 2, improved communal sports facilities. Several food companies have offered pedometers, sports equipment for schools and sports clothing to children's sports teams, as well as sponsoring major sporting events such as the football World Cup and the Olympic Games.

Figure 10-42. Option 20: Rank means for countries



Although 17 appraisals were undertaken in the UK, and five in Spain, all other countries had three or fewer participants making appraisals, so the comparative scores for this option are unreliable.

10.5 Appraisal of options under different criteria

One of the strengths of the Multi-Criteria Mapping approach is that all participants evaluate the options on the basis of their own chosen criteria (see section 9). An examination of participants' criteria showed that they could be grouped into Issues comprising:

whether the options would provide additional social benefits,

whether the options would provide additional health benefits,

whether the options would be effective in dealing with obesity,

whether the options would lead to economic costs or benefits for the public sector, for individuals or for the commercial sector,

whether the options would be practically and technically feasible, and

whether the options would be socially acceptable.

Higher scores reflect more favourable opinions (i.e. a higher score for 'costs' indicates that the costs would be lower). The charts below show for each Issue in turn the scores given to each option. Comparisons within a chart indicate the options that score highest or lowest according to that Issue; comparisons between charts show the strengths and weaknesses of a given option according to the different Issues. The main points that emerge are as follows:

- Educational options score well under all the Issues, being generally perceived as broadly beneficial, presumed to be effective and of fairly low cost, feasible and acceptable.
- Of the informational options, improved and mandatory nutrition labelling and controls on marketing terms were considered more feasible and socially acceptable than controls on advertising, but controls on advertising were considered likely to be as, or more, effective in tackling obesity. All three approaches were recognised to have costs for industry.
- The various approaches for manipulating the food supply through fiscal or compositional measures gave a mixed pattern: taxes on obesogenic foods generally scored poorly, especially in terms of costs to individuals, but were seen as being favourable to public sector finances. Conversely, subsidies on healthier foods were recognised as being a cost to the public sector but not a cost to individuals. Controls on food composition scored poorly in terms of additional benefits but were considered effective in tackling obesity, and were feasible and acceptable.
- Of the three options related specifically to physical activity, changes in planning and transport were seen as having strong additional social and health benefits but would be a major cost to the public sector and would present problems with technical feasibility. Improved provision of and access to sports facilities were well regarded under most criteria but seen as imposing costs on the public sector. The wider use of devices such as pedometers was seen as relatively low cost and

technically feasible, but less effective at tackling obesity than the other two physical-activity-related options.

- Of the two 'technological' options, to use medication and to use artificial fats and sugars, the increased use of medication was slightly preferred to the increased use of synthetic substitutes for sugars and fats under most criteria, and this option was seen as more likely to be effective and of some commercial benefit, but it was one of the lowest scoring options in terms of social acceptability. The increased use of synthetic substitutes for fats and sugars scored poorly, since they were widely deemed ineffective and of questionable safety.
- Of the two institutional policy interventions, the option to reform the CAP was considered most costly, especially to the commercial sector. CAP reform was considered less technically feasible, although more socially acceptable, than setting up new governmental bodies to tackle obesity.

The following figures show the performance of options aggregated across all participants, derived from scores given under certain criteria only. Thus the first figure below shows the average scores under optimistic conditions (upper end of each bar) and pessimistic conditions (lower end of each bar) when participants were using criteria such as 'reduces social inequality' or 'improves education' or 'can reach minority groups' which could all be grouped into the issue of 'Additional societal benefits'; for details of how criteria were grouped into issues, see Section 9.2.

Figure 10-43. Issue: Additional societal benefits

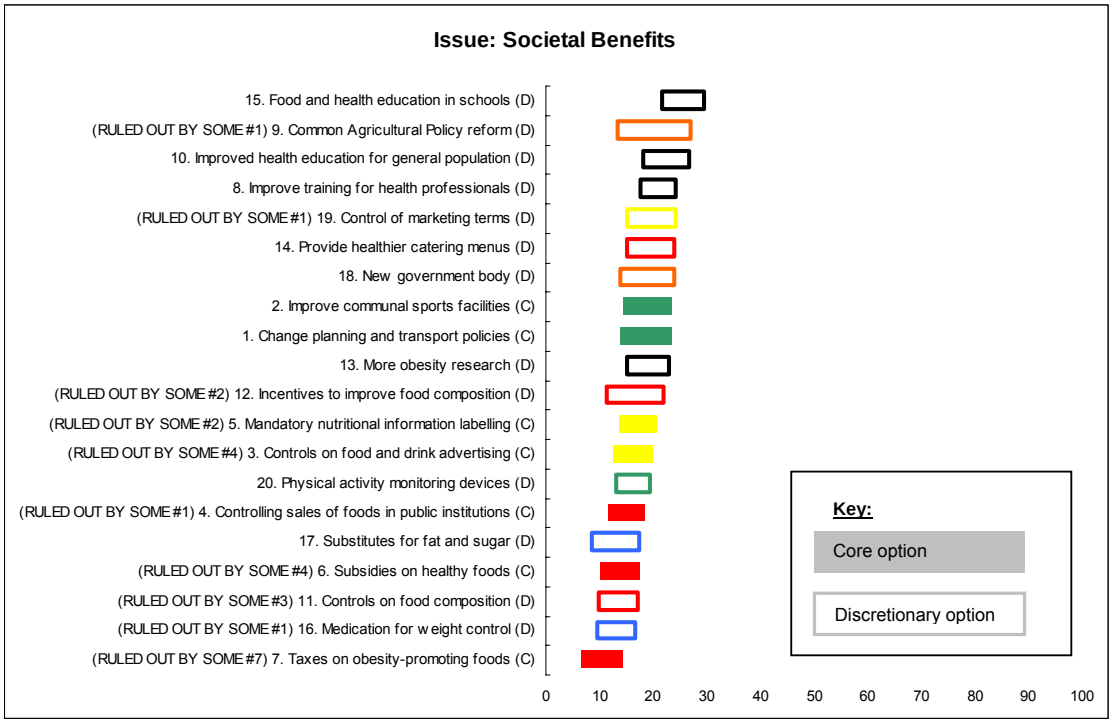


Figure 10-44. Issue: Additional health benefits

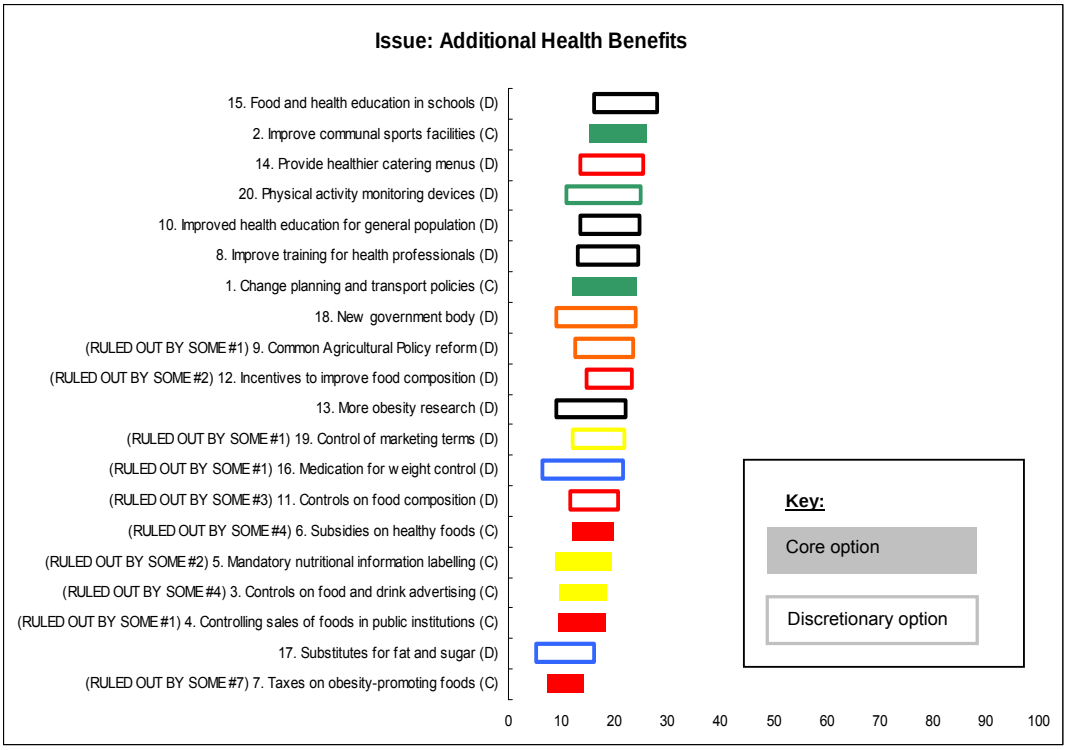


Figure 10-45. Issue: Efficacy in addressing obesity

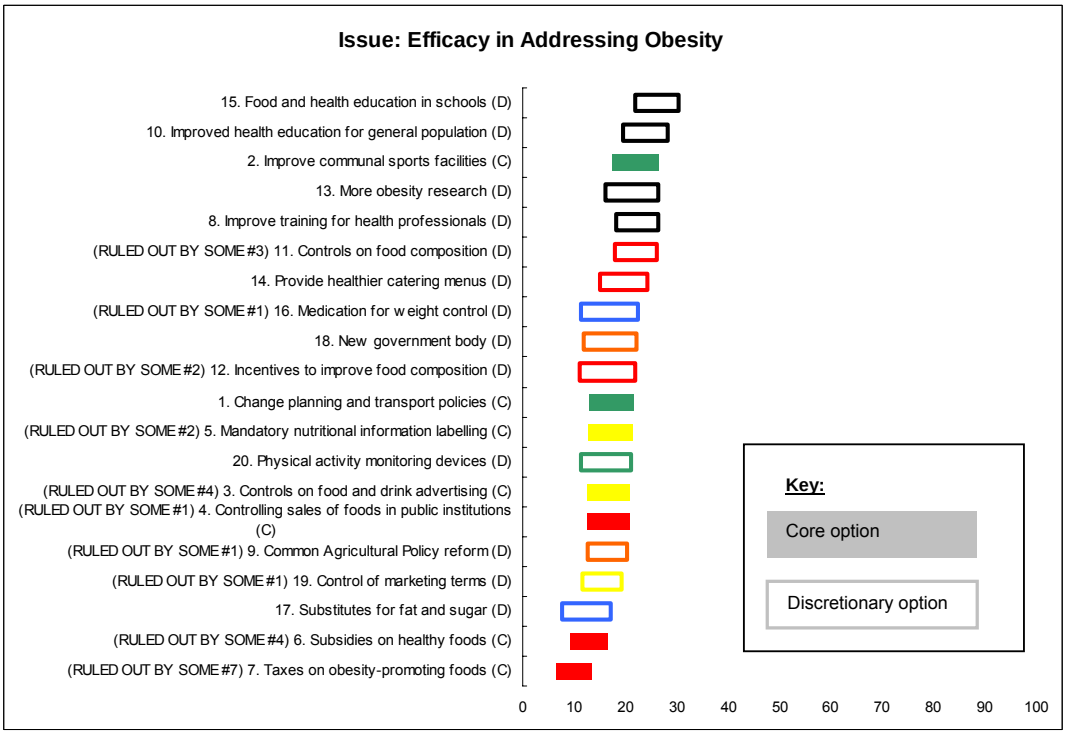


Figure 10-46. Issue: Beneficial economic impact on public sector

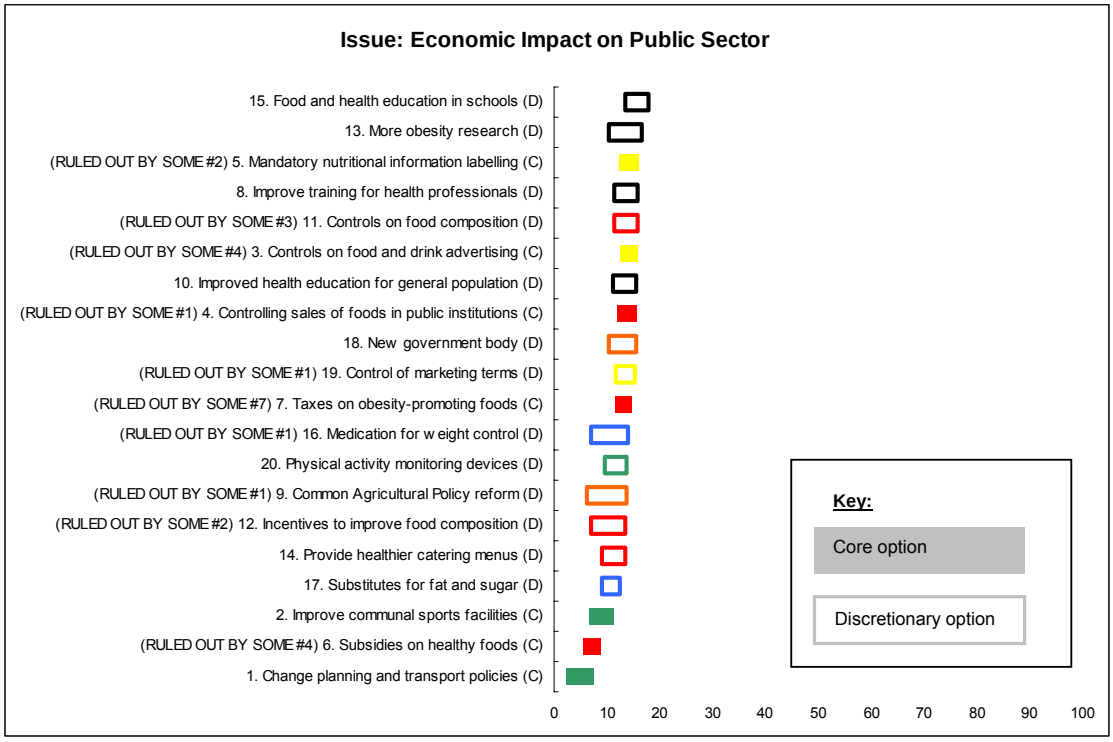


Figure 10-47. Issue: Beneficial economic impact on individuals

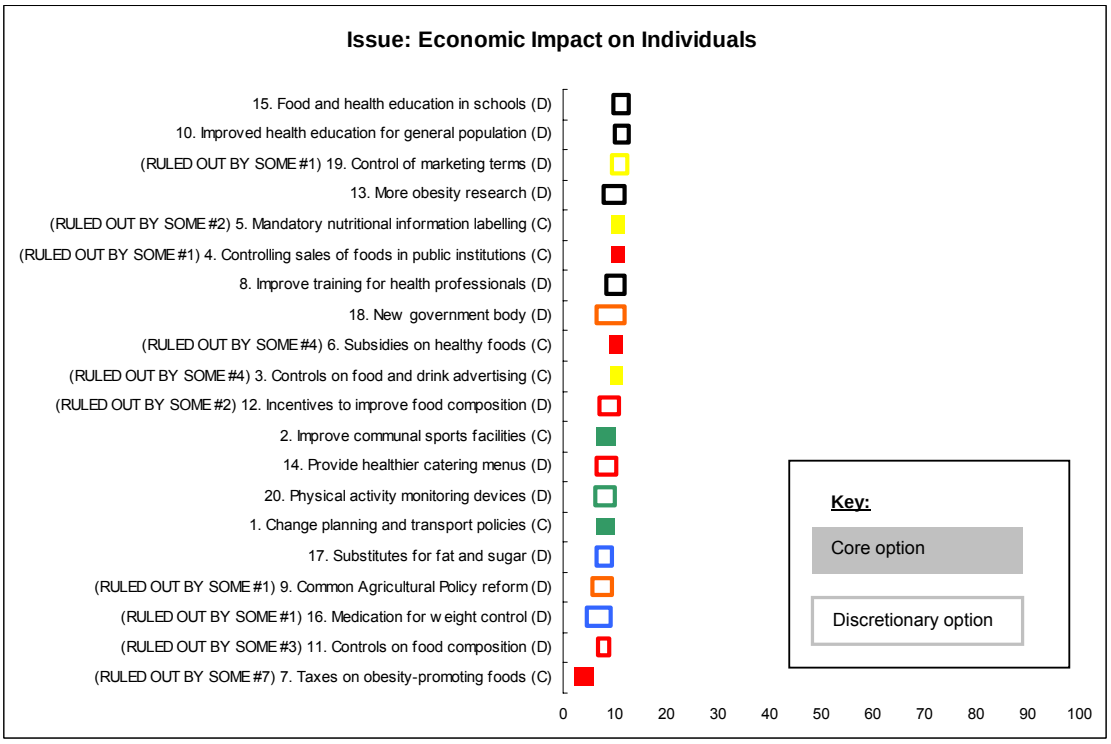


Figure 10-48. Issue: Beneficial economic impact on commercial sector

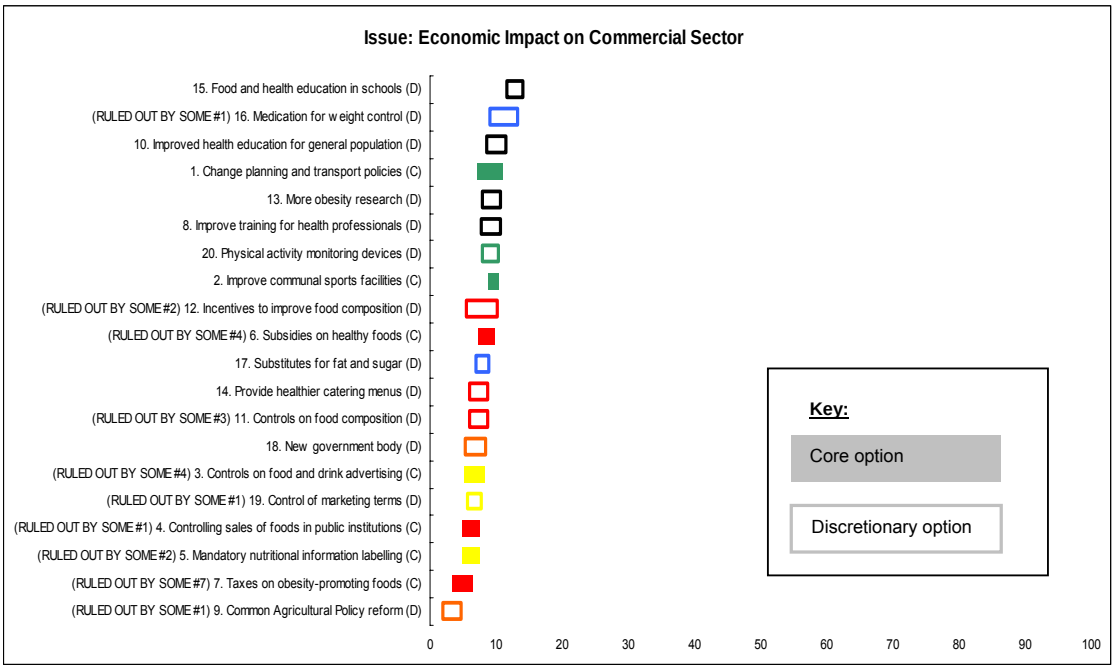


Figure 10-49. Issue: Practical feasibility

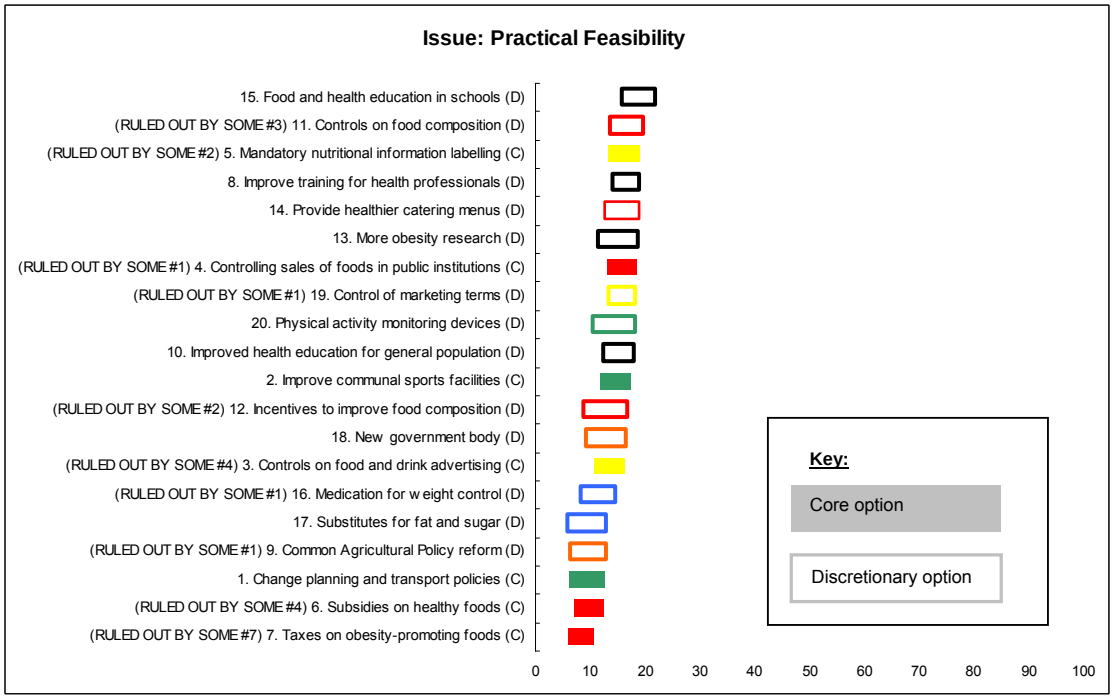
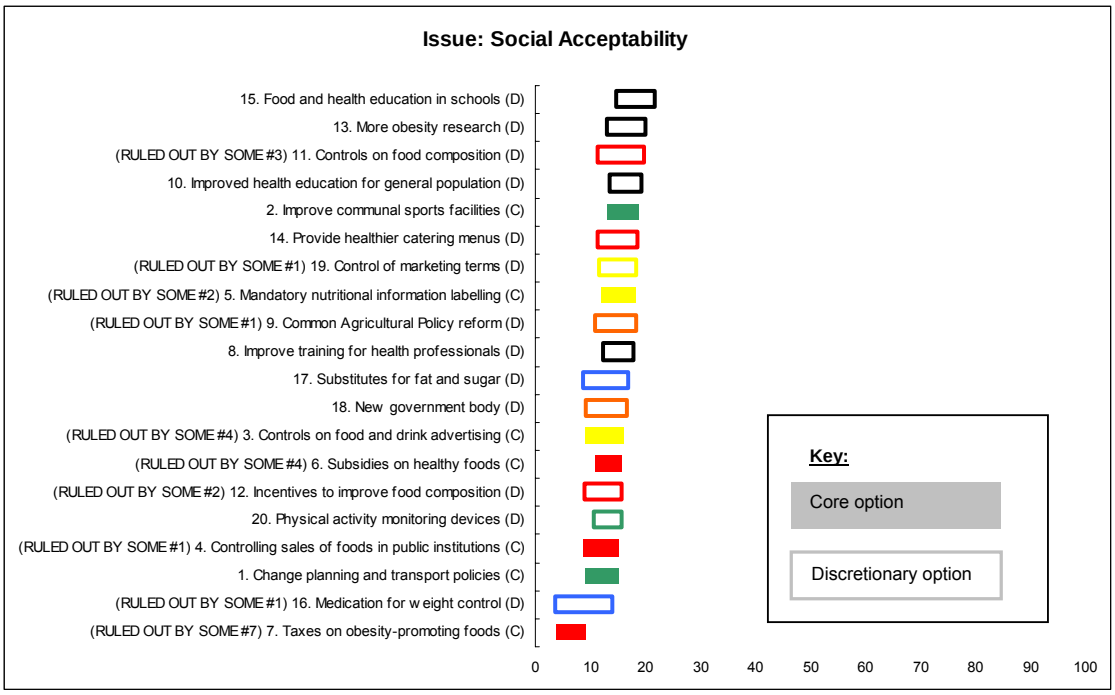


Figure 10-50. Issue: Social acceptability



10.6 Potential bias in favour of discretionary options

As noted earlier in this section and in section 8, there is some ambiguity in the interpretation of participant's choices of discretionary options. Unlike 'core options, these are options that participants could freely choose whether or not to appraise, on the basis of their own personal concerns and interests. This allowed the scope of analysis to extend across a much wider field of possible options, without burdening each interviewee with an impossible workload. In some cases, it is evident from the transcripts that participants chose not to appraise some discretionary options because they felt they were not relevant to obesity while in others they chose not to score options because, although they may be relevant, they would receive very low scores as not being sufficiently attractive in terms of the criteria the participant was using (for example they might be considered too costly, ineffective or unacceptable to be worth appraising). Yet others may have chosen not to score options because their time was limited and the options were not high priorities.

This implies that in some cases a choice not to appraise an option may suggest a prior perception that the option would display relatively low performance. Conversely, in other cases, it may suggest that a choice to appraise an option was an indication of a prior judgement by a participant that the discretionary option in question would perform relatively well, at least under some of their criteria. This qualification does not, however, apply to the core options, which all participants appraised, and for which the results are directly comparable. Consequently, other things being equal and on average, a discretionary option may be thought likely to have a more positive set of scores than a core option. This potential complication in the interpretation of the results may not be significant if the core options represented a representative sub-set of the full range

available. The core options, however, did not include any of the educational cluster of options, nor the technical options or the institutional options. Those interpretative issues will be addressed in Section 12.

As noted earlier in this section and in section 8, there is some ambiguity in the interpretation of participant's choices of discretionary options: in some cases participants chose not to score options because they felt they were not relevant to obesity while in others they chose not to score options because, although they may be relevant, they would receive very low scores as not being sufficiently attractive in terms of the criteria the participant was using (for example they might be considered too costly, ineffective or unacceptable to be worth appraising). Yet others may have chosen not to score options because their time was limited and the options were not high priorities.

This implies that in some cases a lack of scoring could be equivalent to low scoring, or conversely in other cases that a choice to score an option was an indication that a participant believed there was some value to the option, under one or more of the criteria they had chosen. This qualification does not, however, apply to the core options, which all participants were asked to score. Consequently, other things being equal and on average, a discretionary option is likely to have a more positive set of scores than a core option. This potential complication in the interpretation of the results may not be significant if the core options represented a representative sub-set of the full range available. The core options, however, did not include any of the educational cluster of options, nor the technical options or the institutional options.

10.7 Main summary points

- After selecting the options for appraisal and the weighted criteria by which to appraise them, participants assigned 2 numeric scores to each option, one under pessimistic assumptions and one under optimistic assumptions.
- For many of the options a positive appraisal was conditional on several other options also being implemented, as evidenced by comments made by the participants during the interview process.
- In this section comparisons in option scoring are presented across Perspectives, Countries and Issues. The next section will look at relative rankings within these and other groupings.
- When comparing Perspectives to each other:
    - All Perspectives placed option 15 (food and health education in schools) as their first ranking choice.
    - Perspective A (Public health NGOs) had relatively high scores for option 3 (advertising controls), option 6 (subsidies on healthy foods), option 12 (incentives to improve food composition) and option 18 (new government body) in relation to other Perspectives.
    - Perspective B (Food industry representatives) favoured options numbers 12 (incentives to improve food composition), 14 (healthier catering menus), 18 (new government body) and 20 (physical activity monitoring devices). They gave lower scores to options 3 (advertising controls), 4

(controlling sales in public institutions), 5 (nutrition labelling), 6 (subsidies on healthy foods), 7 (taxes on obesity promoting foods) and 11(controls on food composition).

- Perspective C (representatives of small food and fitness companies) was especially not in favour of option 17 (substitutes for fat and sugar).
- Perspective D (Non-food industry, including representatives from pharmaceutical and advertising industries), similarly to Perspective B (Food industry), gave low scores to options 3 (advertising controls), 4 (controlling sales in public institutions), 5 (nutrition labelling) and 11 (controls on food composition).
- Perspective E (Policy-makers) appraised favourably controlling sales in public institutions (option 4), incentives to improve food composition (option 12) and controls on marketing terms (option 19), whereas they viewed subsidies on healthy foods (option 6) less favourably.
- Perspective F (Public service providers) were similarly positively inclined towards controlling the sale of food in public institutions (option 4) and negatively inclined towards subsidies on healthy foods (option 6), in much the same manner as were Policy-makers. They additionally were less supportive of investments into communal sports facilities (option 2).
- Perspective G (Public health specialists) gave higher rankings to options 6 (subsidies on healthy foods) and 14 (healthier catering menus).

- The scoring of options by country also provided some interesting insights in highlighting how differences in availability of sports facilities, the cost an availability of fruits and vegetables, taxation systems, health care delivery schemes and government action plans on obesity affected option scoring. On the other hand, one striking commonality was the ranking of food and health education for school children (option 15) among the top 3 options for every participating country.
  - Participants from Cyprus scored changes to transport and planning policies (option 1) lower and nutrition labelling (option 5) higher than those in the other 8 countries.
  - Greek participants also gave option 1 (transport policies) lower scores, and all rejected scoring option 16 (medication for weight control).
  - Hungarian participants likewise did not score transport policies (option 1) favourably, but did view improvements to communal sports facilities (option 2) in a positive light.
  - Participants from Finland were similarly positively inclined towards option 2 (improvements to communal sports facilities), but gave low scores to controls on food composition (option 11) and improved health education (option 10) under pessimistic conditions.
  - Polish participants gave higher scores to options 2 (improvements to communal sports facilities) and 5 (nutrition labelling), but were less

positively inclined towards option 3 (advertising controls) and 8 (improved training for health professionals).

- Participants from Italy scored showed very similar patterns to their Polish counterparts, scoring nutrition labelling (option 5) quite favourably and improved training for health professionals (option 8) less favourably.
- The Spaniards were positively inclined towards incentives to improve food composition (option 12) and a new government body (option 18), but did not favour taxes on obesity promoting foods (option 7).
- The French shared similar views on their disapproval of taxation (option 7).
- Participants from the UK also shared their Finnish counterparts' sceptical view of improved health education (option 10) under pessimistic conditions.

- In terms of the evaluation of the options by Issue, we have that:
  - Educational options scored well under all the Issues;
  - The informational options were considered as having good feasibility and social acceptability, but also as having costs for industry.
  - Options related to the supply and demand of food showed significant variability in terms of how they performed according to different issues. Taxes scored poorly in terms of costs to individuals, but were seen as being favourable to public sector finances, whereas subsidies were recognised as being a cost to the public sector but not as costly to individuals.
  - Options related to physical activity were judged as imposing high costs on the public sector (with the exception of the use of pedometers), but were rated positively under most other criteria.
  - The two technological innovation options received the lowest scores under most criteria, with the exception of costs to the commercial sector.
  - Both institutional interventions were seen as costly to the commercial sector, but not without some merit in terms of societal and additional health benefits.

11 Mapping option performance

11.1 Introduction

This section makes comparisons between the different options in order to draw conclusions on preferences in aggregate and by countries and by perspectives. The options are initially presented in a standard order on each of the charts below, with colours representing the clusters of options. In the following set of graphical figures, the options are presented in order of preference, ordered from the most favoured (assuming optimistic conditions) to least favoured, retaining their colour coding.

Table 11-1. Options grouped into clusters

Green: Exercise and physical activity-oriented
1. Change planning and transport policies
2. Improve communal sports facilities
20. Increase the use of physical activity monitoring devices options
Red: Modifying the supply of, and demand for, foodstuffs
4. Control sales of foods in public institutions
6. Provide subsidies on healthy foods
7. Impose taxes on obesity-promoting foods
11. Control the composition of processed food products
12. Provide incentives to improve food composition
14. Provide incentives to caterers to provide healthier menus
Yellow: Information-related initiatives
5. Require mandatory nutrition labelling
3. Controls on food and drink advertising
19. Control the use of marketing terms (‘diet’, ‘light’ etc)
Black: Educational and research initiatives
8. Improve training for health professionals in obesity care and prevention
10. Improve health education for the general public
15. Include food and health in the school curriculum
13. Increase research into obesity prevention and treatment
Blue: Technological innovation
16. Increase the use of medication to control bodyweight
17. Increase the use of synthetic fats and artificial sweeteners
Orange: Institutional reforms
18. Create a new governmental body to co-ordinate policies on obesity
9. Reform the Common Agricultural Policy to support nutritional targets

11.2 Mapping the options by cluster and favoured rank order

11.2.1 All participants combined

Figures 11-1 and 11-2 below show the average of the pessimistic (left-hand end of bar) and optimistic (right-hand end of bar) ranks (i.e. combined weighted scores for all criteria) for core options (in 11-1) and for discretionary options (in 11-2) given by all participants from all nine countries. This overview should be interpreted on the understanding that there is some loss of detailed information when averaging across participants when considering Perspectives or countries, and across countries when considering Perspectives and across Perspectives when considering countries.

Figure 11-1. Average ranks for all participants combined – core options -- cluster order

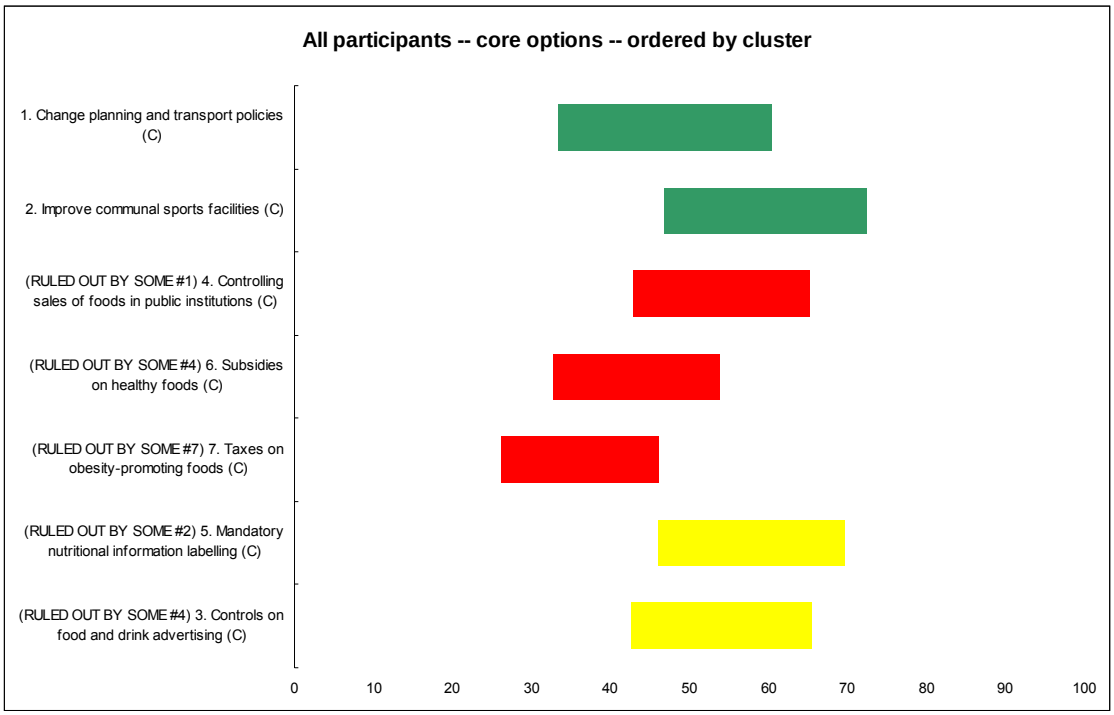
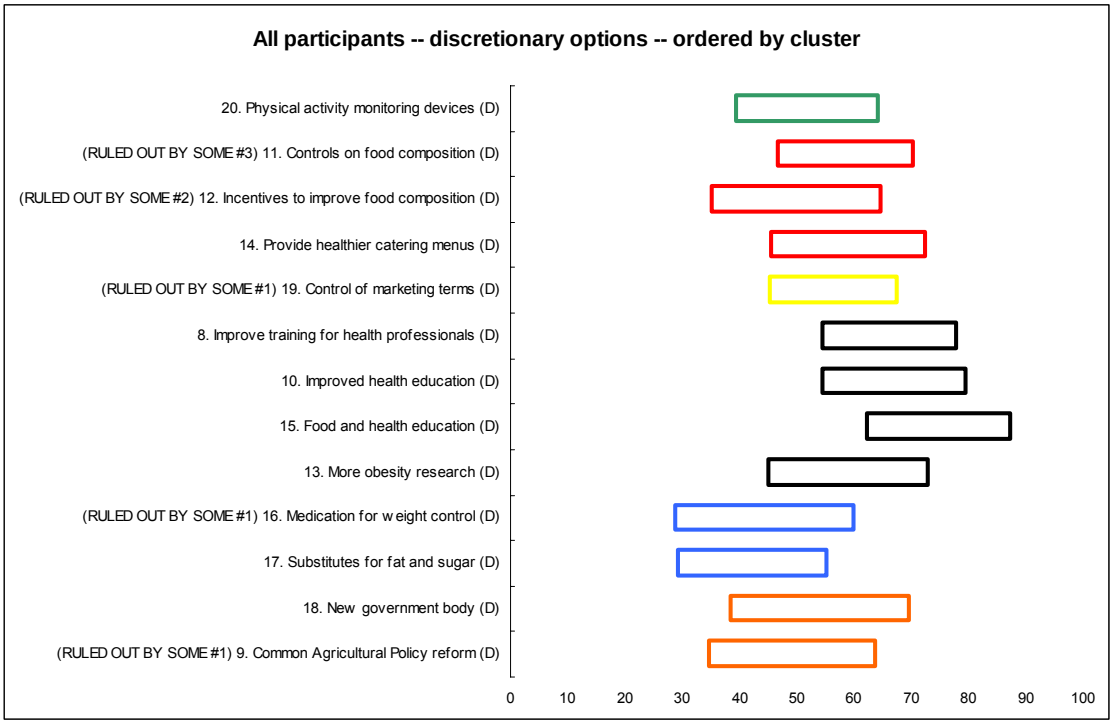


Figure 11-2. Average ranks for all participants combined – discretionary options -- cluster order.



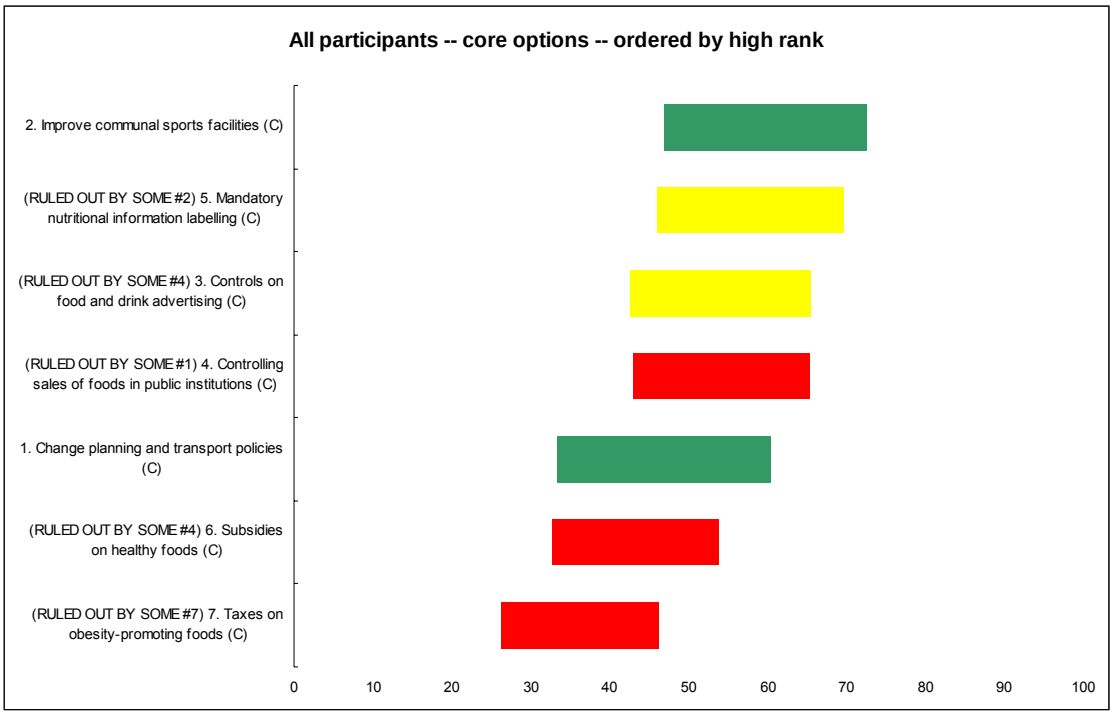
The widths of the bars provide an indication of the degree of 'conditionality' for each option. The conditions and uncertainties influencing the appraisals of each option were reviewed in the previous chapter, where each option was considered separately and the types of conditionality indicated. For example, in relation to core option 1 (changing transport and planning policies) the appraisals of many participants were tempered by doubts about, for example, the pace of implementation, the costs and the modesty and slowness of its potential impact on obesity prevalence. For core option 7 (taxes on obesity-promoting foods), conditionality was expressed in terms of alternative definitions of the foods that would be subject to taxation, the potential impact on lower income households, the context of the prevailing tax regime in a country and possible actions to influence patterns of demand with educational and health promotion initiatives. Amongst the discretionary options, option 15 (improved food and health education in schools) received broad support for several reasons, but appraisals of this option were often conditional. Interviewees often insisted that education and enriched knowledge would not, on their own, be sufficient to change behaviour, unless other environmental factors promoted unhealthy choices were also changed. The impact of education was widely seen as depending on the improved availability of information, as well as access to healthier diets and improved opportunities for physical activity.

While figures 11-1 & 11-2 above presented the average ranks given by all participants under optimistic scenarios (right-hand edge of the band) and pessimistic scenarios (left-hand edge of the band), ordered by cluster or type of option, figures 11-3 to 11-6 below will represent, separately for core and discretionary options, the same information rearranged in order from the most favoured (under optimistic conditions) to least favoured, and from the least favoured to the most favoured (under pessimistic conditions).

11.2.1.1 All participants combined – core options

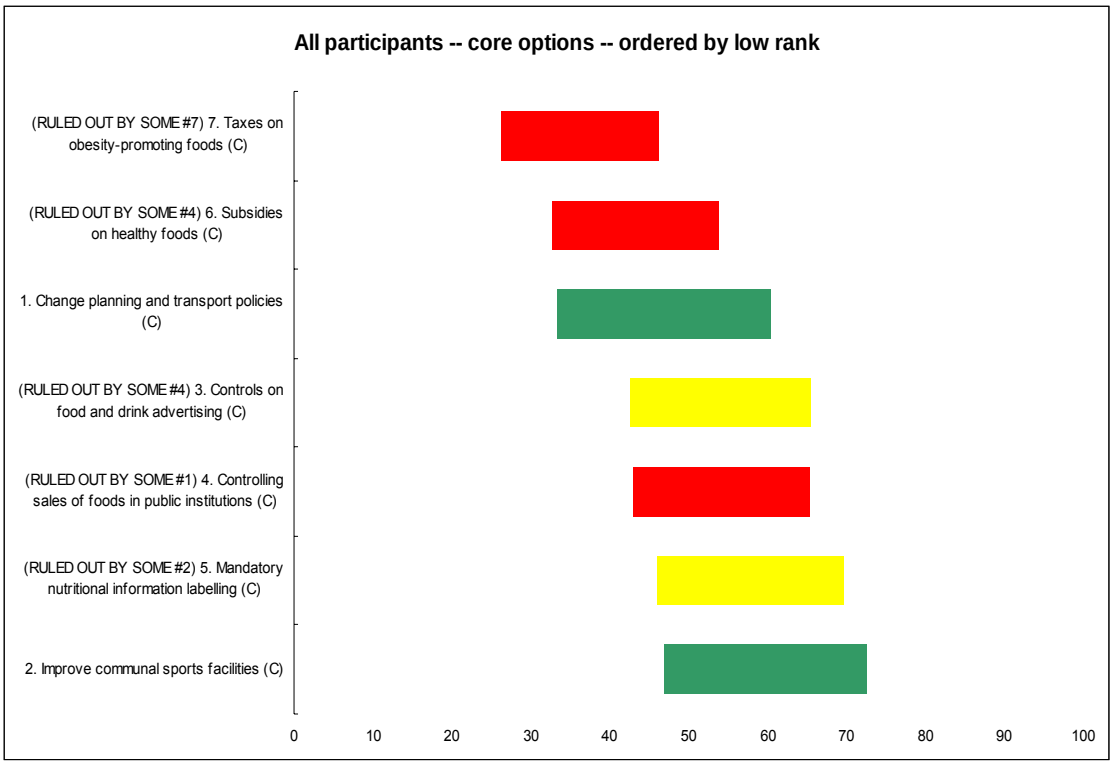
Under optimistic scenarios, the outcome of aggregating rankings across core options revealed a widespread preference for improvements to communal sports facilities, followed by two informational options (namely improved nutritional labelling and controls on food and drink advertising) as well as controls of sales in public institutions, as illustrated in Figure 11-3. The discussion (in Chapter 10) of the individual options indicated how participants interpreted these options and the factors that conditioned their appraisals.

Figure 11-3. Average ranks for all participants combined – core options -- favoured order ranked by optimistic conditionality



The two fiscal options for modifying the supply and demand of food (taxes on obesity-promoting foods and subsidies on healthy foods), as well as the options of changing planning and transport policies, received least support under both optimistic (Figure 11-3) and pessimistic (Figure 11-4) conditions. Although controls on food and drink advertising were ranked slightly lower than controlling sales of food in public institutions under pessimistic conditions, the opposite was true under optimistic conditions, highlighting the subtle effects of 'conditionality' in the aggregate relative ranking of the options. On the other hand, the improvement of communal sport facilities and mandatory and improved nutrition labelling were still ranked highest of all core options, even under pessimistic scenarios.

Figure 11-4. Average ranks for all participants combined – core options – least favoured order ranked by pessimistic conditionality



11.2.1.2 All participants combined – discretionary options

Amongst the discretionary options a strong preference was evident under optimistic scenarios for health educational initiatives, especially those focussing on school children and on health education for the general adult population, with less, but still relatively strong, support for improved training for health professionals and increased research into obesity. Those were followed by, incentives to provide healthier catering menus and further controls on food composition, as well as the creation of a new government body (see Figure 11-5).

Lowest average ranks were assigned to the options from the technological cluster (increased use of substitutes for fat and sugar and medication for weight control) as well as CAP reform, under both optimistic (Figure 11-5) and pessimistic conditions (Figure 11-6). On the other hand, a slightly different picture emerged when contrasting relative ranking by optimistic or pessimistic ranks for some of the options. More obesity research was ranked less favourably than healthier catering menus, controls on food composition and control of marketing terms under pessimistic scenarios. Similarly, the creation of a new government body was ranked less favourably than improved physical activity monitoring devices and control of marketing terms, which was not the case under optimistic conditions. Incentives to improve food composition was placed fourth among the lowest ranking options under pessimistic scenarios, where as it was physical activity monitoring devices which occupied this low rank amongst the core options under optimistic conditions.

Figure 11-5. Average ranks for all participants combined – discretionary options -- favoured order ranked by optimistic conditionality

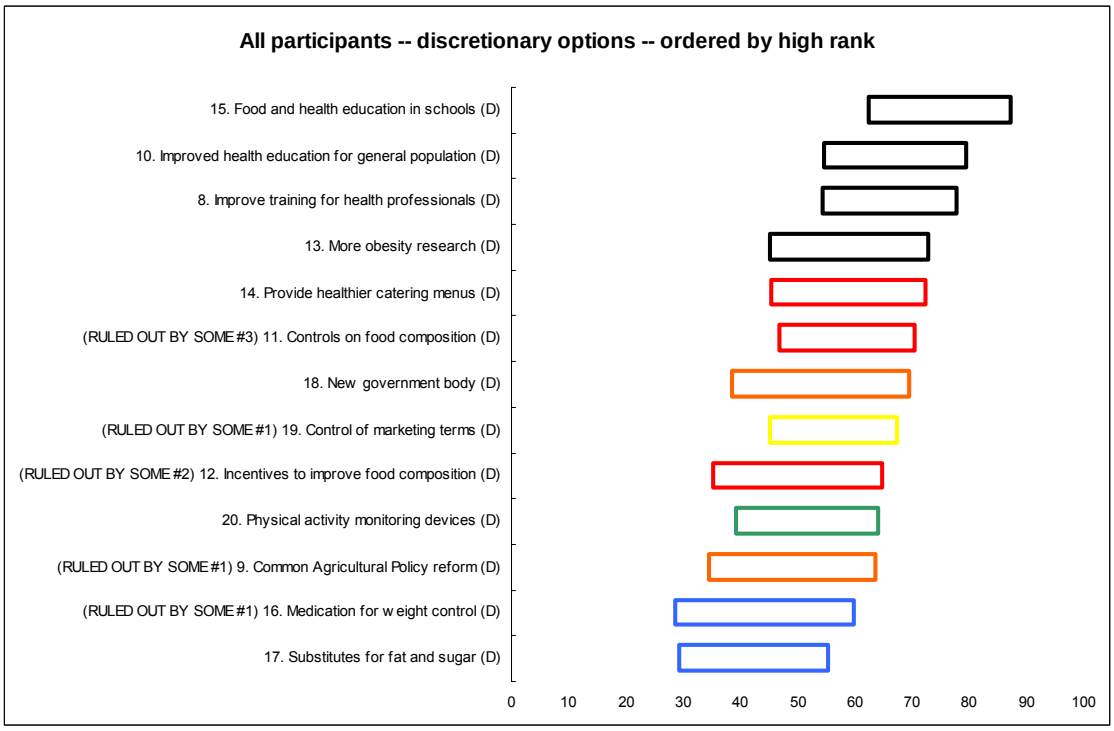
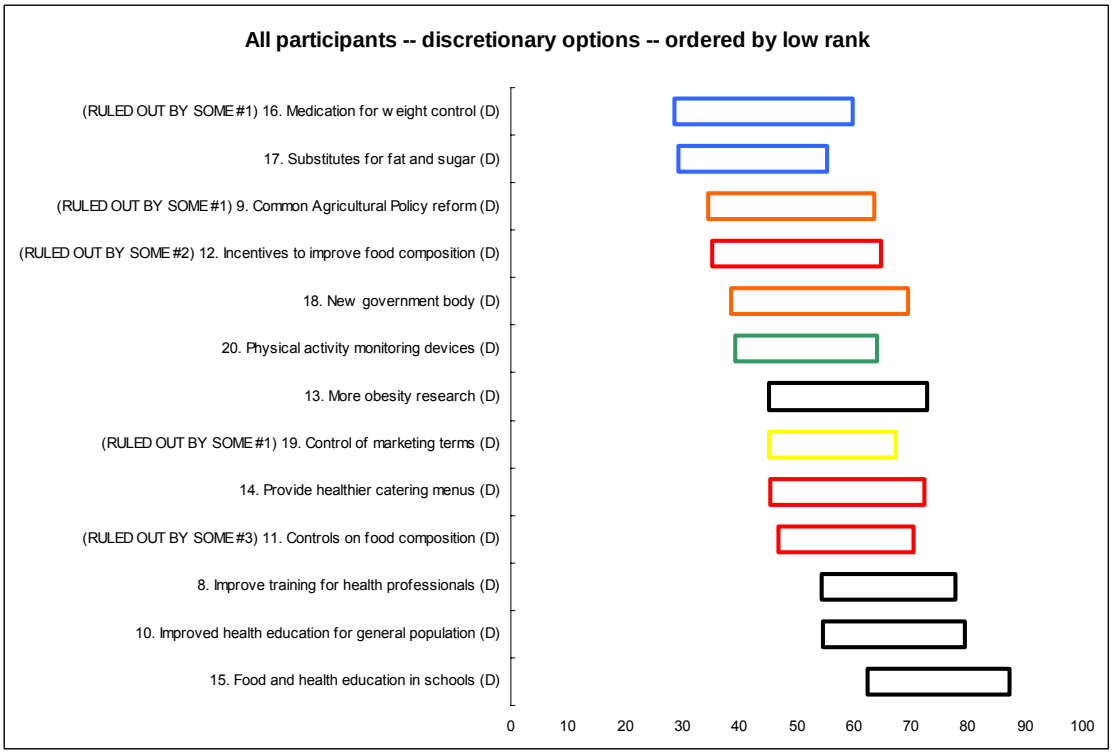


Figure 11-6. Average ranks for all participants combined – discretionary options – least favoured order ranked by pessimistic conditionality

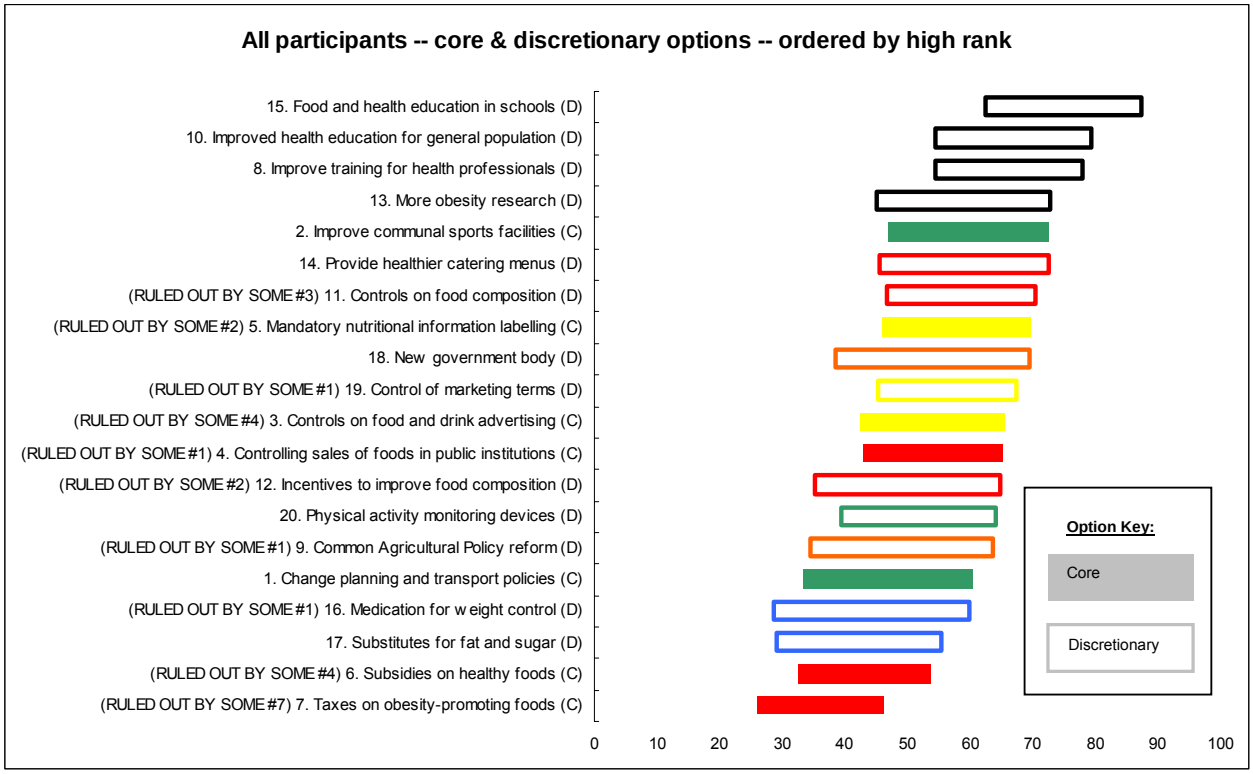


Although core and discretionary options have always been considered (and graphically represented) separately in previous MCM studies, two factors have prompted us to integrate their analysis and graphical representations in the present study. Firstly, the number of participants in the current MCM study is unprecedentedly high, and provides a sizeable number of appraisals even for the discretionary options. Generally, the larger the sample, the more meaningful is their aggregation and averaging.

Secondly, the grouping of options into clusters, which was accomplished only after the participants had been interviewed, indicated particular clusters of options (including the educational, institutional and technological innovation clusters) that had not been represented among the core options. Because some of the options in those clusters that had not been represented amongst the core options were ranked particularly highly, a considerable amount of potentially valuable information on the relative ranking of the most favoured options would be lost if the core options and discretionary options were only considered separately.

Consequently, we have integrated our analysis of the core and discretionary options together, and the remaining graphs will represent both core and discretionary options together, ordered by the highest average rank under optimistic conditions. Since the contrast between core and discretionary options remains an important one, the following graphs will represent core and discretionary options side by side, but in distinct categories. Core option rankings will be indicated by solid rectangles, colour-coded by cluster, whereas discretionary option rankings will be represented by hollow rectangles outlined using the same cluster colour codings. This is illustrated in the figure below, and will be further discussed in Section 12.

Figure 11-7. Average ranks for all participants combined – core and discretionary options -- favoured order ranked by optimistic conditionality



That graphic representation implies several key findings. Firstly, the core options that were the focus of many debates within Member States and at the EU-wide level in 2004 were not particularly well-regarded by most stakeholder groups in 2005, especially when compared to many of the discretionary options. Overall, the options in the education cluster were particularly popular. The most highly appraised core option was to improve provision of and access to facilities for physical recreation. That option was the only one of the three physical activity-related options ranked above the centre of gravity of the entire distribution. Only the two fiscal (core) options were less favourably appraised than the technological options (making greater use of synthetic substitutes for fats and sugars and increased use of pharmaceutical interventions). The most highly regarded core options in the cluster concerned with modifying the demand for and supply of foods was ranked significantly below two other (discretionary) options in that cluster, namely providing healthier catering menus and controls of food composition. All three informational options (two core and one discretionary) were ranked closely together and slightly higher than the overall average.

11.2.2 Perspective's ranking of options

Compared with the general pattern shown for all participants combined (above) the different Perspectives each showed favoured and less favoured options, as can be seen in the diagrams below.

Figure 11-8. Average ranks for all participants grouped into Perspectives, showing ranks by favoured order under optimistic conditions– Perspective A: Public Interest NGOs

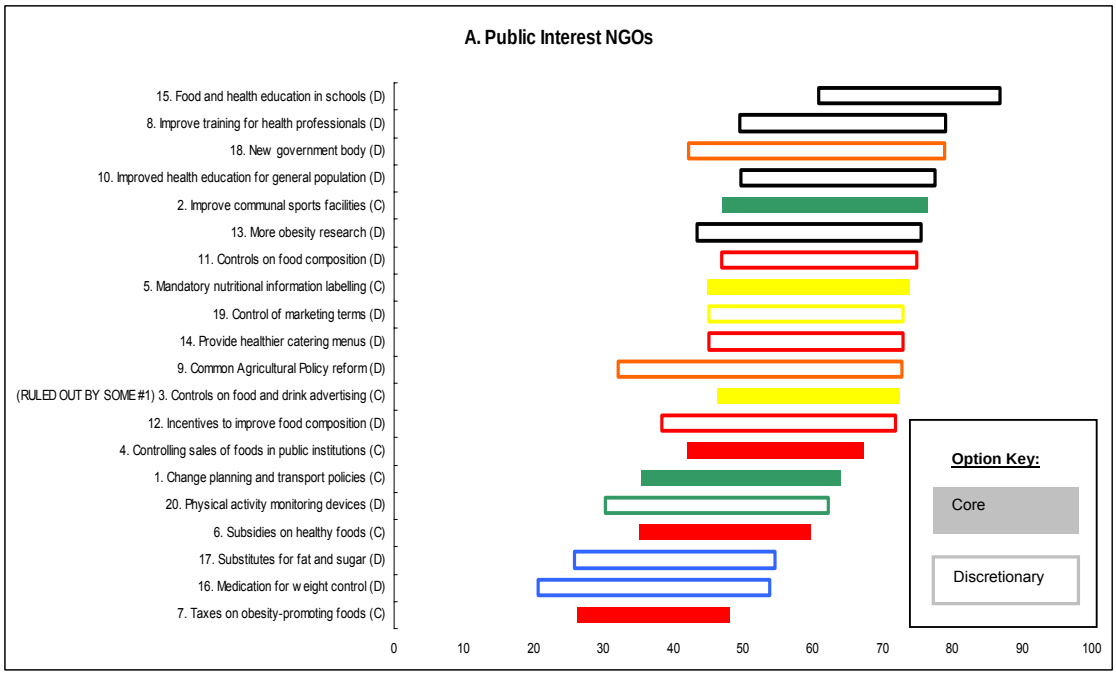


Figure 11-9. Average ranks for all participants grouped into Perspectives, showing ranks by favoured order under optimistic conditions– Perspective B: Large food chain commercial operators

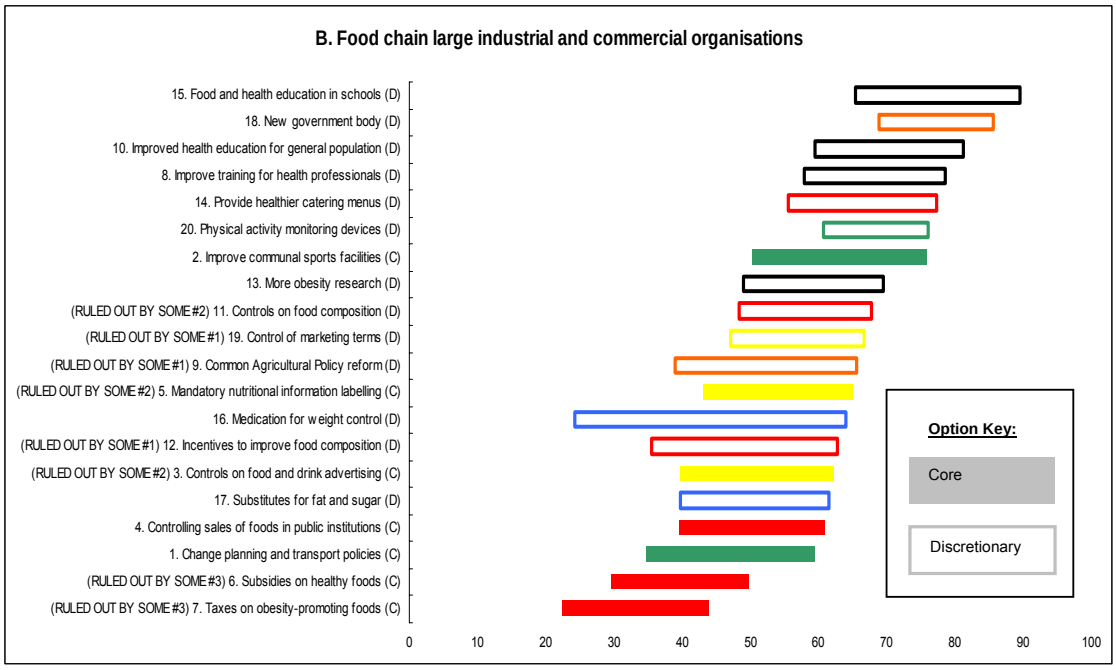


Figure 11-10. . Average ranks for all participants grouped into Perspectives, showing ranks by favoured order under optimistic conditions – Perspective C: Small food and fitness commercial operators

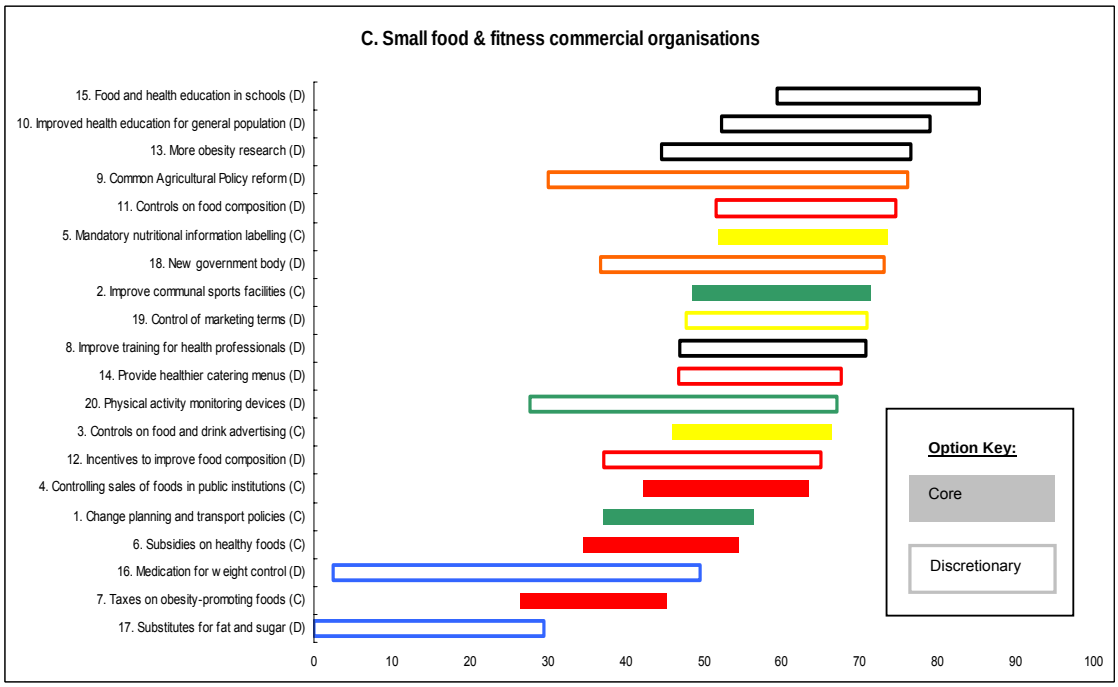


Figure 11-11. Average ranks for all participants grouped into Perspectives, showing ranks by favoured order under optimistic conditions – Perspective D: Large non-food commercial operators

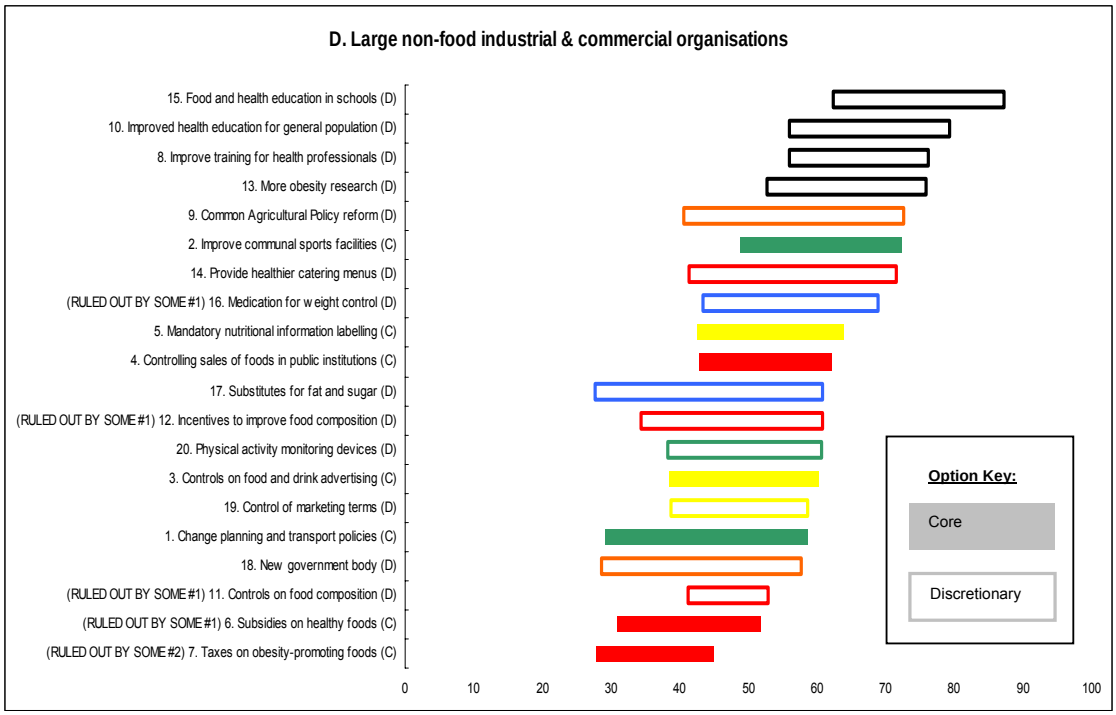


Figure 11-12. Average ranks for all participants grouped into Perspectives, showing ranks by favoured order under optimistic conditions – Perspective E: Policy makers

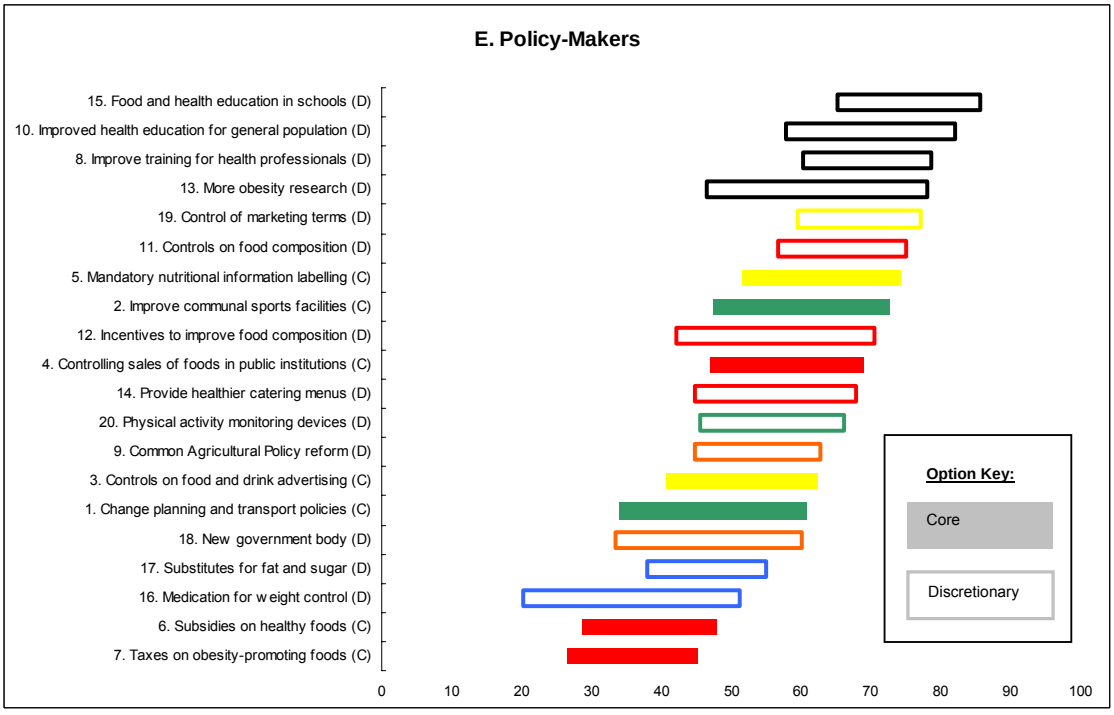


Figure 11-13. Average ranks for all participants grouped into Perspectives, showing ranks by favoured order under optimistic conditions – Perspective F: Public service providers

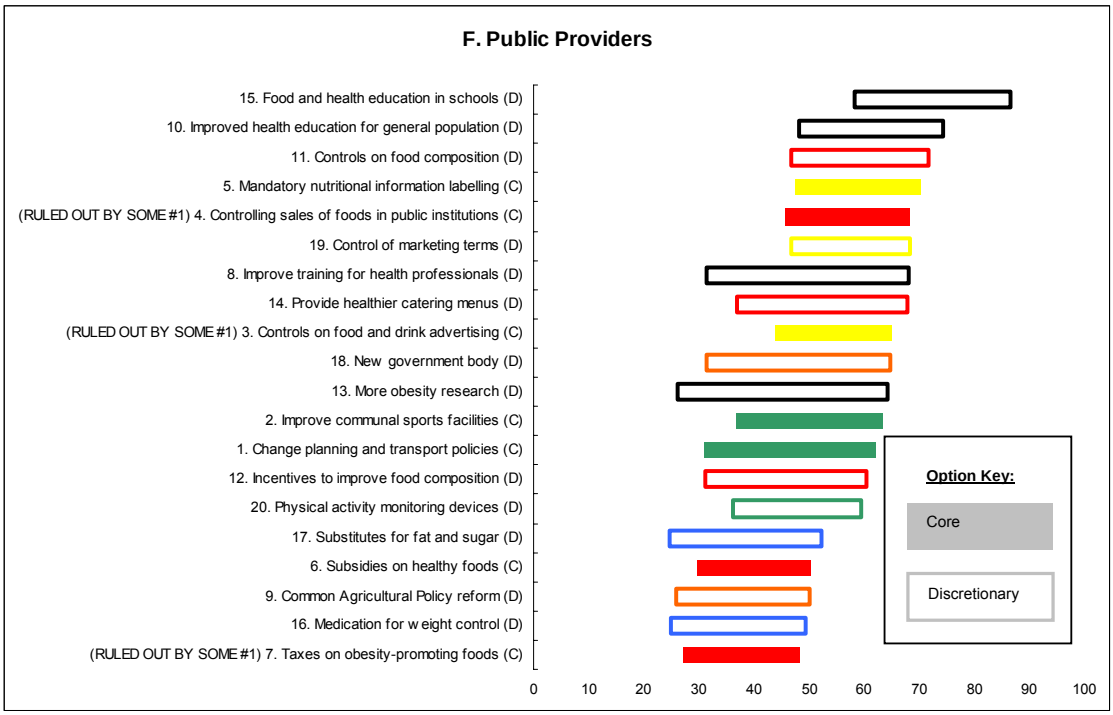
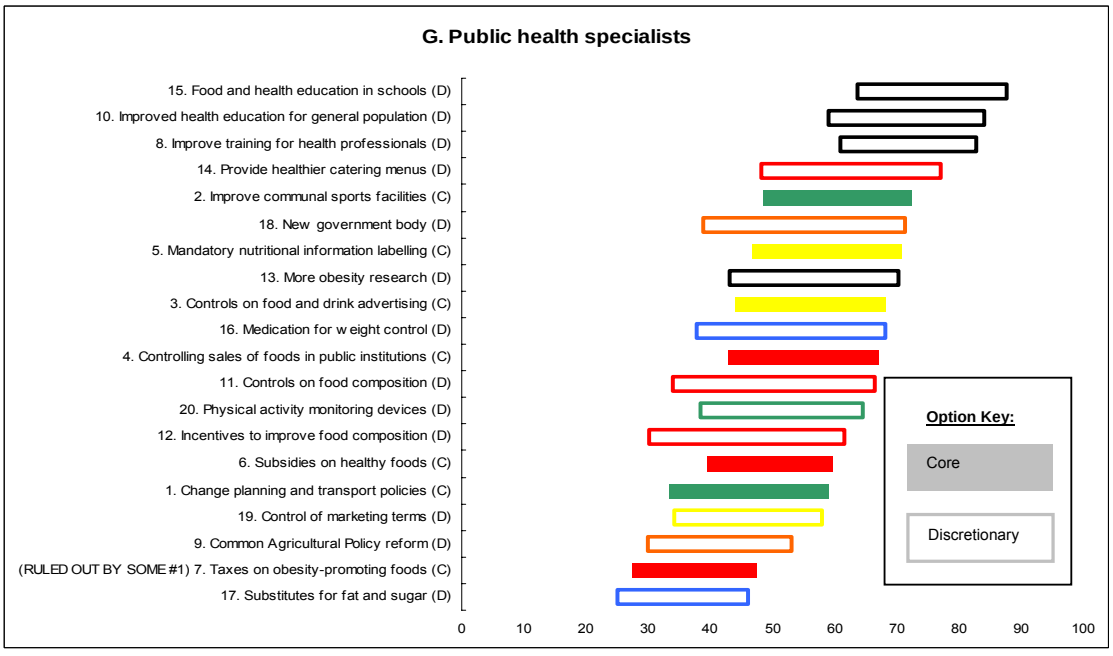


Figure 11-14. Average ranks for all participants grouped into Perspectives, showing ranks by favoured order under optimistic conditions – Perspective G: Public health specialists



Although the strong support from the participants as a whole for the educational options was evident for many Perspectives, some also gave non-educational options a high ranking. A comparison of Perspectives also shows that the options given the lowest scores were not uniformly agreed by all Perspectives.

In summary the following observations can be made:

- Core options were not amongst those that were particularly highly ranked.
- While Perspectives C, D, E and G put three, or all four, of the educational options as their most favoured options (at least under optimistic scenarios), Perspectives A and B believed a new government body was at least as important. Perspectives C and D also gave strong emphasis to the reform of the Common Agriculture Policy.
- Incentives to provide healthier catering menus were favoured especially by Perspectives B, D and G, but were relatively poorly supported by Perspectives A and C.
- While the technological options were scored relatively poorly by most Perspectives, the option to offer medication for weight control was given relatively strong support by Perspective G, B and especially Perspective D, which included the representatives of pharmaceutical companies. The option to use artificial fats and sweeteners was also relatively well supported by Perspective D.
- Comparisons of options within clusters indicates that, of the physical activity cluster, the option offering physical activity monitoring devices was especially well supported by Perspective B, while Perspective F was not supportive of any options in this cluster.
- In relation to the cluster of options concerning food supplies, there was strong agreement in favour of controlling sales of foods and drinks in public institutions, controls on food composition and incentives for healthier menus in preference to taxes, subsidies or incentives for healthier catering menus. Members of the food chain (Perspective B) were not especially attracted to subsidies on healthier foods, ranking this next to lowest, under optimistic conditions, only just higher than taxes on obesity-promoting foods.
- The informational initiatives showed some variation across Perspectives. For example, the option to strengthen controls on marketing terms was ranked as the least attractive of the three options by non-food commercial operators (Perspective D) and public health professionals (Perspective G), whereas the option to control food advertising was ranked in relatively low positions by Perspectives B and E.

11.2.3 Gender comparison

Although not designed into the participant selection process, the issue of possible gender differences in the appraising of options was considered worthy of analysis, and the composite results are presented here. No attempt is made to adjust for differences in gender representation within different Perspective groups or within different countries,

and it is possible that so far undetected complex interactions exist between the scores given by men and by women according to Perspective and/or country.

The overall comparison, shown in Figures 11-11 and 11-12 below, indicate general similarity in the appraisal of the options:

- Both genders agree on the top three highest-scoring options (under both optimistic and pessimistic scenarios), all of which are educational (health education for children, general health education and improved training for health professionals).
- The men's six top-scoring options (under optimistic conditions) were all among the women's seven top-scoring options: these included more obesity research, improved catering menus and more communal sports facilities.
- Women gave high scores to two supply-side options: controls on food composition and healthier catering menus, while men gave high scores to the improvement of communal sports facilities.
- Of the three options concerning commercially-provided information about food, women preferred the option to control food and drink advertising whereas men preferred mandatory nutrition labelling. Meeting the concerns of both genders therefore implies implementing both of those options.
- Both men and women gave their lowest scores (under optimistic conditions) to five options: taxes on obesity-promoting foods and subsidies on healthy foods, medication for weight control and substitutes for fat and sugar, and changes to transport and planning policies. Men and women gave the same nine options the lowest scores under pessimistic conditions: these included the five just noted plus incentives to improve food composition, reform of the Common Agriculture Policy, a new government body and physical activity monitoring devices.

Figure 11-15. Average ranks for all participants grouped into genders, showing ranks by favoured order under optimistic conditions (men)

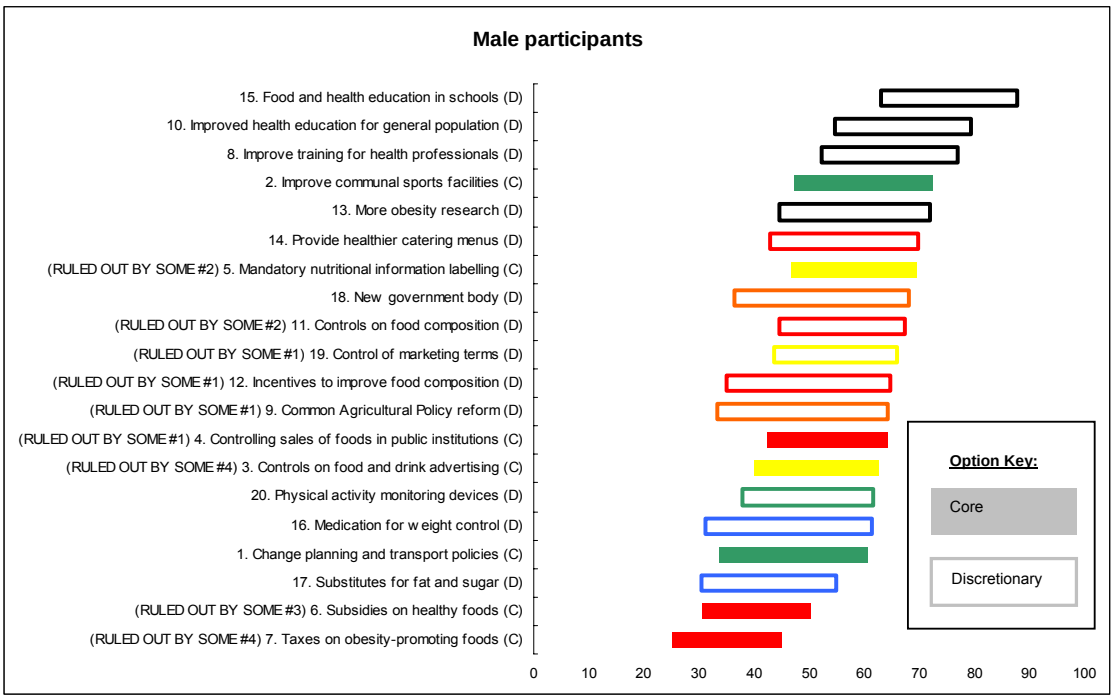
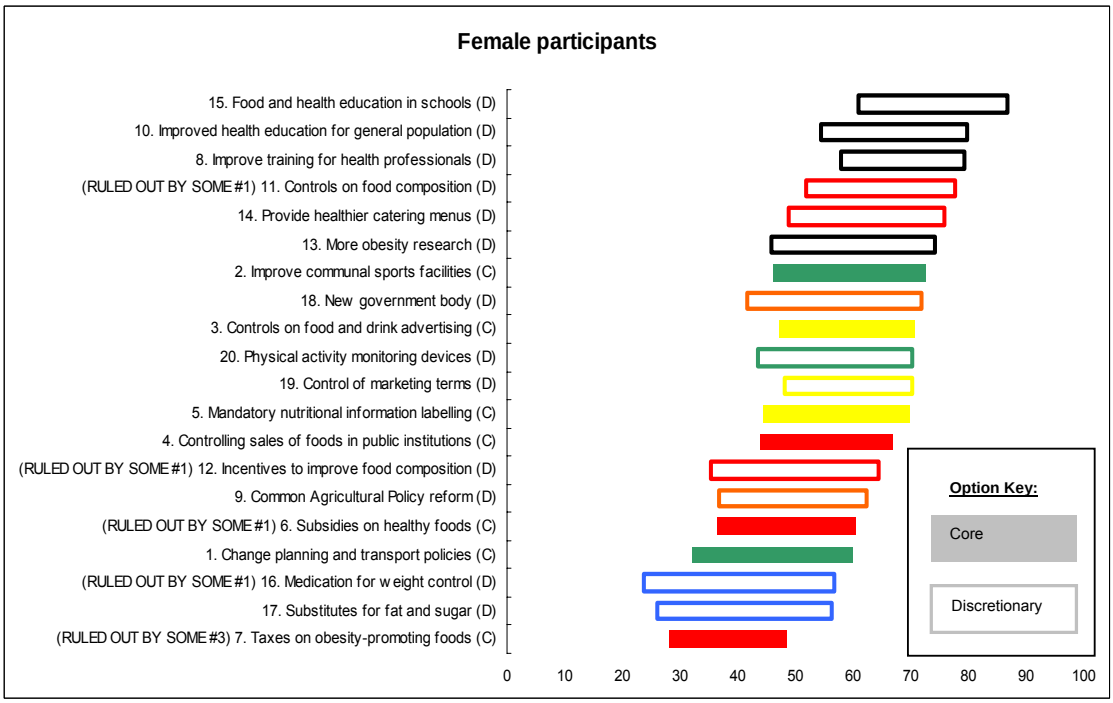


Figure 11-16. Average ranks for all participants grouped into genders, showing ranks by favoured order under optimistic conditions (women)



11.2.4 Country-by-country ranking of options

The figures below show average rankings for options across all participants within each country, in cluster order and in favoured ranking option order (under optimistic conditions). Variations can be seen in the ordering of the options, the range between most

favoured and least favoured option, and in the degrees of uncertainty or conditionality for each option. In this last respect interviewees in Poland and Greece consistently gave small differences between scores under optimistic and pessimistic conditions across most options, while interviewees in other countries, notably Finland, Spain and the UK, gave consistently larger differences across most options.

Differences in the ordering of the preferences for options and option clusters are apparent between the nine countries. The main features shown are:

- Within the options concerning physical activity, French participants scored the third option, to promote the use of physical activity monitoring devices, very poorly under both pessimistic and optimistic conditions, while Hungarian participants gave this option the highest scores of the three options and ranked it second highest of all the options they appraised. For Finland, improving sports facilities ranked highest of all options, when scored under optimistic conditions, and the high scores given to this option by Poland and Hungary led to it being given the overall highest ranking across all countries of all the non-educational options.
- Of the cluster of educational options, virtually all countries agreed that the most appealing was the option to provide food and health education in schools. Most countries ranked the option to undertake further obesity research as the lowest ranking option within the cluster.
- While both Cyprus and Italy gave nutrition labelling the highest scores of the three informational options, and controls on health claims the lowest scores, in France and in Hungary the pattern was reversed. In the UK controls on advertising scored best, under optimistic conditions, and in Cyprus, France, Italy and the UK controls on advertising came within the top ten most favoured options, assuming optimistic conditions.
- Among the countries with participants scoring the two technological options – medication for weight control and substitutes for fats and sugars – only interviewees in Spain gave either of these a high score. In Spain, medication for weight control was the third most highly scored option, and as discussed in the previous section, this was a result of having just two participants appraise this option, one of whom (from the pharmaceutical industry) gave it a very high score, and those appraisals might therefore be discounted.
- Of the two institutional policy options – a new government body to tackle obesity and CAP reform – Greek interviewees gave a very high ranking to the proposal for a new government body, while Italians gave a high ranking to CAP reform. However, in each case three or fewer participants undertook appraisals and the results might therefore be discounted.

Figure 11-17. Average ranks for all participants showing ranks by favoured order under optimistic conditions – Cyprus

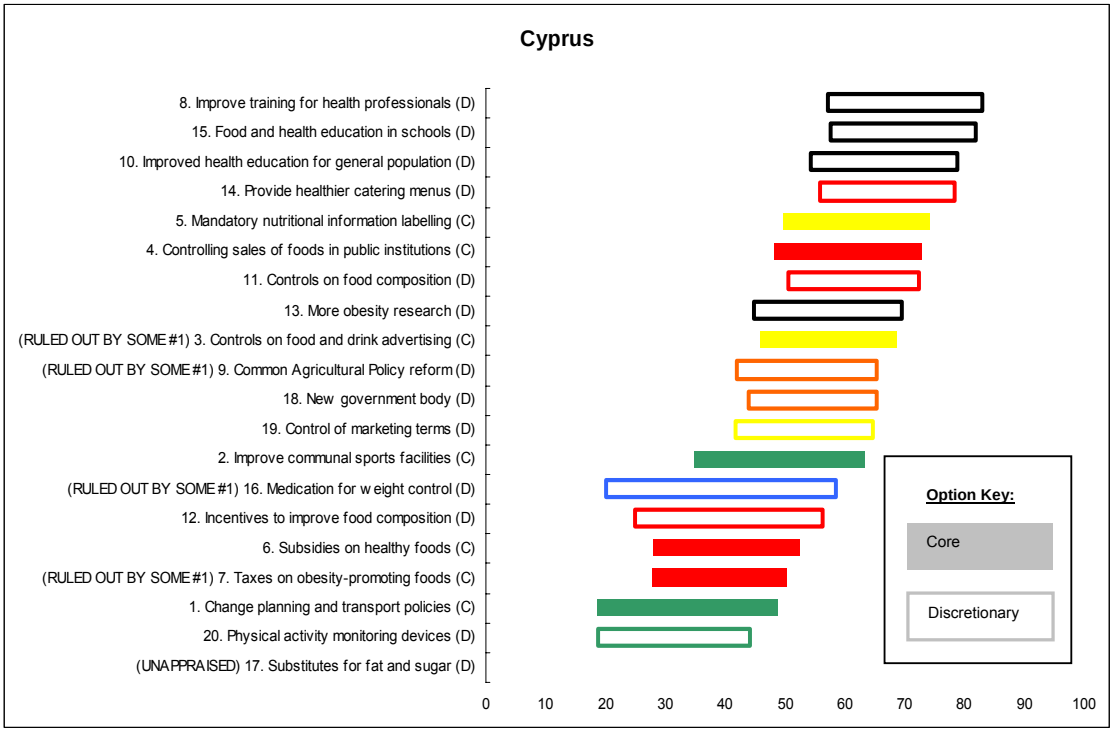


Figure 11-18. Average ranks for all participants showing ranks by favoured order under optimistic conditions – Finland

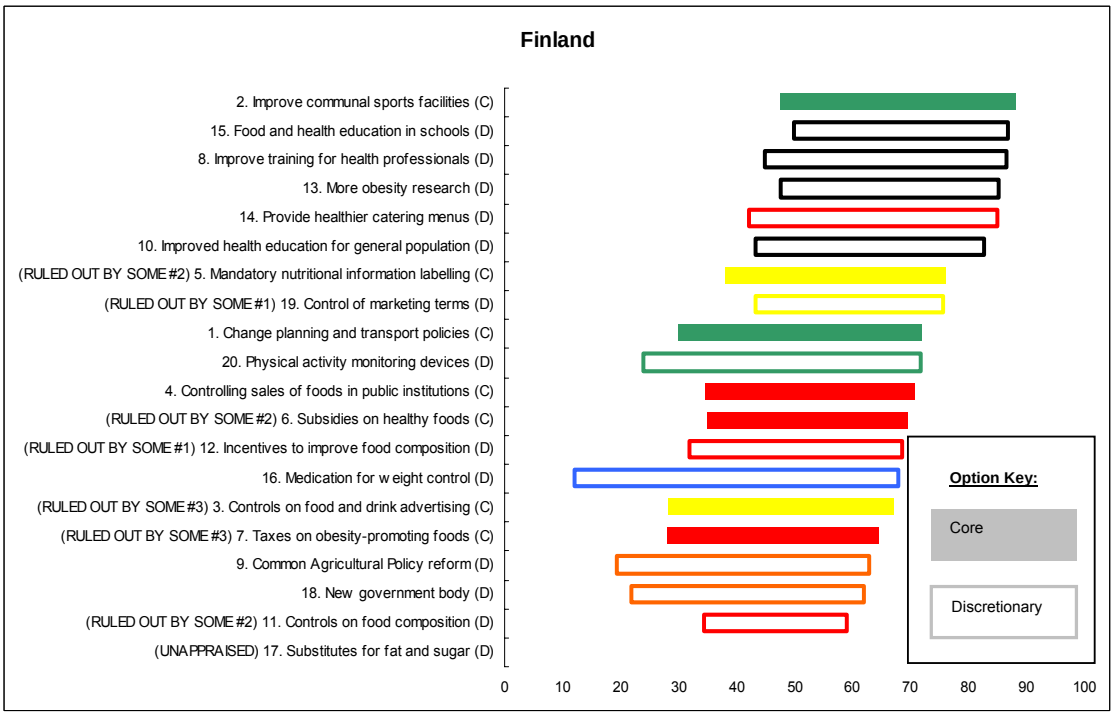


Figure 11-19. Average ranks for all participants showing ranks by favoured order under optimistic conditions – France

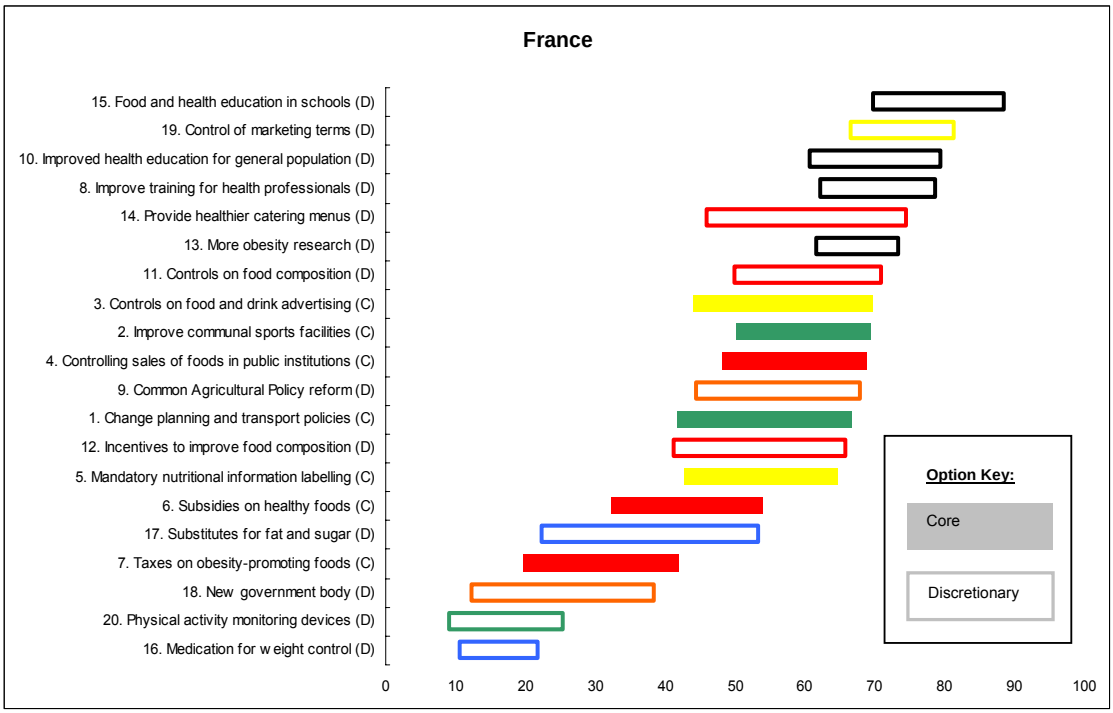


Figure 11-20. Average ranks for all participants showing ranks by favoured order under optimistic conditions – Greece

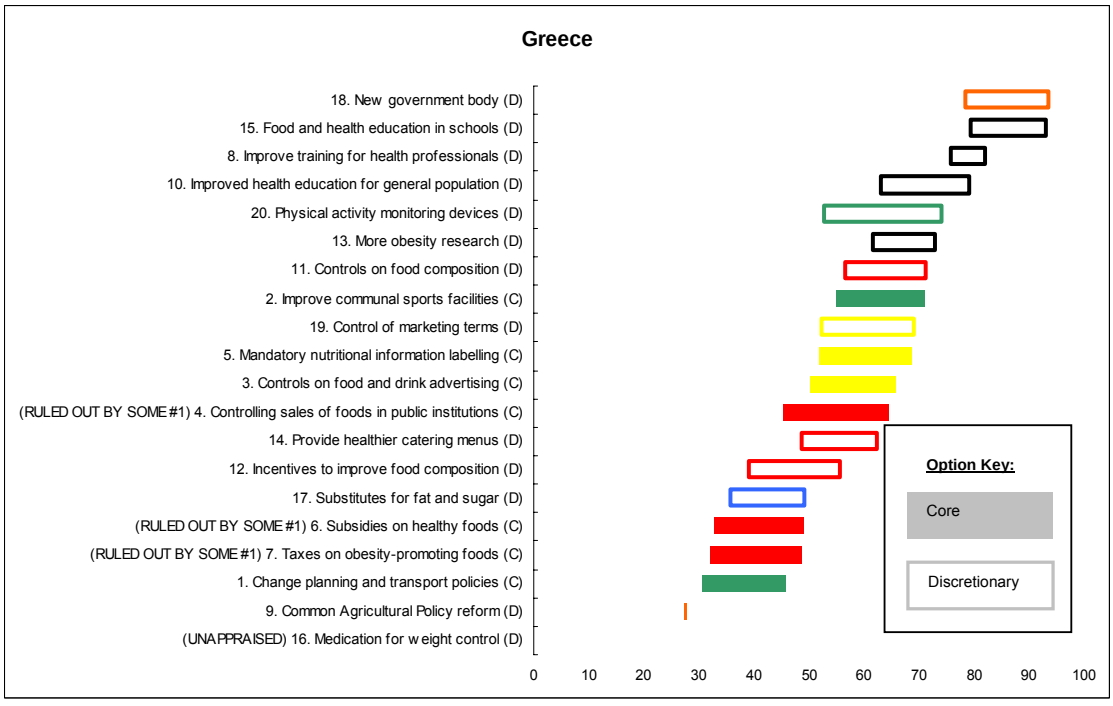


Figure 11-21. Average ranks for all participants showing ranks by favoured order under optimistic conditions – Hungary

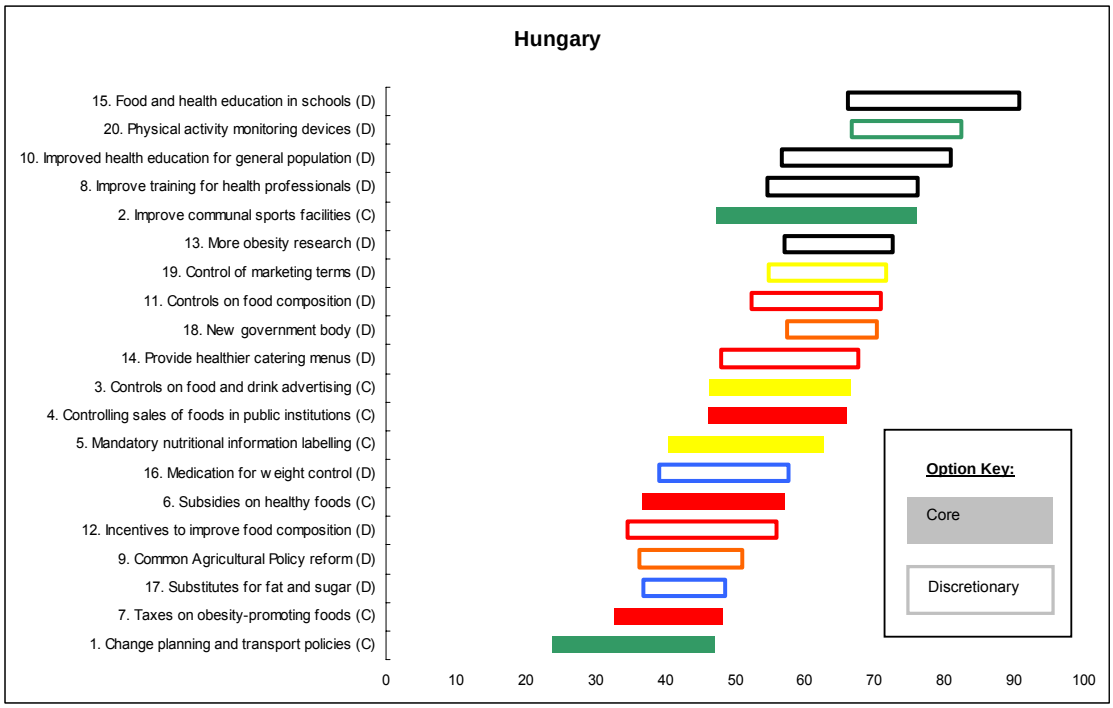


Figure 11-22. Average ranks for all participants showing ranks by favoured order under optimistic conditions – Italy

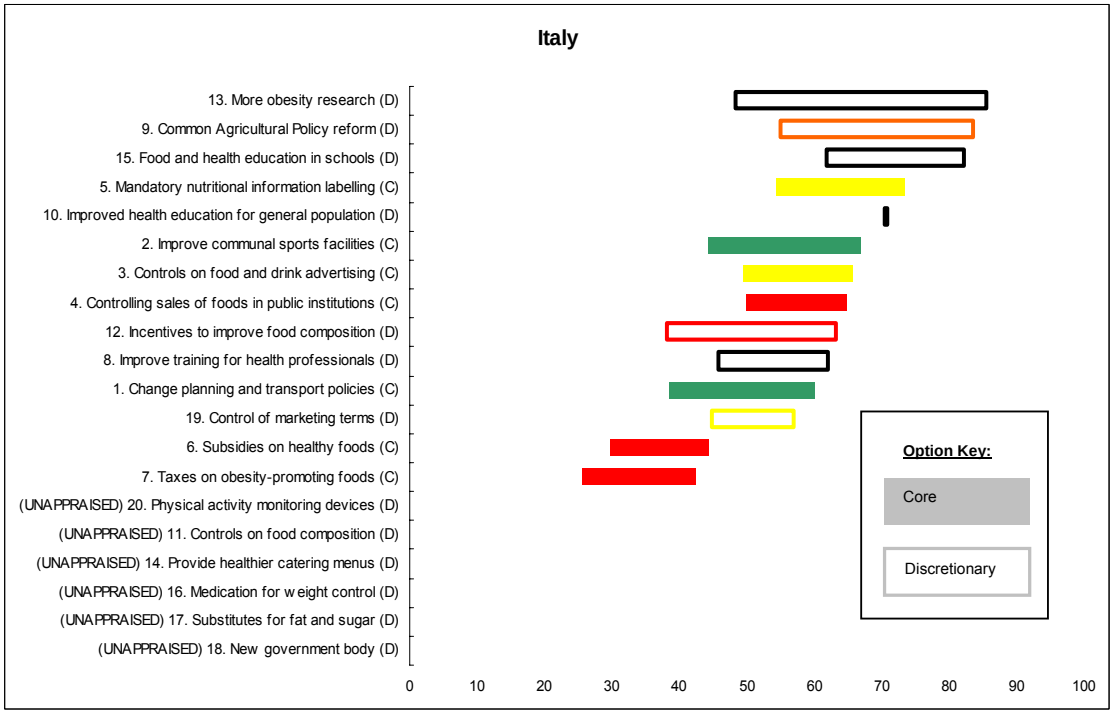


Figure 11-23. Average ranks for all participants showing ranks by favoured order under optimistic conditions – Poland

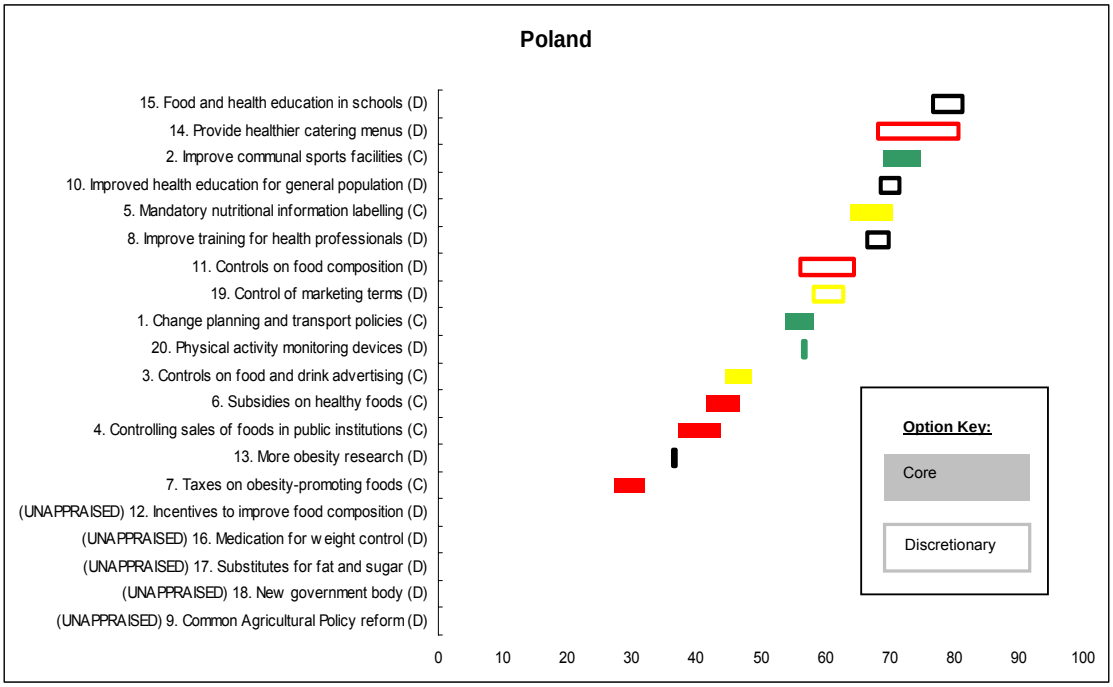


Figure 11-24. Average ranks for all participants showing ranks by favoured order under optimistic conditions – Spain

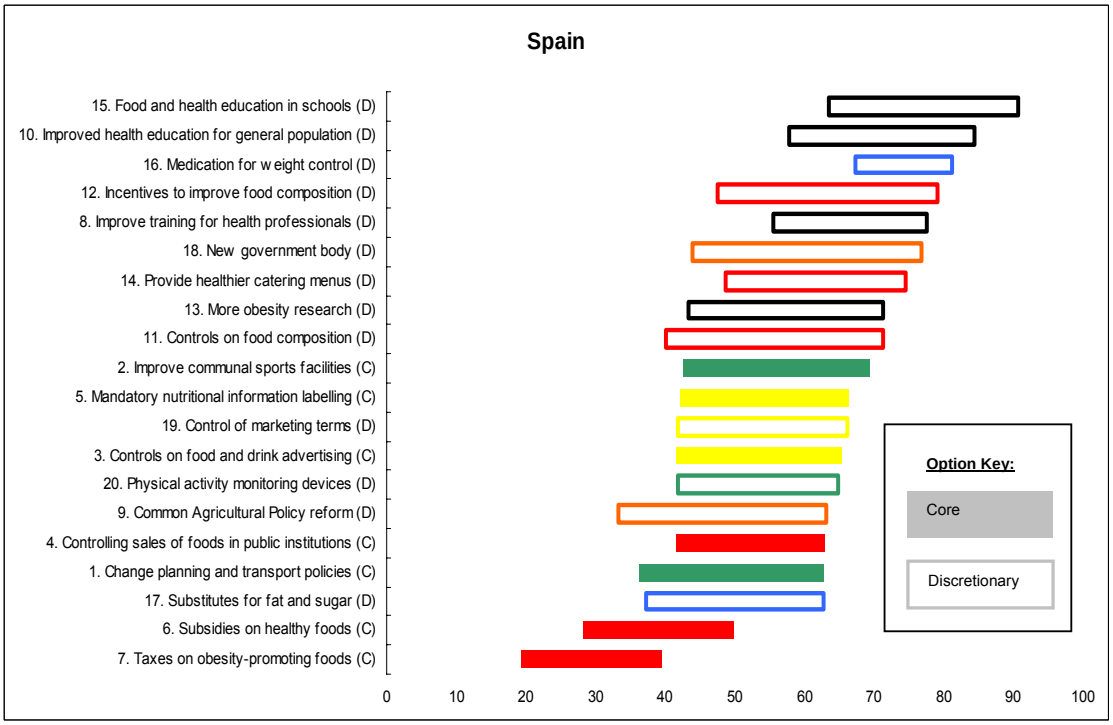


Figure 11-25. Average ranks for all participants showing ranks by favoured order under optimistic conditions – UK

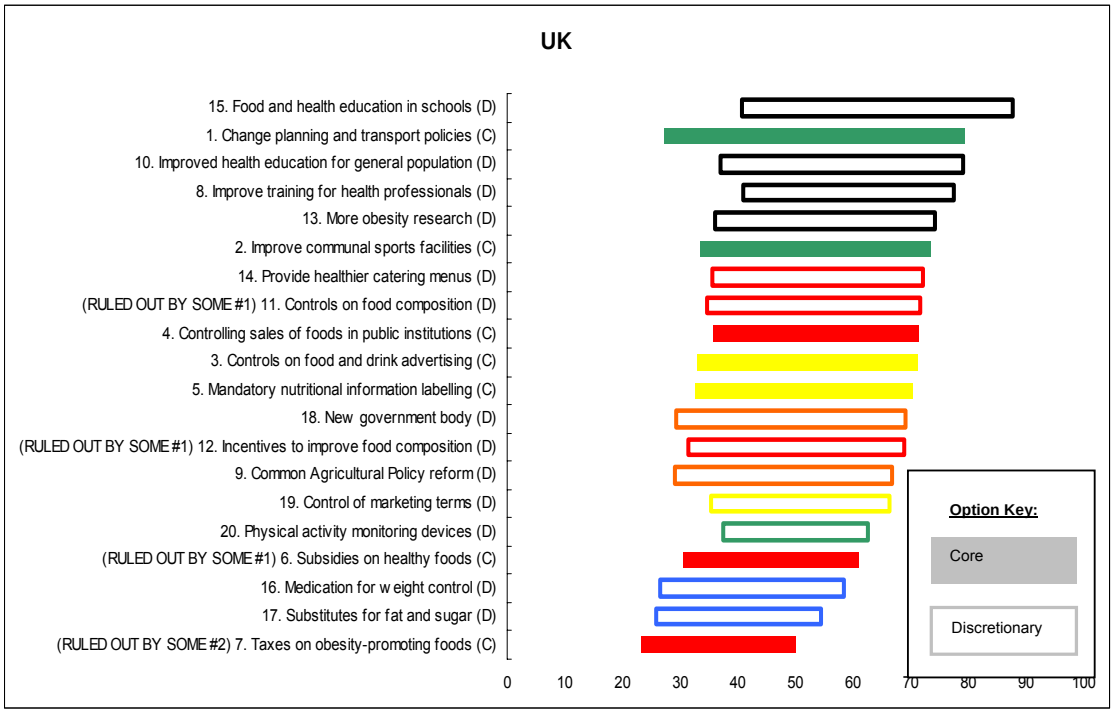
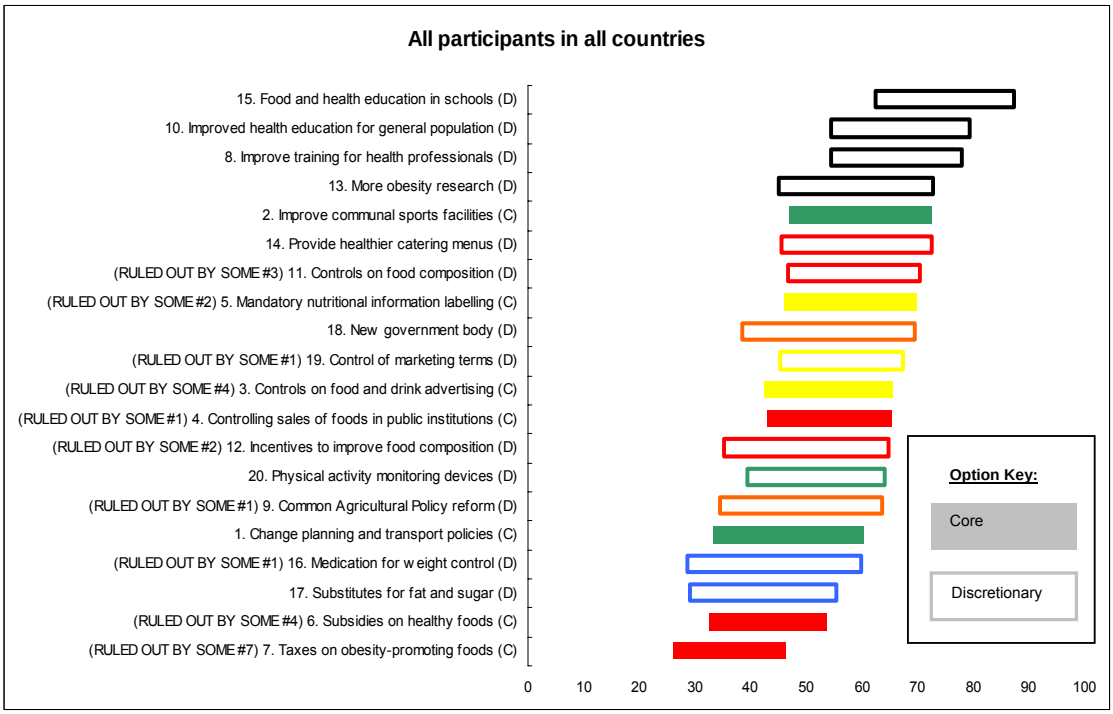


Figure 11-26. Average ranks for all participants showing ranks by favoured order under optimistic conditions - all 9 countries



11.2.5 Countries by regions

In order to explore potential regional differences, the scores were aggregated into three geographical regions: those primarily in the Mediterranean basin (Cyprus, Greece, Italy and Spain), those in Eastern Europe (Finland, Hungary and Poland) and those in Western Europe (France and the UK). The principle differences that emerge are as follows:

- As noted earlier, the provision of community sports facilities features very highly among all three countries in the Eastern region, exceeded only by the option to provide food and health education in schools, which was scored very highly in all regions.
- Of the remaining physical activity-related options, the use of monitoring devices such as pedometers was scored relatively highly in the Eastern region but very poorly in the Western region. Changes to planning and transport policies were scored well (under optimistic conditions) in Western countries but very poorly in Eastern and Mediterranean countries.
- Of the informational options, Western countries gave highest scores (under optimistic conditions) to controls on food and drinks advertising, whereas this was given the lowest scores of the three options in the Eastern region.
- Mediterranean countries gave high scores to the option to form a new government body to tackle obesity, and also gave high scores to the option to offer medication to control body weight – but in both cases these may have been influenced by small numbers of participants giving very high scores to these options (in Greece and in Spain, respectively, as noted above).
- In most other respects the various regions show remarkable agreement in their scores and relative ranking of the various options.

Figure 11-27. Average ranks for all participants showing ranks by favoured order under optimistic conditions - Mediterranean region (Cyprus, Greece, Italy and Spain)

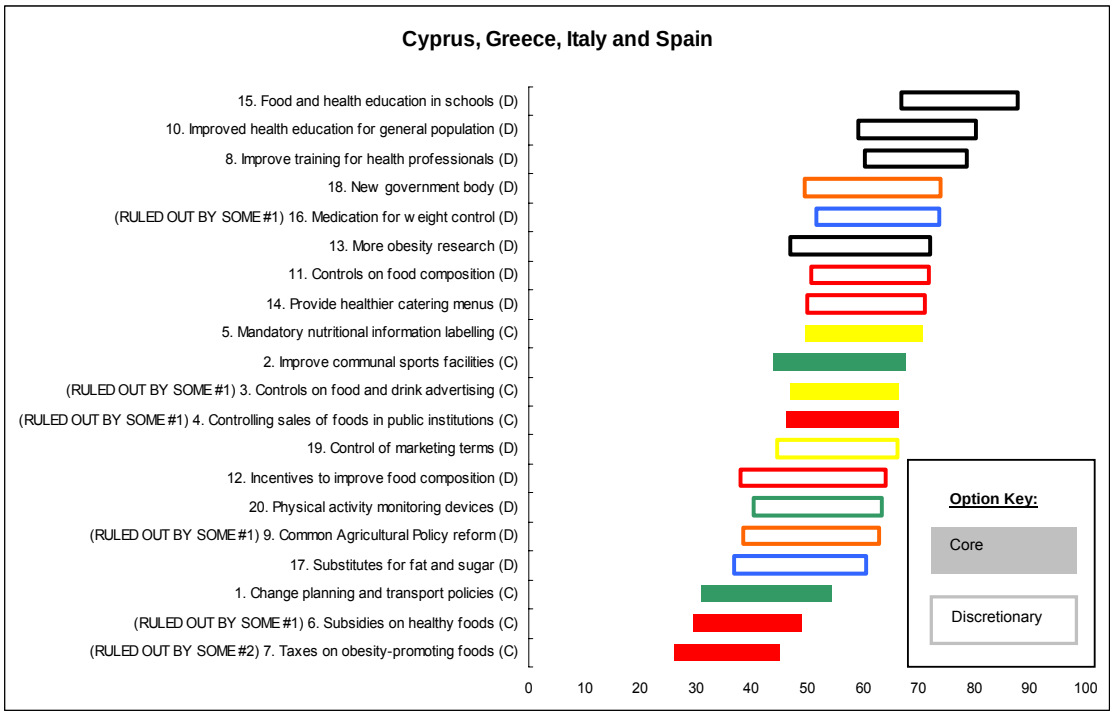


Figure 11-28. . Average ranks for all participants showing ranks by favoured order under optimistic conditions - Eastern region (Finland, Hungary and Poland)

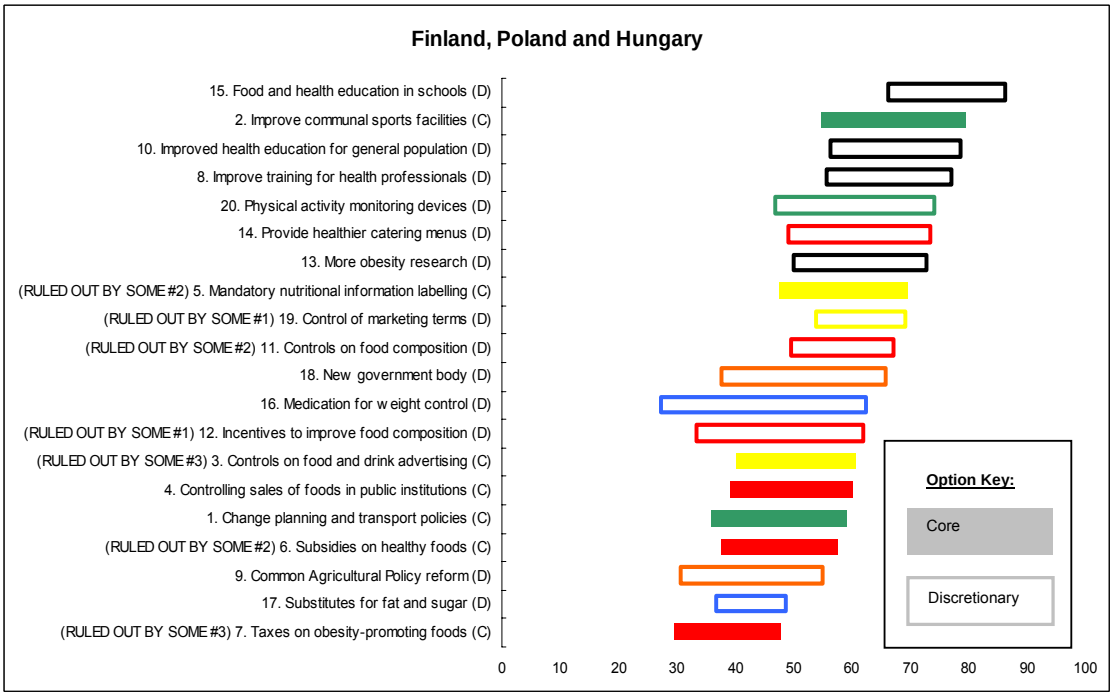
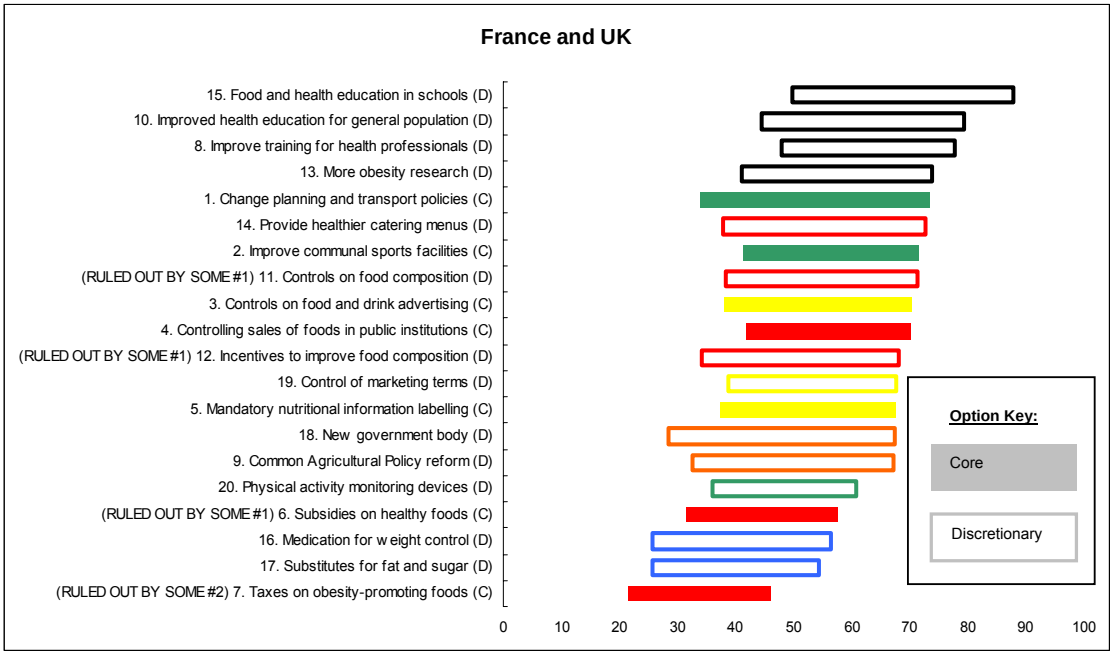


Figure 11-29. Average ranks for all participants showing ranks by favoured order under optimistic conditions - Western region (France and UK)

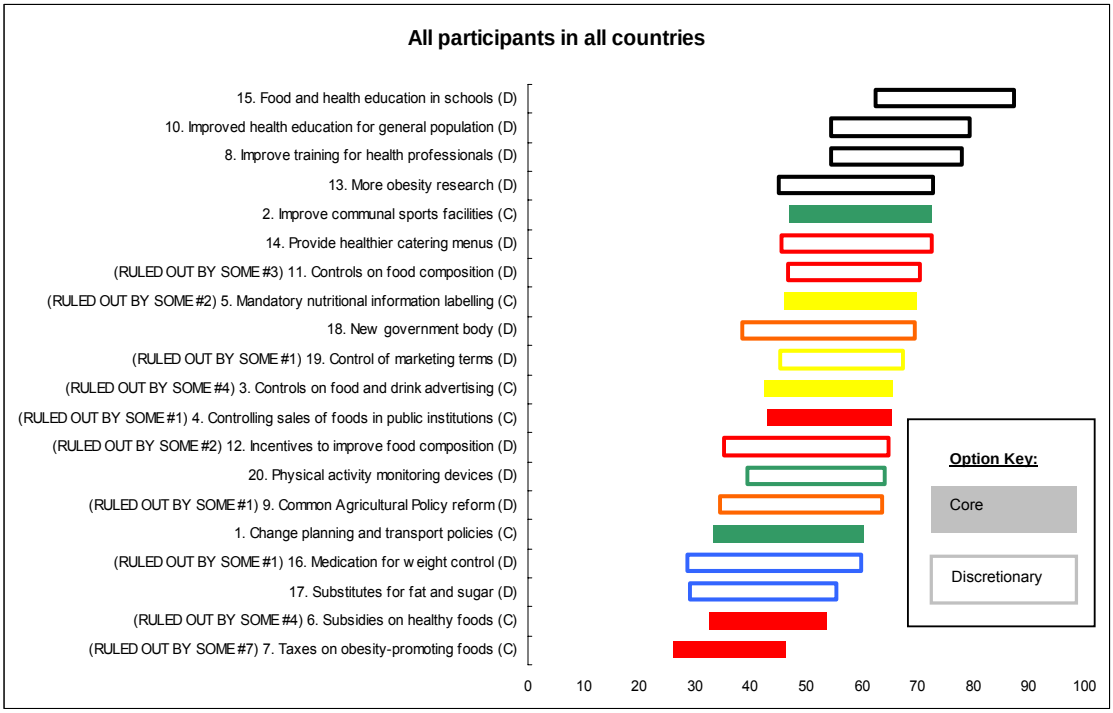


11.4 Potential bias in the rankings

Section 8.3.2 identified a possible source of bias in the scoring of discretionary options. This arises because – in common with other MCM studies and for the sake of combining a broad scope of analysis with a manageable workload in individual interviews – only core options were appraised by all participants whilst discretionary options were freely chosen by those participants who wished to appraise them. Accordingly, as discussed earlier, the reasons for participants *not* appraising discretionary options may often reflect a prior judgement of relatively low performance. As a result, the scores for those discretionary options that *are* appraised may be higher than those for the core options.

Previous studies have addressed this issue by restricting detailed comparative discussions just to the core options.[88] However, in the present case, it emerged through the process of analysis that, despite including a greater number of core options than any other MCM study, not all clusters of options were actually represented amongst the core set. Fortunately, in seeking to address this, the unprecedented large body of data elicited across all the nine national studies encourages greater efforts to integrate comparisons of core and discretionary options than has hitherto been the case in MCM analysis. Given this large dataset, it becomes possible in principle to explore the magnitude of any bias that might have occurred in the representation of the overall performance of discretionary options, when compared with core options. This does not affect comparisons between the ranks obtained for the seven core options. However, in order to compare these with the ranks obtained for the discretionary options this would require the use of an adjustment procedure. Such a procedure will be explored in Section 12, in the context of a discussion of the evaluation of the methodology. The unadjusted results are summarised in the figure below:

Figure 11-30. Options ranked in order of their optimistic appraisals



11.3 Options given highest and lowest scores

As shown in the figure above, the options given the most positive appraisals (the top third of ranks under optimistic conditions) were (highest first):

1. Food and health in the school curriculum
2. Health education for the general public
3. Improved training for health professionals
4. More research related to obesity prevention
5. Improved communal sports facilities
6. Provision of healthier catering menus
7. Controls on food composition

The options ranked lowest (in the bottom third of ranks under optimistic conditions) were (lowest first):

1. Taxes on obesity-promoting foods
2. Subsidies on healthier foods
3. Use of synthetic fats and artificial sweeteners
4. Medication to control bodyweight
5. Changes in transport and planning policies

6. Reform of the Common Agricultural Policy

7. Use of physical activity monitoring devices

In summary, there are several options for which there is widespread support. Those options were, moreover, often seen to constitute a complementary set because their individual performance was seen as depending on the effective implementation of other options. The benefits of improved educational provision, both for school children and the general adult population, in relation both to healthy nutrition and physical activity, were widely seen as depending on the provision of sufficient and appropriate information. Other conditions for obtaining those benefits included adequate access to, and availability of, products and resources such as foodstuffs, meals, sports and recreational facilities and opportunities for active transport.

Further discussion of those preferred options, setting them in the context of a monitoring and review programme, is provided below in section 13, where the implications for national and EU policies will be discussed.

11.4 Summary of main points

- This section makes comparisons between the different options, clusters of options and between core and discretionary options, under both optimistic and pessimistic scenarios and within each Country and Perspective, in order to draw conclusions on preferences within these different groupings.
- Within each Perspective, under optimistic conditions:
    - Perspectives D (Non-food industry) & E (Policy-makers) included all 4 educational options among the 5 options they most favoured. Perspectives A (Public health NGOs), B (Food industry), C (Small health food & fitness industry) & G (Public health specialists) included 3 of the educational options excluding improving training for health professionals in the case of Perspective C, and more obesity research in the case of the other 3 perspectives). Perspective F (Public service providers) included 2 educational options in the top 5 options rated.
    - A new government body was also among the top 5 for Perspectives A and B, controls on food composition for Perspectives C & F, healthier catering menus for Perspectives B & G, CAP reform for perspectives C & D and improving communal sports facilities for Perspectives A & G.
    - Substitutes for fat and sugar and taxes on obesity promoting foods were rated among the lowest 5 options by all Perspectives. This was also the case for subsidies on healthy foods in the case of all but Perspective G.
    - Other unpopular options (i.e., within the lowest 5 ranked by Perspective) were planning and transport policies for Perspectives B, C, D & G, medication for weight control for Perspectives A, C, E & F, and CAP reform for Perspectives F & G.

- The issue of possible gender differences in the appraising of options was also considered, but no attempts were made to adjust for differences in gender representation within different Perspective groups or within different countries.
    - Both genders agree on the top three highest-scoring options (under both optimistic and pessimistic scenarios), all of which are educational (health education for children, general health education and improved training for health professionals). Taxes on obesity-promoting foods and substitutes for fat and sugar we also ranked by both men and women among the 3 lowest scoring options, under both optimistic and pessimistic conditions. Men also looked unfavourably upon subsidies for healthy foods, and women also gave lowest scores to the use of medication for weight control.
    - Women gave high scores to two supply-side options: controls on food composition and healthier catering menus, while men gave high scores to the improvement of communal sports facilities. Of the three options concerning commercially-provided information about food, women preferred the option to control food and drink advertising whereas men preferred mandatory nutrition labelling
- Within each country, under optimistic conditions:
    - Promoting the use of physical activity monitoring devices received very poor appraisal by the French, whereas Hungarian participants ranked it second highest of all the options they appraised. The high ranks given to improving sports facilities by Finland, Poland and Hungary led to it being given the overall highest ranked option across all countries of all the non-educational options.
    - Of the cluster of educational options, virtually all countries agreed that the most appealing was the option to provide food and health education in schools, whereas the option to undertake further obesity research was rated lowest in this cluster by most countries.
    - Both Cyprus and Italy ranked nutrition labelling the highest of the three informational options, and controls on health claims the lowest, with the reverse being true in France and in Hungary. In Cyprus, France, Italy and the UK controls on advertising came within the top ten most favoured options.
    - For the remaining clusters of options, fewer participants chose to appraise them, so the ranks assigned must be interpreted with caution. This was the case of high appraisal of the use of medication for obesity control in Spain, the proposal for a new government body in Greece and CAP reform in Italy.
- Differences were also explored (under optimistic conditions) within the following regions: the Mediterranean basin (Cyprus, Greece, Italy and Spain), those in Eastern Europe (Finland, Hungary and Poland) and those in Western Europe (France and the UK).

- The improved provision of community sports facilities featured very highly among countries in the Eastern region, exceeded only by the option to provide food and health education in schools.
- The use of monitoring devices such as pedometers scored relatively highly in the Eastern region but very poorly in the Western region. Changes to planning and transport policies scored well in Western countries but very poorly in Eastern and Mediterranean countries.
- Of the informational options, Western countries gave highest ranks to controls on food and drinks advertising, whereas this was ranked lowest of the three informational options in the Eastern region.
- Mediterranean countries gave high rank to the option to form a new government body to tackle obesity, and also ranked highly the option to offer medication to control body weight; but those results derived from a small number of participants ranking these options highly in Greece and in Spain, respectively.
- In most other respects the regions show remarkable agreement in their relative rankings of the options.

12 Evaluation

12.1 Process evaluation

The application of the Multi Criteria Mapping Methodology to the issue of public policy responses to obesity has generated a uniquely comprehensive multi-dimensional data set, replete with complexities. Data were gathered from 190 interviewees drawn from 21 different stakeholder categories in institutionally matched groups across nine Member States of the European Union. A total of around 14,000 option appraisal scores and ranks were collected, including detailed records of criteria of appraisal and conditionalities which participants identified. Transcripts were analysed to identify the participants' reasons for their selection of criteria and scores, weightings and ranks.

Organising and integrating all the quantitative and qualitative data from the interviewees was accomplished with the use of the MCM Analyst database system, specifically developed for this project, but which can subsequently be used for other MCM research projects. MCM Analyst provided a superstructure into which all the scores, weights, notes and textual nuggets could be integrated into a single database, providing a rich range of different ways of organising and analysing those data. The MCM Analyst software tool helped, metaphorically, to detect interesting needles in a very complex set of haystacks, neatly arranged and graphically displayed.

The MCM methodology, when applied to the issue of public policy responses to obesity did not identify a single policy, or set of policies, that would be demonstrably sufficient to transform the diets, fitness and health of EU citizens or solve the problem of obesity. Nonetheless, the approach adopted for this project allows analysts to identify a set of policy changes that stakeholders believe will be important in any attempt to tackle obesity.

Evaluations of the procedures used in the collection of interview data are given in the individual country reports. All participants were provided, in advance of the interview, with a document explaining how the interview process would be conducted, and outlining the core and discretionary policy options to be appraised, but the amount of pre-interview preparation time varied considerably between participants. Almost all invited participants agreed to be interviewed, in a few they cases asked to bring colleagues to join in the procedure. Although the time taken for participants to familiarise themselves with the interview process varied, all participants accepted the procedures and all participants successfully completed the interview. Section 8 shows the levels of engagement with the different options in each of the nine participating countries.

Participants reviewed their choices at the end of the interview and were invited to comment on the procedure and the graphical presentation of the results of their scores. These comments were frequently highly supportive (see country reports) with participants approving of the superiority of the Multi-Criteria Mapping approach:

> *"The best thing about this process is the system's possibility for establishing a dialogue, a chat and being able to state your view of the problem and fit it into the system. In my opinion, this is the most serious survey carried out so far."* (Spain, Food processing company)

12.1.1 Critical issues

Restricted choice

Some participants felt that the choice of options was too limited or too focused on some specific aspects of the problem at the expense of others (e.g. too few options concerning physical activity). The MCM process allows participants to add options of their own, and many participants took that opportunity. Although those additional options allow participants to express their views more fully, the option scores cannot be directly integrated into the mapping process for comparisons between Perspectives or countries. Introducing additional options, however, increased the duration of the interview with limited value in analytical terms. It was rare for more than one participant to introduce comparable options so those data could not be compared across participants. The main value of such additional options is that it provides a means to check for any significant or consistent gaps in the definition of core and discretionary options. Greater diversity of options within the set of core options may have helped to evaluate any potential selection bias in the selection of discretionary options.

Capturing a diversity of views

An essential part of the MCM appraisal process is that a broad range of stakeholders participates in the assessment of options. The constraints of the lengthy interview process meant that some 20-25 participants in each country could be selected for interview, whereas a much larger number would have helped to make the findings more comprehensive. However, the purpose of the exercise was to gather an indicative 'map' of the likely points of consensus and areas of diversity. The combination of participants across nine countries, giving a total of 190 participants greatly increases the robustness of the overall findings whilst allowing a further dimension – inter-country variation – to be analysed.

Constructed responses

In any questionnaire or interview participants are likely to construct their responses according to a number of prevailing factors: the need to supply what they believe is being asked for, the need to reflect their organisations' view, the need to appear knowledgeable or sophisticated, and possibly even a desire to mislead the investigation.

One participant, from the food industry, acknowledged that he represented the industry's concerns, and that in advance of the interview and in discussion with colleagues had made a strategic selection of options for appraisal: "*Strategies were chosen under three criteria: 1) we gave priority to those strategies where the food industry can be engaged in pursuing or even implementing them, 2) strategies that enable consumers to make informed choices, 3) strategies that promote the development of new products meeting today's consumers' needs.*"

The PorGrow process could not distinguish different motivations and rationales from participants unless these were explicitly articulated. Attempts to give misleading responses (from the viewpoint in question) were not detected and would have been difficult for participants to maintain in a two- to three-hour interview face-to-face with the researcher. If participants expressed professional or organisational views rather than there own this was fully acceptable: the purpose of the research was to gather a wide

range of viewpoints and to acknowledge divergence of opinion, especially divergence that may be linked to the Perspective of a stakeholder, i.e. their professional and organisational occupation.

The nature of weighting

The use of numerical weightings to reflect the relative prioritisation and trade-offs among different issues is a key feature of this multi-criteria mapping methodology. Essentially, quantitative weightings allow performance under different criteria to be compared with one another in a way that takes into account the crucial fact that – even where there is agreement over performance under any one criterion – different criteria may be of different relative importance for different participants. Although the weightings that a participant will assign may depend on the way the options actually perform, in practice participants typically conducted the weighting process with relatively little attention to the particular scoring ranges under each criterion. Indeed, the weighting process was generally the least deliberative aspect, and most rapid part, of the interview process. This need not pose a particular problem for a 'heuristic' process such as the PorGrow MCM study, in which the purpose has been to provide a framework for participants to develop, explore and validate a relatively complete and consistent picture of their views on option performance.

Combinations of options

The benefits of a combination of options can be sometimes be 'more than the sum of the parts'. The scoring process required each option be appraised separately, but many participants argued that the performance of some options would depend on the extent to which other options were also in place and coordinated together. This cannot be formally recorded in the numerical scoring process, but is reflected in comments made during the interviews, many of which are cited in this report (and the 9 national reports), particularly in the option-by-option discussion in Section 10. Other MCM exercises have addressed this directly, by separately eliciting views on portfolios of options.[89] However, this is not without difficulties, and represents a significant increase in the burden placed on respondents and subsequent analysis.

Potential bias in favour of discretionary options

Our analysis of the qualitative data identified numerous comments indicating that interviewees preferentially selected discretionary options for appraisal that they favoured, and that they chose not to select options to which they would have assigned low scores and ranks, were they to have appraised them. This potential bias has been discussed previously and reflects a characteristic of the PorGrow MCM procedure that is usually dealt with by treating discretionary options separately to core options. In the present exercise, the exclusion of certain option clusters from the core set entailed that a more integrated analysis was both required and appropriate.

This has implications for the interpretation of the findings, since the average score for discretionary options is likely to be relatively positive compared with that obtained for core options. In future, it would be useful more fully to record participants' reasons for choosing not to appraise particular discretionary options, and to ensure that the range of core options encompasses examples of options from all clusters. Alternatively,

participants might be asked to score all options presented to them, although this could make the process too lengthy for many potential interviewees, given that the PorGrow project stipulated a larger number of core options than any previous MCM study.

Remarkably, however, unplanned and unanticipated good fortune provided the conditions under which an estimate of the magnitude and direction of such bias could be obtained.

12.2 Comparison of the PorGrow findings with two other studies

Although no formal external benchmarking of the PorGrow findings had been envisaged or planned, two opportunities arose during the course of the project to undertake stakeholder analyses using a limited version of the MCM approach to option appraisal. Crucially, both those exercises concerning obesity policy in Europe chose to appraise a set of options that derived directly from the PorGrow option set, using the same options similarly definitions. Moreover, in both cases, the investigators did, in effect, treat all the PorGrow core and discretionary options, as core options in their studies. The results of those two studies cast a fascinating light upon the PorGrow data.

The first of the two studies was conducted in the context of a series of meetings organised as part of the preparatory work for the WHO European Region ministerial conference on obesity, scheduled for Istanbul in November 2006; the second was developed within an EC-funded project on childhood obesity coordinated by the European Heart Network 2003-2006.

12.2.1 WHO meeting of NGOs, Brussels, February 2006

A preparatory meeting, in February 2006 (for the November 2006 WHO European Region ministerial conference on obesity) was attended by representatives of 12 non-governmental organisations concerned with obesity and health, including sports organisations, consumer organisations, medical professions and health-related NGOs. Those stakeholders came from a similar range of organisations as those in Perspective A in the present study (but primarily representing organisations at EU level). In the course of this meeting an option-appraisal exercise was held during which participants appraised all 20 PorGrow options (core and discretionary) using three criteria of their own choosing, with each criterion weighted to indicate priority. The resulting scores were compiled and the options ranked according to their overall average weighted scores are shown below.

Table 12-1. Comparison of average rankings by members of Perspective A (Public Sector NGOs) and rankings at a meeting of European NGOs, Brussels, February 2006

Option	European NGOs	PorGrow Average Perspective A
Food and health education	71.5	73.9
Improved health education	71.1	63.6
Mandatory nutritional information labelling	67.9	59.3
Controls on food composition	67.5	60.9
Controls on food and drink advertising	66.3	59.4
Change planning and transport policies	65.8	49.7
Improve training for health professionals	65.3	64.3
Control of marketing terms	64.6	59.1
More obesity research	64.3	59.5
Common Agricultural Policy reform	63.9	52.4
Controlling sales of foods in public institutions	62.6	54.7
Subsidies on healthy foods	62.6	47.5
Improve communal sports facilities	61.9	61.7
Incentives to improve food composition	56.0	55.2
Taxes on obesity-promoting foods	53.8	37.3
New government body	51.7	60.6
Provide healthier catering menus	46.0	59.1
Physical activity monitoring devices	44.7	46.3
Medication for weight control	43.9	37.2
Substitutes for fat and sugar	41.9	40.2

The appraisals undertaken by the twelve representatives of EU NGOs only required a single score for each of the criteria chosen; estimates under optimistic and pessimistic conditions were not required. Table 12-1 (above) compares their mean weighted scores with the average (across both optimistic and pessimistic) weighted scores from all 36 members of Perspective A in the PorGrow project.

Statistical comparison of the two sets of data, using a rank correlation method, indicates a strong degree of association between the two sets of scores ($r=0.66$, $p<0.01$). There was concern, moreover (discussed above), that the PorGrow data may have been affected by the selection bias in favour of some discretionary options; participants may have opted not to appraise options rather than give them low scores. Using the EU NGO average weighted scores as a basis for comparison, we found that deflating the average ranks of the PorGrow discretionary options (in relation to the core options) by between 10% and 20% markedly strengthened the correlation between the PorGrow ranks and the EU NGO scores, most especially when using a 10% deflationary adjustment ($r=0.72$, $p<0.001$). This provides further evidence that the selection bias in relation to discretionary options may have occurred and that an adjustment for this bias – by deflating the ranks for discretionary options by some 10% – may be appropriate.

12.2.2 European Heart Network CHOB project

The European Heart Network's project on Children, Obesity and Avoidable Chronic Diseases, funded by the European Commission and by national heart associations, included an opportunity for an appraisal of options to tackle child obesity. Meetings were held in 14 countries coordinated by each of the participating institutions, and an additional EU level was meeting held by the European Heart Network. The exercise, utilised the list of 20 PorGrow options marginally modified to be more child-specific, and asked stakeholders assembled in each meeting to appraise the options using three criteria of their own choosing, weighted to reflect their priorities. Stakeholder selection differed in each country but primarily involved NGOs in the health and consumer fields along with medical specialists and some government officials. The results are shown below.

1. EU-level meeting

Highest ranked options: at the EU level meeting, the highest ranked options were:

- Controlling sales of foods in public institutions
- Controls on food and drinks advertising
- Mandatory and improved nutritional information labelling
- Common Agriculture Policy and subsidies for healthy foods
- Improve training for health professionals

Lowest ranked options

- Medication for weight control
- Physical activity monitoring devices
- Control of marketing terms
- New government body
- More obesity research

2. Member State-level meetings

The number of Member States (maximum 14) in which particular options were given the highest rank is given in Table 12-2.

Table 12-2. Number of Member States (out of 14 participating) giving an option a high rank

Policy option	Number of Member States
Improved food and health education in schools	13
Controlling sales of foods in public institutions	9
Controls on food and drink advertising	8
Improve communal sports facilities	6
Improve training for health professionals	6
Subsidies on healthy foods	6
Change planning and transport policies	6
Improve health education in the media and community	5
Common Agricultural Policy	2
Mandatory nutritional information labelling	1

The five lowest ranked options across the 14 countries were:

- New government body
- Physical activity monitoring devices
- Incentives for healthier catering menus
- Medication for weight control
- Substitutes for fat and sugar

It can be seen from these results that stakeholders in the CHOB programme opted for a range of measures that form a complementary set of options involving education and the information necessary to support educational measures (such as improved mandatory labelling and advertising controls) along with measures to ensure availability and accessibility of appropriate options, including products, meals and facilities.

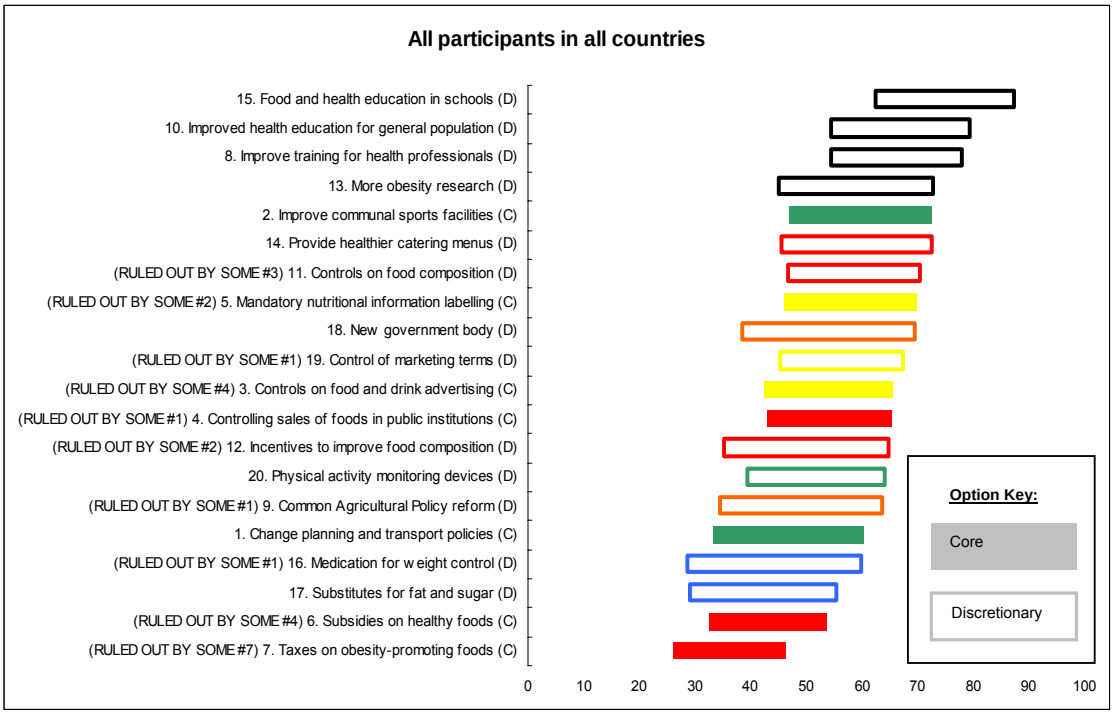
The results indicate a similar set of views to those held by the participants in Perspective A in the PorGrow programme, but with a greater emphasis on controls on marketing, the provision of healthier meals and controls on vending machines etc, reflecting the priority of the CHOB programme to focus on child obesity.

Taken together, evidence from the WHO European Regional meeting and the EHN's CHOB study, provide both qualitative and quantitative benchmarks against which the PorGrow findings can be compared. Given the previously noted empirical and conceptual grounds for thinking that interviewees may have exercised a positive selection bias in favour of those discretionary options that they chose to appraise, and given the quantitative comparisons shown in Table 12-1 above, it is reasonable to assume that introducing an adjustment of 10% to the ranks of options might correct for that bias. In practice, however, there are several ways in which that adjustment could be accomplished. For example, the core options could be adjusted upwards by 10%, either at

their optimistic scores or at the pessimistic score, or the average of those two, or both. Similarly, the discretionary options could be adjusted downwards by 10%, at their optimistic scores or at the pessimistic score, or the average of those two.

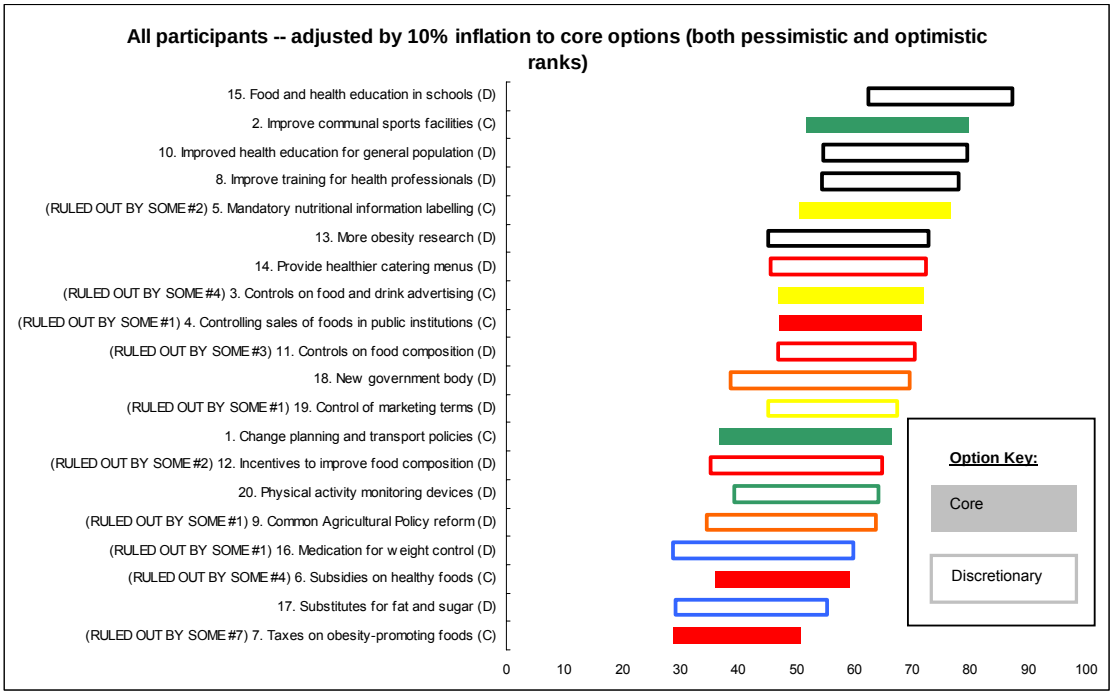
Since the estimate of the magnitude of the adjustment (i.e. 10%) derived from the WHO-Europe meeting held in of NGOs, Brussels, February 2006, at which participants were asked to provide a single score, rather than optimistic and pessimistic scores, the scores and ranks that derived from that exercise correspond most closely to the mid-points of the bars obtained in the PorGrow MCM exercise, and therefore the most appropriate adjustment is one that inflates by 10% both the optimistic and pessimistic ends of the bars for the core options, in relation to the discretionary options. The implications of making that adjustment are indicated graphically in Figures 12-1 and 12-2 below.

Figure 12-1. Original ranks (ordered by optimistic appraisals)



Since the purpose of the adjustment is to analyse the core and discretionary options together on a consistent basis, figure 12-2 represents both sets of options in a uniform graphical style.

Figure 12-2. Option ranks with 10% inflation to core option (both optimistic and pessimistic ranks)



The effects of applying this modest deflationary adjustment are to strengthen the relative positions of several of the core options, notably the options to improve communal sports facilities, which rises from 5th to 2nd, to provide mandatory improved nutritional information on food labels, which rises from 8th to 5th, and to strengthen controls on food and drink advertising, which rises from 11th to 8th. More generally, the effect of the adjustment is to elevate informational options in comparison with options concerned with modifying the supply or and demand for foodstuffs.

The options given the top three appraisal scores, under optimistic conditions, were:

Unadjusted:

1. Food and health in the school curriculum
2. Health education for the general public
3. Improved training for health professionals

Adjusted:

1. Food and health in the school curriculum
2. Improved communal sports facilities
3. Health education for the general public

The 4 lowest ranking options under optimistic conditions (both adjusted and unadjusted) were:

- Taxes on obesity-promoting foods
- Subsidies on healthier foods
- Use of synthetic fats and artificial sweeteners
- Medication for weight control.

12.3 Policy implications

The MCM approach is designed to develop an understanding of public policy responses to obesity by generating a multi-dimensional data set of quantitative weighted scores and rankings and qualitative commentary on criteria and reasoning. The overall findings can be located in the context of a wider process of developing strategies to tackle obesity, outlined in an influential paper by Swinburn et al who identified a five-step process for policy development:

1. Building a case for action on obesity
2. Identifying contributing factors and points of intervention
3. Defining the range of opportunities for action
4. Evaluating potential interventions
5. Selecting a portfolio of policies, programs and actions.[90]

Stakeholders will vary in their understandings of the need for action on obesity and their perceptions of the contributing factors and the opportunities for intervention. Assuming that they recognise the need for interventions, they can be expected to differ in their assessments of the possible interventions and their choice of policies, programmes and actions, making consensus difficult. The PorGrow findings are designed to assist policy-makers in understanding how to engage stakeholders, the language they use, and the criteria they feel are important in developing policies and the types of option they want to see developed.

12.4 Criteria used for assessment of policies

As shown in sections 9.3 and 10.4, taking all participants combined, there was a broad consensus that the costs of the various policy options were less important than the social and health benefits, efficacy, acceptability and practical feasibility of the options. In particular:

- Educational options were perceived as broadly beneficial, presumed to be effective and of fairly low cost, feasible and acceptable.
- Of the informational options, improved and mandatory nutrition labelling and controls on marketing terms were considered more feasible and socially acceptable than controls on advertising, but controls on advertising were

considered likely to be as or more effective in tackling obesity. All three approaches were recognised to have cost implications for industry.

- Concerns about costs to the public sector or to individuals were the main problems with fiscal interventions in the food supply. Controls on food composition were considered effective in tackling obesity, and were feasible and acceptable.
- A high level of additional social and health benefits were anticipated from changes in transport and planning policies, but the cost to the public sector was considered high and the implementation difficult. Sports facilities were highly regarded under most criteria but seen as being a cost to the public sector. Pedometers were seen as lowest cost and technically feasible, but as markedly less effective at tackling obesity than the other two physical activity-related options.
- Medical interventions were recognised as likely to be effective and of considerable commercial economic benefit, but scored very poorly in terms of social acceptability.
- CAP reform was considered costly and difficult to implement technically, although socially acceptable.

12.5 Preferred options and European policy implications

The results of the analysis of the data gathered for the PorGrow project show widespread support for a multi-faceted and integrated strategy to tackle obesity, involving initiatives that take several approaches in various settings, as reflected by the support given to one or more options in virtually all the clusters. Any coherent policy programme is therefore likely to include a portfolio of specific strategies, to provide a coherent package of measures, likely to involve public authorities at several levels, from the local level, through national to European and possibly global levels (for example in terms of negotiating agricultural policies and cross-border advertising controls). Such an approach has already been recognised in several policy documents issued at national and European level (see country reports and section 5) and the PorGrow results provide stakeholder support for this approach.

Within each cluster of options the PorGrow analysis gave the following results:

Cluster 1: Exercise and physical activity

The preferred option here is the provision of community resources to improve access to and encourage use of facilities for sports and physical activity. A relatively low priority was given to the development of transport and planning policies to encourage greater active transport in the unadjusted data set, but after adjustment for potential bias against the core options, the option of changing planning and transport policies was elevated above the increased use of physical activity indicators such as pedometers. For the majority of participants, the use of physical activity indicators ranked poorly in this category, although in several countries, and among members of the commercial food Perspective, it was seen as a preferred option in this cluster.

From a European perspective, transport and planning controls are affected at the EU level by policies for regional development, sustainable economic growth and environmental pollution. Urban development and regeneration of deprived areas should consider active transport and zoning policies within the wider brief. Support for private sector and public sector enterprises should include criteria for the provision of active transport to work and ensure no incentives are provided for unnecessary use of motorised transport. Sports facilities are largely supported through local and national funds, from private, charitable and public sources and EU promotion of this can be considered, for example to discourage inequalities in access.

Cluster 2: Modifying food supply or demand

The six options within this cluster attracted varied rankings, with controls on sales of food in public institutions (e.g. school meals services), controls on food composition and incentives to caterers to improve menus ranked relatively highly. Subsidies on healthier foods received relatively low ranks and taxes on unhealthy foods were very poorly ranked.

European policies to harmonise sales taxes across the EU should be reviewed to ensure they do not encourage poor dietary habits. Similar, EU-wide specifications for food quality and food composition should be reviewed for their effects on prices and dietary choices, and EU-supported research in food processing should be directed to encourage healthy products with wide availability (for example through supporting methods that ensure rapid distribution of fruit and vegetables at low cost to consumers).

Cluster 3: Information-related initiatives

Mandatory and improved nutritional labelling and controls on food and drink advertising were relatively highly ranked in this cluster, and ranked well overall, particularly when a 10% adjustment is made for possible bias in the selection of discretionary options. All three options in this cluster have implications for EU policies. Although some nutritional labelling initiatives can be introduced voluntarily, compulsory labelling is set at EU level within harmonised market procedures. Marketing claims are similarly controlled, so that definitions of 'light' and 'reduced' are determined for specific types of product under current legislation. Extension of such claims to ones relevant to caloric intake or expenditure (including breakfast cereals with energy and fitness claims, 'sports' drinks and glycaemic index claims) need to be brought under regulatory control and reviewed in terms of their potential impacts on consumption levels and dietary balances. In so far as current proposals attempt to put limits on health claims for food and drink products deemed to be detrimental to good dietary health, a set of definitions of such 'unhealthy' products needs to be developed.

Mandatory nutrition labelling, and improvements in clarity through 'traffic light' or other devices able to summarise key nutritional information, are currently being considered by Member States. In the UK government proposals for a traffic light scheme have been challenged by food companies who prefer alternative approaches, including percentages of 'Guideline Daily Amounts' or GDAs. As noted in section 10, the majority of participants recognised that the present situation was inadequate. Although some nutritional labelling is currently required for certain categories of products, this was

widely seen as far too limited and, more importantly, presented in a confusing and overly-technical format.

As a policy option, clearer and simpler labelling fits well with a 'consumer choice' approach to improving dietary patterns, while it may also provider manufacturers with incentives to improve the formulations of their products. Additional strengths of this option were that was unlikely to be costly and was seen as politically feasible and socially acceptable. Food industry interests were also concerned that a 'traffic light' format would unfairly penalise specific products by putting red warnings on them, while several interviewees in that perspective acknowledged that where traffic light labelling has been introduced it had been successful at changing food purchasing preferences.

Controls on the advertising of food and drink are also of concern at EU level, primarily in the regulatory framework for cross-border broadcasting. Moves to control such advertising may also be limited to those products that are deemed 'unhealthy' and a set of definitions or nutritional profile will need to be developed. There is also increasing recognition that children's food preferences may be influenced by marketing activities beyond television broadcasting, such as internet marketing, branding of toys, educational material and sports kit, packaging design and food product formulation. All of these are amenable to control at the EU level.

Cluster 4: Educational and research initiatives

All options in this cluster ranked highly compared with most other options, although the 10% adjustment elevated improved labelling above more research into obesity, and elevated improving communal sports facilities above all options but one. Within this cluster, the option to increase food and health education in school curricula stood out significantly, being a high priority for all countries and all Perspectives. Health education for the general adult population was also strongly supported. Both measures were seen as important to underpin the application of many of the other options, either to encourage their uptake (e.g. catering meals, sports facilities, nutrition labelling) or to promote the acceptance as policy measures (e.g. marketing controls, fiscal measures).

The EU has little involvement in formal educational activity and has only a limited role in general public health education, but it has a distinct role in health professional education in the standards set for minimum qualification requirements for professions seeking employment across Member States, and the standards should be reviewed to ensure they achieve minimum levels of competence in health promotion, dietary advice and obesity screening and treatment.

The EU also has a potential role to play in supporting further research activities concerned with tackling obesity. Research efforts promoted by the EC include consideration of chronic diseases including obesity, health inequalities and stakeholder involvement in policy development as well as a variety of nutrition-related programmes.[91]

Cluster 5: Technological innovations

The two options in this cluster were excluded from appraisal by a large majority of participants and otherwise given a relatively low ranks, with only very few exceptions. The EU has little direct influence on whether medication should be developed for weight control or whether substitutes for fats and sugars should be used in food formulation, except to ensure that medications and food ingredients are acceptably safe and approved for cross-border trade. There is however scope for widening the frame of reference for the appraisal of food ingredients, by the EFSA, so that not only their toxicological consequences are considered but also their impacts on public health nutrition. Research support from the EC should be limited to products that are likely to have widely accepted public health benefit.

Cluster 6: Institutional reforms

The two options in this cluster were excluded from appraisal by a large majority of participants and otherwise given only moderate support, with few exceptions. Establishing a new government body was relatively highly ranked in two countries (Hungary and Greece) and by members of the food chain Perspective. Conversely, CAP reform was strongly supported by several participants in Italy and France.

The proposal to develop a government (or in some participants' view, an independent) body to coordinate policies for preventing obesity has both national and pan-European aspects. In so far as cross-national measures – including monitoring and information exchange as well as regulatory controls – are concerned, the recently-established European Centre for Disease Prevention and Control may be an appropriate body to undertake that work, in conjunction with the European Regional offices of the World Health Organization and other relevant bodies.

Reform of the Common Agricultural Policy is clearly an EU-wide responsibility. Current reforms tend to be directed towards decoupling production quantity from support, and favouring environmental support measures. In so far as sustainable, environmental farm policies may have a beneficial effect on diets this is to be welcomed, but more specific measures are likely to be needed to ensure better distribution of low-cost fruit and vegetables (and fish, through EU fisheries policies) and reduced support for the 'chronic over-production' of sugar, butter and milk identified by the European Court of Auditors as being the consequence of the CAP commodity regimes.[92]

The attempt to gather data on the extent to which, and the ways in which, the incidence of overweight and obesity are changing, and data on corresponding changes to patterns of food consumption and physical activity, reveal that too few data are gathered, and in too many different ways to facilitate comparisons over time or between countries. Consequently, it would be difficult to monitor the effectiveness of such measures as Member States and the EU as a whole might take. We therefore recommend that steps be taken to put in place a consistent form of data gathering on patterns of food and drink consumption, physical activity and levels of overweight and obesity amongst representative cross sections of the populations of EU Member States and particularly of vulnerable groups, including children and disadvantaged groups. That would enable policy-makers, citizens and stakeholder groups to monitor the effectiveness or otherwise of policy measures that might be taken. If the trends change in the desired direction, and at an acceptable rate, then it may be appropriate to maintain those policies in place. To

the extent, however, that the trends either fail to move in the desired direction or shift only very slightly and slowly, further measures will be required.

12.6 Summary of policy implications

The PorGrow results indicate that a wide array of policy measures, integrated into a coherent programme, would be well-supported by stakeholders. The economic and social costs of not taking action would be high and hence the relative costs of implementing a programme of measures is of less importance than other aspects of these measures, in particular their social acceptability.

The most favoured policy options were the following:

1. Improved food and health in the school curriculum
2. Improved communal sports facilities
3. Health education for the general public
4. Training for health professionals
5. Mandatory and improved nutrition information labelling
6. More obesity research
7. Providing healthier catering menus
8. Controls on food and drink advertising
9. Controls on food sales in public institutions

All participants accepted the need for 'downstream' interventions, such as educational measures designed to improve the ability of individuals to make appropriate health choices. A few stakeholder groups were not keen on 'upstream' policy measures, designed to increase the opportunities to make healthier choices or to restrict countervailing influences, although they were enthusiastically supported by many others. The commercial implications of policies that, for example, put warnings on certain food products or that restrict the use of cars in urban areas need to be introduced with attention to stakeholder interests: from the present analysis it appears that policies would be well received if they can be shown to have strong social benefits.

Many stakeholders saw difficulties and shortcomings in the 'technological' options, such as the use of medical interventions to control bodyweight or the use of artificial sweeteners or fats, which were widely seen as having little long-term efficacy and as socially unacceptable.

The implementation of a package of policy measures requires not only stakeholder support and political feasibility, but they also need to be monitored. One of the positive aspects of the option to create a new body to implement policies is that this body could ensure that the relevant information is gathered in order to assess the success of the policies: e.g. monitoring dietary patterns, physical activity levels and prevalence of obesity in the population. Some form of responsible authority is needed to ensure that policies are reviewed for their effects, and new options proposed where necessary.

In conclusion, policy makers developing actions to promote nutritional health and greater physical activity, such as those considered in the EU Green Paper, should be assured that the great majority of stakeholders recognise the need for such actions, that most stakeholders are prepared to accept the costs but that the 'upstream' interventions in particular will require justification, which may best be expressed in terms of wider health and social benefits.

12.7 Main summary points

- The MCM process was generally well accepted by participants and was very useful in providing detailed insights into the evaluation of different policies for addressing obesity by stakeholders across the EU. The development of the MCM software was of great assistance to the analysis process given the amount and complex nature of the data collected, with 14,000 option appraisal scores from190 interviews among 21 stakeholder categories across 9 countries. This useful tool is available for subsequent MCM projects.
- Data from the study suggest that a single policy or set of policies would not be sufficient to adequately address the obesity problem in the EU, but that selected measures need to be carefully coordinated and integrated to support each other, as well as being closely evaluated so that any necessary adjustments can be made.
- Some critical issues in evaluating the MCM process are also discussed. Some of potential areas for improvement include actions that could make the interviews more time-consuming (such as requiring participants score all 20 options, further capturing different motivations and rationales on participants' scoring behaviour or having them explore the use of additional options more fully); which would make the participation of busy stakeholders more problematic.
- When the raw PorGrow findings were compared to 2 other surveys (collected at the WHO meeting of NGOs in Brussels and in a series of meetings from the European Heart Network CHOB project) using the same set of 20 options and very similar appraisal methods, close agreement of rankings was observed. All three surveys pointed towards a complementary set of options involving education supported by informational measures (such as clear labelling and advertising controls) along with options that improve the availability and accessibility of corresponding products, meals and facilities.
- Because of the widespread support for a multi-faceted strategy to tackle obesity, the preferred options in each of the clusters are presented here together with European Union policy implications.
    - **Cluster 1: Exercise and physical activity**

      Preferred option: provision of community resources to encourage sports and physical activity. Sports facilities are largely supported through local and national funds, from private, charitable and public sources and EU promotion of this can be considered, for example to discourage inequalities in access.

- **Cluster 2: Modifying food supply or demand**

Preferred options: providing healthier catering menus and controls on sales of food in public institutions (e.g. school meals services), controls on food composition ranked relatively highly. EU-wide specifications for food quality and food composition should be reviewed, and EU-supported research in food processing should be directed to encourage healthy products with wide availability.

- **Cluster 3: Information-related initiatives**

Preferred options: mandatory nutrition labelling and controls on food and drink advertising. Compulsory labelling is set at EU level within harmonised market procedures. Improvements in clarity through 'traffic light' or other devices able to summarise key nutritional information, are currently being considered by Member States. As a policy option, clearer and simpler labelling fits well with a 'consumer choice' approach to improving dietary patterns while putting pressure on manufacturers to improve the formulations of their products. Controls on the advertising of food and drink are also of concern at EU level, in the regulatory framework for cross-border broadcasting, as well as through internet marketing, branding of toys, educational material and sports kit, packaging design and food product formulation.

- **Cluster 4: Educational and research initiatives** (All options in this cluster scored highly compared with most other options.)

Preferred options: increasing food and health education in school curricula and health education for the general adult population. Some benefits were anticipated from improved training for health professionals. Research on health promotion, dietary advice and obesity screening and treatment were also positively appraised. The EU has little involvement in formal educational activity and has only a limited role in general public health education, but it has a distinct role in standards for health professional education as well as in supporting further research activities concerned with tackling obesity.

- **Cluster 5: Technological innovation**

The two options in this cluster were excluded from appraisal or ranked relatively poorly by a large majority of participants. EU-wide controls should ensure that medications and food ingredients are safe and approved for cross-border trade. When the safety of food ingredients is appraised, however, the risk assessments only address toxicological aspects, and there is scope for broadening the assessment to include their potential impact on public health nutrition.

- **Cluster 6: Institutional reforms**

The two options in this cluster were excluded from appraisal and given only modest support by a large majority of participants. The recently-established European Centre for Disease Prevention and Control may be an appropriate body to undertake the coordination of policies for preventing obesity at a

cross-national level – including monitoring and information exchange as well as regulatory controls – in conjunction with the European Regional offices of the WHO and other organisations. Reform of the Common Agricultural Policy is clearly an EU-wide responsibility that needs to ensure better distribution of low-cost fruit and vegetables (and fish, through EU fisheries policies) and reduced support for the 'chronic over-production' of sugar, butter and milk.

- The implementation of a package of policy measures requires not only stakeholder support and political feasibility, but their impacts also need to be monitored.
- Most stakeholders are prepared to accept the costs of implementing policies to tackle obesity problems, but 'upstream' interventions in particular (such as advertising restrictions, putting warnings on certain food products or that restrict the use of cars in urban areas) would be better received if they were shown to have wider health and societal benefits.

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