Nutritional Policies in Europe and their effectiveness

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Background to Eatwell

- An obesity ‘epidemic’
  - Implications for health (€70b per year European health care costs)
- Poor diet quality may impose even greater costs
- Concern about the sustainability of health care systems
- Economic productivity also suffers
- Governments have recognised the scale of the problem and are anxious to reverse current trends
- A desire that policy be ‘evidence-based’
Benchmarking nutrition policies, evaluation and success stories

Quantitative evaluation of the effectiveness of intervention

Private sector marketing effectiveness and relevance to public sector marketing

Public acceptance of interventions

Propose effective policy interventions, methods of evaluation and data collection priorities for the future

Communication and management

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Definitions used by EATWELL

- **Policy interventions**: any government action which can affect people’s healthy eating behaviour by
  - (a) supporting more informed choice;
  - (b) changing the market environment

- **Healthy eating**: the adherence to the nutrition recommendations of WHO and eating to maintain healthy weight
Method of policy effectiveness assessment

1. Benchmarking European policies and their evaluations
   - information services and governmental websites
   - direct consultation with policy makers and local public servants

2. Previous reviews, reports and academic literature

3. Eatwell case studies
Number and Type of Diet and Health Measures in the EU identified by Eatwell (March 2010)

<table>
<thead>
<tr>
<th>Measures supporting informed choice</th>
<th>Changing the market environment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td><strong>No.</strong></td>
</tr>
<tr>
<td>Advertising controls</td>
<td>5</td>
</tr>
<tr>
<td>Public information campaigns</td>
<td>38</td>
</tr>
<tr>
<td>Nutrition education</td>
<td>35</td>
</tr>
<tr>
<td>Nutritional information on menus in restaurants</td>
<td>0</td>
</tr>
<tr>
<td>Nutritional labelling</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL (informed choice)</strong></td>
<td><strong>82</strong></td>
</tr>
</tbody>
</table>

+ Review of relevant non-EU policies & academic studies

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Common evaluation gaps

- Inappropriate outcome variables (e.g. focus on exposure, awareness, intentions, attitudes etc.)
- Inappropriate measurement (self-reporting)
- No counterfactual consideration
- Inappropriate sampling (self-selection biases)
- No estimate of longer term response
- Compensating behaviours and substitutions ignored
- Lack of attention to relevant population subgroups
- Cost-effectiveness ignored
Econometric methods for policy evaluation

Using secondary, mostly large-sample multi-purpose survey data, not collected for analysis of specific interventions

Some of the methods available:

• ‘Difference in difference’ methods
• Micro-simulations
• Propensity score matching
• Regression discontinuity
• Panel data methods
## Own evaluations (selected case studies)

<table>
<thead>
<tr>
<th>Case study</th>
<th>Main findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-a-day (UK)</td>
<td>+0.3 portions (0.2-0.7 by income group)</td>
</tr>
<tr>
<td>5-a-day international (UK, Spain, Denmark)</td>
<td>+0.4 portions in Spain (fruit), no impact in DK</td>
</tr>
<tr>
<td>Salt campaign (UK)</td>
<td>10% reduction in salt intakes</td>
</tr>
<tr>
<td>Ofcom regulation (UK)</td>
<td>No clear effect when accounting for pre-existing trends</td>
</tr>
<tr>
<td>Vending machine ban (France)</td>
<td>Effective in schools (reduction up to 150 cal), evidence of compensation</td>
</tr>
<tr>
<td>Reformulation (international)</td>
<td>Effective for salt, trans-fats, but concern about levels in some foods and countries</td>
</tr>
</tbody>
</table>
Recommendations on Policy Evaluation Methods

• Much can be learned even without randomised policy evaluation.
• Plan evaluation ahead of policy introduction!
• Observational studies need to pay careful attention to:
  - Choosing appropriate outcome variables
  - Building counterfactuals and overcoming selection biases
  - Controlling for confounders, including market forces
  - Short term vs. long-term
• Harmonisation of definitions across data sets (e.g., health surveys and budget surveys), over time and across countries would enable much better evaluation from secondary data

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Methodology for assessing policy effectiveness and policy recommendations

- Review evaluations of interventions from Member States and non EU countries.
- Review evidence of effectiveness and cost-effectiveness from internationally peer-reviewed literature and own case studies.
- Survey of EU citizens in 5 countries on policy acceptability

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Methodology (contd)

• Draft recommendations discussed among all partners

• 4 workshops with policy makers, industry, consumer and other relevant NGO representatives for feedback

• Revised document discussed among all partners and fine-tuned
## Overall assessment of past policies in Europe

<table>
<thead>
<tr>
<th>Policy instrument</th>
<th>Reported evidence of positive impact</th>
<th>Estimation of cost-effectiveness (based on literature)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising control</td>
<td>Suggestive (uncertainty on behaviours, long-term)</td>
<td>Cost-effective (if effective...)</td>
</tr>
<tr>
<td>Public information campaign</td>
<td>Suggestive (strong on attitudes, small on behaviours)</td>
<td>Cost-effective</td>
</tr>
<tr>
<td>Nutrition information on menus</td>
<td>Suggestive (compensating behaviours?)</td>
<td>No evidence</td>
</tr>
<tr>
<td>Nutritional education</td>
<td>Suggestive (uncertainty about larger scale outcomes)</td>
<td>Not cost-effective (discounting)</td>
</tr>
<tr>
<td>Fiscal measures (taxes)</td>
<td>Mixed (uncertainty about distributional impacts)</td>
<td>Cost-saving</td>
</tr>
<tr>
<td>Fiscal measures (subsidies)</td>
<td>Suggestive</td>
<td>Cost-effective</td>
</tr>
<tr>
<td>Nutritional labelling</td>
<td>Mixed (strong on awareness for users, mixed results on the dietary outcomes)</td>
<td>Cost-effective</td>
</tr>
<tr>
<td>Regulate meals in schools/working places</td>
<td>Suggestive</td>
<td>No clear evidence</td>
</tr>
<tr>
<td>Nutrition-related standards</td>
<td>Suggestive</td>
<td>Cost-effective</td>
</tr>
<tr>
<td>Government encouragement for reformulation in food sector</td>
<td>Suggestive (uncertainty about final outcomes)</td>
<td>Cost-effective</td>
</tr>
<tr>
<td>Disadvantaged consumer subsidies</td>
<td>Effective</td>
<td>Cost effective</td>
</tr>
<tr>
<td>Availability measures</td>
<td>Suggestive</td>
<td>No clear evidence</td>
</tr>
</tbody>
</table>

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How cost-effective are healthy eating policy interventions? OECD evidence

<table>
<thead>
<tr>
<th>Policy/Intervention</th>
<th>Cost/DALY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food advertising regulation</td>
<td>$25,672</td>
</tr>
<tr>
<td>Food labelling</td>
<td>$12,577</td>
</tr>
<tr>
<td>Mass media campaign</td>
<td>$25,897</td>
</tr>
<tr>
<td>School-based interventions</td>
<td>&gt;100,000</td>
</tr>
<tr>
<td>Worksite interventions</td>
<td>45,639</td>
</tr>
<tr>
<td>Fiscal measures</td>
<td>Cost-saving</td>
</tr>
</tbody>
</table>

ACE study: 10% tax on unhealthy food both improves health and saves costs.
Reformulation cost effectiveness?

“it is estimated that a 1g average salt intake reduction across the UK population yields an average benefit of 56,660 QALYs per year” (FSA, 2009).

Valued at €35,000 per QALY implies a value of €2b!

The FSA argues in the absence of regulation, reformulation costs are all private....

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Acceptance

- 5 countries: Belgium, Denmark, Italy, Poland, UK
- Computer-assisted web interviews
- Survey run in Feb 2011
- 3003 interviews

Also measured:
- Willingness-to-pay
- Attributions of obesity
- Other psychological traits
- Socio-demographic drivers
- Information search
- Lifestyle habits

<table>
<thead>
<tr>
<th>POLICY</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education measures (children)</td>
<td>84.8%</td>
</tr>
<tr>
<td>Labelling requirements</td>
<td>80.8%</td>
</tr>
<tr>
<td>Subsidies to healthy foods</td>
<td>70.1%</td>
</tr>
<tr>
<td>Government-Industry cooperation</td>
<td>68.0%</td>
</tr>
<tr>
<td>VAT measures</td>
<td>67.2%</td>
</tr>
<tr>
<td>Industry co-financing of campaigns</td>
<td>65.7%</td>
</tr>
<tr>
<td>Government awards to health-innovating companies</td>
<td>64.1%</td>
</tr>
<tr>
<td>Ban advertising to children</td>
<td>63.9%</td>
</tr>
<tr>
<td>Information campaigns</td>
<td>63.7%</td>
</tr>
<tr>
<td>Regulate school meals</td>
<td>63.3%</td>
</tr>
<tr>
<td>Impose nutritional standards</td>
<td>62.2%</td>
</tr>
<tr>
<td>Measures to improve accessibility to healthy food</td>
<td>61.4%</td>
</tr>
<tr>
<td>Vouchers for low-income families</td>
<td>59.7%</td>
</tr>
<tr>
<td>TV station providing free advertising time</td>
<td>58.4%</td>
</tr>
<tr>
<td>Fat Taxes</td>
<td>55.2%</td>
</tr>
<tr>
<td>Information on restaurant menus</td>
<td>50.9%</td>
</tr>
<tr>
<td>Education measures (adults)</td>
<td>49.5%</td>
</tr>
<tr>
<td>Ban vending machines from schools</td>
<td>47.5%</td>
</tr>
<tr>
<td>Ban advertising to adults</td>
<td>43.7%</td>
</tr>
<tr>
<td>Regulate workplace meals</td>
<td>40.6%</td>
</tr>
</tbody>
</table>

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Warning!

- Unable to gather evidence on policy synergies, may be that the recommendations would be more effective together than the sum of their parts

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Measures supporting informed choice

- Small but generally positive effect on healthy eating and tend to be cost-effective.
- Well accepted by the public and stakeholders.
- However, informed choices are not necessarily healthy choices.
- Room for improvement.

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Advertising controls

Recommendations:

• Evidence should be collected on the effectiveness of advertising to children following a broad approach encompassing all TV channels and other media.

• Regulation of advertising to adults is not recommended.
Social marketing

Recommendations:

• Continued use of public information campaigns.
• Longer term investment to sustain effects on behaviour.
• Incorporation of key success factors of commercial marketing and best practice social marketing.
Nutrition education

Recommendations:

• Should be a compulsory component of school curricula in all EU countries.

• Provide information on healthy lifestyles and attractive and healthier food in school canteens.

• Governments should lead in ensuring public sector workplaces encourage healthy lifestyles and include information and healthy options in work canteens.
Nutrition labelling

Recommendations:

- Front-of-pack information (initially voluntary) in a consistent format and positioning.
- Nutrition information should be provided in food restaurant chains.
- Menu labelling often leads to wider initiatives, (e.g. reformulation, portion sizes, pricing strategies, health promotion and education).
- Nutrition labelling should be combined with initiatives targeting health motivation and education of the labelling scheme of choice.

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Policies changing the market environment

- The potential to off-set the social costs of unhealthy eating.
- Cost effective
- Measures are more intrusive and therefore generally less well accepted by the public.

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Fiscal measures for the population at large

Recommendations:

• Should work towards introducing taxes to promote healthier eating and raise revenue for other healthy eating programmes.

• Ring-fence tax revenue for other cost-effective healthy eating policies.

• Subsidies are not recommended.
Fiscal measures targeting disadvantaged consumers

Recommendations:

- Recognise cost effectiveness of food assistance programmes like the US WIC (Women, Infants and Children scheme) targeted at pregnant women and those with young children and examine ways to fit such schemes into the existing welfare systems.

- Examine incorporation of a US SNAP-like scheme (Supplementary Nutritional Assistance Program) targeted at disadvantaged adults, using vouchers restricted to ‘healthy’ food groups, into welfare schemes, replacing a component of present cash transfers.

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Availability measures for disadvantaged consumers

Recommendations:

• Research into the existence of food deserts in European countries and the factors that influence outlet location and consumer demand in these areas.

• Additional well evaluated trials to improve access to healthy foods in problematic geographical access areas.

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Reformulation

Recommendations:

• Voluntary agreements with food manufacturing, catering and retail industries to reduce salt, saturated fat, sugar and possibly portion sizes and increase positive nutrients such as whole grains.

• Most foods already meet artificial trans fats targets, but EU legislation should be introduced to set a maximum level in all foods.
Regulation of school food provision

Recommendations:

- Measures regulating food provision in schools (e.g. the nutritional content of school meals, provision of free fruit and vegetables) which should be accompanied by education measures.

- Supply healthier food choices in vending machines in schools rather than imposing an absolute ban of the machines.

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Regulation of workplace food provision

Recommendations:

• Food supplied in public sector workplaces should be extended to include healthy options.

• Gather evidence on the cost-effectiveness of these interventions.

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Conclusion on policy recommendations

• Strong need for more and better evidence of policy effectiveness to be collected.

• Despite only partial evidence on policy effectiveness, the case for action is urgent and there is sufficient evidence for the actions recommended.
Selected Eatwell Publications


Aschemann-Witzel et al. (2012), Lessons for public health campaigns from analysing commercial food marketing success factors: a case study. *BMC Public Health*, 12:139


Capacci and Mazzocchi (2011). Five-a-day, a price to pay: an evaluation of the UK program impact accounting for market forces. *Journal of Health Economics*, 30(1), 87-98

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Thank you

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## Policy recommendations (selection)

<table>
<thead>
<tr>
<th>Policy</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising controls</td>
<td>Children: a broader approach is needed</td>
</tr>
<tr>
<td></td>
<td>Adults: not recommended</td>
</tr>
<tr>
<td>Social marketing</td>
<td>Recommended, but more focused and long-term</td>
</tr>
<tr>
<td></td>
<td>Transfer best practices from commercial sector</td>
</tr>
<tr>
<td>Labelling</td>
<td>Front-of-pack, and in combination with other policies</td>
</tr>
<tr>
<td>Fiscal measures</td>
<td>Introduce, but ring-fence revenues and thorough evaluation of current experiences</td>
</tr>
<tr>
<td>Vending machines in schools</td>
<td>Selective products on sale, but ban is not recommended</td>
</tr>
<tr>
<td>Nutrition standards &amp; reformulation</td>
<td>Promote voluntary reformulation, but mandatory for trans fats</td>
</tr>
<tr>
<td>Dis advantaged consumers</td>
<td>Introduce schemes like WIC and SNAP from the US. Further study of food deserts and availability measures.</td>
</tr>
</tbody>
</table>