Supply chains, social externalities and policy responses in the global food economy

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Core arguments

1. There is conflict in and over food supply chains in the market, society and policy
2. The issue of externalities is becoming part of this contestation
3. This is not yet fully being translated into, or reflected in, policy but is likely to be some policy formulations emerging in:
   – governmental / intergovernmental fora
   – corporate decisions
   – supply chain alliances
Core Argument 1

• There is conflict in and over food supply chains in the market, society and policy
Food is contested space, pulled in different directions by: different interests at multi-levels

State

Civil society

Supply chain
Power shift in the supply chain: Retail increasingly dominate

Source: J-P Grievink, Cap Gemini, OECD 2003
Conflict in supply chains

- Power shift: from farm to processing and now to retailing & food service
- Tensions over:
  - Pricing & efficiencies
  - Value-adding along food chains
  - Risk management
  - Quality control and standards setting
- Values: ‘free trade’ or ‘fair trade’?
- Future see retail v food service tensions
Core Argument 2

• The issue of externalities is becoming part of contestation in supply chains
• Evidence is beginning to emerge on ‘social’ externalities with regard to...
  – Public health
  – Environment
Public health externalities include:

- Cost of diet-related diseases e.g. CHD, diabetes, some cancers
- Huge healthcare costs

NB. Burden on rich countries is bad enough, but for developing countries it’s serious
The UK food costs crisis
1990s/2000s

• Coronary Heart Disease cost to NHS £1.7 bn p.a. (BHF Oxford Univ. 2002)
EU Diet-related ill-health costs

• CVD cost EU health care systems of the EU just under €105 billion in 2003 (€230 per cap p.a)
• = c. 12% of EU total health care expenditure across the EU (BHF Oxford Univ. Heartstats. 2005)
• CVD = 1.5m death p.a. in the EU (42% of all deaths) (EU French Presidency 2000)
• PLUS….Years of working life lost (morbidity)
• PLUS …Social-psychological costs in well-being (e.g. 25% of EU women widowed before 65 due to CHD)
Global burden of disease 1990 - 2020
by disease group in developing countries

1990

49%
27%
9%
15%

Communicable diseases, maternal and perinatal conditions and nutritional deficiencies

2020 (baseline scenario)

43%
22%
21%
14%

Noncommunicable Conditions
Neuropsychiatric disorders
Injuries

Source: WHO, Evidence, Information and Policy, 2000
In the Nutrition Transition, populations – shift from restricted to extended choice

<table>
<thead>
<tr>
<th>CONSUME MORE</th>
<th>CONSUME LESS / NOT ENOUGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Meat</td>
<td>• Staples</td>
</tr>
<tr>
<td>• Fats</td>
<td>• Fruit and vegetables</td>
</tr>
<tr>
<td>• Sugar</td>
<td>• Fibre</td>
</tr>
<tr>
<td>• Soft drinks</td>
<td>• Water</td>
</tr>
<tr>
<td>• Energy dense foods</td>
<td></td>
</tr>
</tbody>
</table>
Figure 2: Relationship Between the Proportion of Energy from each Food Source and Gross National Product per capita with the Proportion of the Population Residing in Urban Areas placed at 75%, 1990

Source: Food balance data from the FAOUN; GNP data from the World Bank; regression work by UNC-CH
Trends in mean total cholesterol; Beijing China, 25-64

Source: Subnational, Beijing, MONICA
New GLOBAL Types and Effects of Malnutrition

*Source: Gardner & Halweil 2000, based on WHO, IFPRI, ACC/SCN data*

<table>
<thead>
<tr>
<th>Type of malnutrition</th>
<th>Effect</th>
<th>No. people affected (bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunger</td>
<td>Deficiency of calories &amp; protein</td>
<td>At least 1.2bn</td>
</tr>
<tr>
<td>Micro-nutrient deficiency</td>
<td>Deficiency of vitamins and minerals</td>
<td>2.0-3.5bn</td>
</tr>
<tr>
<td>Over-consumption</td>
<td>Excess of calories, often accompanied by deficiency of vitamins and minerals</td>
<td>1.2-1.7bn</td>
</tr>
</tbody>
</table>
Environmental externalities

Examples are numerous (e.g. soil, climate change, waste etc).

Here look at:

• Water
• Agrichemicals
• Assessment of externalities of the weekly food shopping basket (UK)
Global Water

Water for human use:

• Agriculture use = 70%
• Industry = 22%
• Drinking = 8%

(Stockholm International Water Institute 2001)

→ Water Stress

Source: http://www.solcomhouse.com/drought.htm

Accessed 17 May 2004
Water futures

- 2000-2020: water availability for humans is expected to drop by one-third

- Water scarcity or stress (having less than 1,700 cubic metres of water per person per year) is estimated to affect 40% of humanity by 2050

Consequences:
1. increased food prices and health threats;
2. poor countries likely to be most heavily affected


<table>
<thead>
<tr>
<th>Damage costs</th>
<th>China</th>
<th>Germany</th>
<th>UK</th>
<th>USA</th>
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<tbody>
<tr>
<td>Drinking water treatment</td>
<td>nd</td>
<td>88</td>
<td>182</td>
<td>897</td>
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<tr>
<td>Human health costs</td>
<td>900</td>
<td>14</td>
<td>2</td>
<td>132</td>
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<tr>
<td>Pollution incidents</td>
<td>nd</td>
<td>51</td>
<td>6</td>
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<tr>
<td>Biodiversity adverse effects</td>
<td>350</td>
<td>9</td>
<td>64</td>
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<td>Climate effects from manufacture</td>
<td>148</td>
<td>4</td>
<td>3</td>
<td>55</td>
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<tr>
<td>TOTALS</td>
<td>1398</td>
<td>166</td>
<td>257</td>
<td>1492</td>
</tr>
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</table>
UK food’s environmental externalities (Pretty et al, Food Policy, 30 (1) 2005)

IF:

• all farms in the UK to turn organic - environmental costs would fall £1.5bn $<£400m = saving £1.1bn pa

• all food sourced from within 20km of where it was consumed, environmental and congestion costs would fall $>£2.3bn to $<£230m = saving of £2.1bn

• shopping by car were to be replaced by travel by bus, bicycle or walking, environmental and congestion by a further £1.1bn: from £1.3bn $>£100m.
UK weekly food basket $\rightarrow$ externalities

$\Rightarrow@ 12\%$ extra costs

Pretty et al, *Food Policy*, 30 (1), 2005

- £24.79 spent on food per UK person per week (of which £7.53 = eating out)

This spend generates additional externalities worth £2.91 (+11.8%):
- 81p farming externalities
- 76p on road transportation: farms $\rightarrow$ shop
- 93p government subsidies
- 41p on consumers traveling to/from shops
Core Argument 3

• Such evidence is not yet fully being translated into, or reflected in, policy

• The gap between this evidence and policy is beginning to be acknowledged

• Policy formulations emerging at governmental / intergovernmental and corporate levels of policy-making → partly, filling the gap
Examples of (some) acknowledgement of evidence: intergovernmental

• Global/international:
  – International Panel on Climate Change
  – UNEP Millennium Environmental Assessment

• EU:
  – CAP reform → environmental (& social/cultural)
  – DG SANCO Roundtable on Obesity, 2004ff
Examples of evidence being acknowledged: National

- **UK**: Healthcare costs (of technical fixes to CHD)

- **USA**: Surgeon General 2002 on obesity
Full engagement can work e.g. packaging waste & Germany

1991 → tougher recycling regulations put responsibility on manufacturers for their packaging waste and recycling

→ per capita consumption of packaging has declined:

• 94.7kg in 1991
• to 82kg by 1998

(INCPEN 2002)
Policy responses: inter-governmental

- **Inter-governmental UN**
  - *WHO Global Strategy on Diet, Physical Activity and Health 2004*
  - *FAO Sustainable Agriculture & Rural Development – SARD Initiative*

- **Inter-governmental EU:**
  - *CAP reform & multifunctional agriculture model*
  - *Food safety reform*
  - *New supply chain governance- EU Food Law general principles & traceability*
  - *European Commission’s Roundtable on obesity*
EU Round table on obesity: different policy actions?

- Stakeholders (at Obesity roundtable 2004):
  - NGO alliances EPHA & European Heart Network; increased focus for consumer groups
  - Industry responses (CIAA, Euro Commerce)? Differentiated responses: winners and losers?

- Voluntary v regulatory approach

- Public authorities direct a voluntary response OR threat of regulation
Emerging formulation of national governmental policy responses

• Adding *social value in situ*: State support for national/local food supply chains

• National State-led voluntary initiatives:
  – *Pesticide reduction*
  – *Signposting (based on nutrient profiles)*

• New role for food taxes?
Adding *social* value to supply chains

• Through national/regional social supports:
  
• most recent CAP reform → single farm payment signals

• But…Special & Differential Treatment for LDCs (Doha Round)

• capacity building for LDCs to add value
Adding social value *in situ*

- Policy supports for local and national based producers to capture supply chain value:
  - *Infrastructure support e.g. supply chain to benefit local producers*
  - *Thus, recognition of the social elements of food production*
  - *Creative public procurement policy*
  - *Promotion of brand and provenance designation existing & new (Assured Farm Standards)*
The above policy responses are accompanied by corporate moves

- Marine Stewardship Council: NZ, Mexico, Scotland, Alaska, S Africa, UK, Australia
- Sustainable Agriculture Initiative: e.g. Unilever, Dole, McDonalds, Kraft, Nestlé
- CIES: global food safety standards
- EUREP-GAP: from Europe → USA → global
- New product lines (e.g. functional foods & nutrigenomic products)
Future?

• Continuing debate about forms of governmental action
• Continuing corporate activity
• Continuing tension over values
• Continued battle for hearts and minds of consumers