Data requirements for policy and private decision making - case the Netherlands

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Content

• Introduction
• The current policy environment
• Developments in some relevant policies
• Intermezzo: between policy and science
• Need for micro data in policy evaluation
• Need for up to date concepts on farming
• Need for efficient monitoring
Degree of diffusion of the technological revolution

Installation period

Turning point

Deployment period

Financial bubble
Decoupling in the system
Polarisation poor and rich

1771 water, textile
1829 steam, railways
1875 steel
1908 car, oil, massproduction
1971 ICT chip

Conflict

FRENZY

IRRUPTION

SYNERGY

Maturity

Institutional innovation

Last products & industries
Market saturation
Disappointment vs complacency

Golden age
Coherent growth
Increasing externalities

Unemployment
Decline of old industries
Capital searches new techniques

Based on Perez, 2002

The opportunity for green growth

1771 water, textile
1829 steam, railways
1875 steel
1908 car, oil, massproduction
1971 ICT chip
The end of declining food prices?

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Food index
Foresight(s) 2050: Scarcity & Transition

Can we feed 9 billion (with higher income levels) with less environmental impacts?

The debate focuses on scarcities:

- Climate change (and the role of livestock)
- Environmental impact and biodiversity loss, eco system services
- Energy supply, biobased economy
- Phosphate supply
- Water availability
- Declining productivity
- Resistance to industrialisation of agriculture in Western countries (incl. animal welfare issues)

See the EU SCAR 3rd Foresight report
Trends in relevant policies

- Agricultural policy: CAP post 2013
- Rural policy
- Food Safety, including novel foods, gmo
- Environmental policies: nitrate, phosphate, soil, pesticides
- Animal welfare
- Nature management (decreasing in NL, but more incentives for farmers?)
- Chain management issues / Competition policy
- Energy policy (and renewables)
- Innovation policy (NL: 9 top sectors)

Policy coherence is not easy: trade offs, ‘silos’ in government
TRENDS in EU Ag. Policy

- CAP moves quite quickly to ‘decoupled’ payments (flat rate)
- And payments for eco-services
- plus rural development

- CAP data are in public domain

- More attention to impact assessments, monitoring and evaluation Rural development plans

- New member states are integrated in acquis communautaire

+ Smart, sustainable, inclusive growth: Innovation Partnerships

- Less need for product data
- environmental data is needed
- (regional) subsidies on bio energy
- “cost prices” and WTP of eco-services (multi-functionality)
- total farm income (+ tax), investments, and role of direct payments on viability, poverty
- Other sectors in rural economy more important >> integration farm statistics and other sectors
- Regional input / output
- Is the rural area in the network (ict, roads, education, jobs)?
Intermezzo: between science and policy

- Policies have a policy cycle with different stages
  - Is FADN becoming a (too) mature product?

- Evidence-based policy or policy-biased evidence?
Where are we now in the Policy cycle

- Awareness
- Political impact
- Policy formulation
- Setting laws and rules
- Management
- Time

FADN
Need for most efficient monitoring: recommendations for data managers

- Policy research seldom needs yearly census data; yearly income and other data from a panel is enough
- Econometrics (like panel technics) can substitute for data gathering
- Collaborate with industry (and their datasets)
- Use up to date IT to get electronic data (EDI, bank data, XBRL, remote sensing, precision farming data, social media?)
- Use standard definitions in the 90% of the cases where this is possible, also internationally in OECD, or even global (Wye group etc.)
- Develop those standards where needed (sustainability?)
- Set up data exchange in Era-Nets or Joint Research Planning Initiatives or OECD Network groups if official statistics are slow
Evidence-based policy or policy-biased evidence?

• Politics versus science
  • Values <> facts
  • Interests <> neutral, independent
  • Subjective <> objective
  • Ideology <> truth
  • Opportunistic, negotiating <> standard methodology

• 4 potential roles for policy oriented scientists / brokers
  • Pure scientist
  • Issue advocate
  • Science arbiter
  • Broker of policy alternatives

source: Huitema & Turnhout, 2010
Need for micro data

• Evidence-based policy needs policy evaluation with ‘true and fair’ models and data on the behavior of people (and sometimes animals or soils), on which the effect of an intervention can be calculated / simulated
• Farms are getting more heterogeneous (income levels, niche markets, individualisation, less directive agricultural policy)
• With cheap computer power data are easier to handle
• Better to understand by non-economists than aggregates

• Don’t use them only to calculate averages, but show distributions
• Some best practices in the next slides:
Farm size in the EU, 2007

- Belgium
- Denmark
- Germany
- France
- UK
- Italy
- Spain
- Poland
- Netherlands
- EU-27

- acreage (ha)
- economic size (ESU)
Farm Strategies

Drivers for change

- Technology and demography demand scale
- Pressure from the food chain to optimize
- Changing CAP

Strategies based on competences or location:

- Bigger: efficiency of scale
- Better: improve management
- Different: value added, part-time, multi-functional
Figure 3 Share (%) of farms (left) and land (right) per size class in ESU, 2007

size class in ESU (European Size Units)
Total income farmer and spouse, Finland

Income share from agriculture and forestry:
- (0–25%)
- (25–60%)
- (50–75%)
- (75–100%)

Most part-time farms...
- 36% of farms
- 16% of farms
- 15% of farms

Most full-time farms...
- 34% of farms

Forecast: 2003e and 2004e according to price indices in 2002.

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Benchmark top dairy farms with the average

- cows in meadow
- education
- pesticide use
- P pollution
- N pollution
- income
- solvability
- cost price milk
- energy use
- water use

25% most sustainable dairy farms (coloured areas) compared to the average Dutch dairy farms (black lines), 100 = sustainable, 2006-'08
Need for up to date data concepts

Macnamara fallacy:

1. Measure whatever can be easily measured >> OK as far as it goes
2. Disregard that which can’t be measured, or give it an arbitrary quantitative value >> artificial and misleading
3. Presume that what can’t be measured easily really isn’t important >> blindness
4. Say that what can’t be measured really doesn’t exist >> suicide

Yankelovich, 1972
Need for up to date data concepts: the nature of the farm

Definition of the farm:

- threshold: is every household with 3 cars a car dealer?
- is a farm a firm (sme), a single unit ("both technically and economically, which has single management and which produces agricultural products" – Eurostat), a location with farm buildings?
- Standardisation of subcategories possible? (subsistence, hobby, part-time, family farm, farm business // ERS classification?)

Integration in the food chain (contracts, franchising, farm shops etc.)
Integration with rural activities (energy, services from nature management to care farming)

Is the household a better unit of analysis than the farm?
Figure 5. Farm-households allocate resources to farm and non-farm uses and source inputs from multiple farm, household, and non-farm businesses

- specialization family members
- pluri-activity
- asset management
- rural housing and hobby farming

- increasing scale
- risk management
- chain management by contracts
- transaction costs shapes structure
- separation management and work

From: Krijn Poppe, James Johnson, Mitchell Morehart, David Culver, Cristina Salvioni, 2009
Need for most efficient monitoring

Costs should be judged in relation to policy expenditure and welfare effects, not on a cash basis:

- NL hands out circa € 1 bln a year on CAP payments. 1% monitoring cost equals € 10 mln. (FADN costs less)
- The derogation in the Nitrate directive had a value for farmers of circa € 0.5 bln. The monitoring obligation for the NL to the EU is less than 1%. Cost recovery could be an issue here.

Nevertheless efficiency gains are needed, seen austerity plans
Need for most efficient monitoring: recommendations for data managers

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- Use up to date IT to get electronic data (EDI, bank data, XBRL, remote sensing, precision farming data, social media?)
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Need for most efficient monitoring: recommendations for policy makers

- Have an M&E section with data gathering needs in a policy regulation (not separate in a statistical or special regulation)
  - better link to budget, more innovative.
- Coordinate data gathering in a limited sets of multi-purpose panels (FADN, Food Chain panel, Consumer panel)
  - cheaper than ad hoc data gathering in each research project
  - much better integrated impact assessment / policy coherence
- Create / invest in IT standards like XBRL to lower costs of data exchange, for these panels but also within the food chain.
- Take an open data approach (website with data, smart phone app):
  - Breaks down monopoly of the agency that manages the data
  - Use of data in universities will increase, extra research for free
  - Use of data in food chain and with farmers will increase
Thank you for your attention

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