Managing animal diseases risk: incentives and governance of external effects

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Presented by Dr Frank Alleweldt, Civic Consulting
Overview over presentation

- **Background**
- **Current situation**
  - cost-sharing schemes in the EU
  - Situation in emerging / developing economies
  - Private livestock insurance market
- **The way forward**
  - A harmonised EU framework
  - Incentive based compensation
  - Challenges for involving private insurers
Background /1

• Civic Consulting is a Berlin based economic and public policy consultancy with special expertise in food chain issues, animal health and public risk management

• Our studies include:
Background /2

• Large outbreaks of livestock epidemics in the last decade have highlighted need for new approaches to manage epidemic disease risk

• Epidemic livestock disease risk has two main characteristics:
  
  – *Strong interference of stakeholders’ behaviour and risk*, which causes externalities of risk management through prevention measures and early reporting (or not), individual animal producers can have a significant influence on the overall costs of a disease outbreak

  – *Animal disease risk is an accumulation risk* → Disease can spread to other animals through infection. Accumulation is a typical feature of catastrophic risk
Costs/losses of operators due to livestock epidemics

- **Prevention costs**
  - Bio-security measures

- **Disease outbreak losses**
  - Stamping-out of infected herds
  - Pre-emptive slaughter/welfare slaughter
  - Partial loss of animal value due to control measures
  - Emergency vaccination, disinfection, testing diagnosis, slaughter / rendering costs
  - Business interruption costs

- **Losses caused by lower demand/prices** (price risks)

- **Losses other sectors**
Part I: Current situation
EU framework for emergency measures & compensation /1

- Generally 100% of direct losses of farmers (animal value, slaughter, etc) compensated by Member States
- EU “Veterinary Fund” contributes to eligible costs – Council Decision 2009/470/EC (ex 90/424/EC) – allows for EU co-financing of the costs of compulsory and pre-emptive slaughter and of related operational expenditure
- Roughly 1.2 billion € spent between 1997-2008, mainly on FMD, AI, CSF and Bluetongue
EU framework for emergency measures & compensation /2

• Besides EU “Veterinary Fund” there are “exceptional market support measures”, i.e. ad hoc payments in case of serious market disturbances due to restrictions imposed by the veterinary authorities in the case of outbreaks of animal diseases

• Aim of these measures is to purchase and remove healthy livestock in order to avoid overcrowding on farms located in protection and surveillance zones.

• Several billion € between 1997-2005, mainly BSE and CSF, since then less frequently used

→ Compensation system contributed to implementation of rapid and effective control measures, although in several cases deficiencies have led to insufficient control of disease spread (e.g. FMD 2001, CSF 1997/98)
Deficiencies of EU framework for compensation

- **Limited coverage**: FMD outbreak 2001 cost the UK £8 billion (of which government covered £3 billion)
- **Transfer of funds** from low-risk to high-risk areas (two countries accounted for 85% of Veterinary Fund expenditure 1997-2005)
- **Adverse incentives**, because operators with infected herds may be better off than operators with healthy herds under veterinary movement restrictions
- **Complex rules**
Cost-sharing schemes

- **Cost-sharing schemes** are public/private schemes that aim at sharing the responsibilities and costs of livestock epidemics with the affected sector(s). Significant differences in Member States: institutional set-up, degree of involvement of private insurers (rarely the case), degree to which costs are shared, mechanisms for stakeholder involvement, types of costs/losses covered. Only minority of EU countries have such a scheme

- **Implementation (selected MS schemes):** Where cost-sharing schemes exist, they seem to have led farmers to take on more responsibility. However, current schemes lack a harmonised approach and only partially provide incentives for prevention
Scheme I: Animal Health Fund NL

- Animal Health Fund compensates farmers in case of specific disease outbreaks
- Product Boards that exist for certain livestock industries and incorporate the whole product chain (from the farm to retailing) contribute
- Levies on farmers increase after outbreak

Source: Civic Consulting / Ministry of Agriculture, Nature and Food Quality of the Netherlands
Scheme II: Animal Disease Funds Germany

- **Tierseuchenkassen** are generally established in the Bundesländer (first legislation 1909)
- Public bodies (stakeholder involvement)
- Financed from state budget (50%) and through levies on livestock holders (50%)
- Funds compensate & finance prevention programs

**Scheme Description**

- **Federal Ministry**
- **State Ministry**
- **Governing Board of the Tierseuchenkasse**
- **Administration of the Tierseuchenkasse**
- **Farmers**

- **State Ministry**
  - County, Veterinary authorities
  - Farmers Representatives

- **Public bodies**
  - Stakeholder involvement

- **Funds**
  - Compensate & finance prevention programs

- **Financed from**
  - State budget (50%)
  - Through levies on livestock holders (50%)
Scheme III: Agroseguro Spain

Agroseguro is a pool of private insurers, complementing the public compensation scheme.

- Government provides premium subsidies and stop loss reinsurance.
- Livestock covers mainly for death of animals due to accidents and extreme weather, along with certain diseases (including for some epidemic diseases linked to government measures).
Emergency measures & compensation in transition / developing economies

- **Some progress** made during the last decade (response to the threat of Avian Influenza and other zoonoses)
  - More global coordination of donors and recipient countries;
  - Growing attention for a need to provide financing for prevention and improving governance of Veterinary Services (OIE PVS Evaluations)
  - Emergency response plans prepared & vaccine banks established
  - Growing awareness for the need to compensate livestock holders in case of disease related culling (WB global guidelines 2006)

- **However:**
  - Few countries have consistent compensation policy (absent or very low expenditures in a global sample of seven countries studied by Civic)
  - Veterinary restrictions of importing countries can lead to adverse incentives for early reporting
Epidemic livestock disease insurance

- Penetration for livestock insurance products is very low:
  - Products marketed in developing countries are individual animal accidental mortality policies
  - Sometime they include limited disease coverage, targeted at high value breeding stock
  - **Epidemic cover** is even more limited, and restricted to a few developed countries. Where it exists, such as in Germany, it is linked to government compensation programmes

- Livestock insurance premium income often not more than 1% of crop insurance premium income (in government-supported schemes!)
Part II: The way forward
A harmonised EU framework for cost-sharing


• Aim to develop framework for efficient cost and responsibility sharing schemes

• Preparatory work is ongoing - European Commission is expected to bring forward detailed proposals for responsibility and cost-sharing in 2012

• UK government currently reconsiders proposals for cost-sharing developed under previous government
Main principles of harmonised EU framework

Main principles for harmonised cost-sharing schemes could include (according to pre-feasibility study):

→ Participation of operators in cost-sharing schemes will be compulsory and contributions/compensation payments will provide incentives for prevention and early reporting

→ Compulsory cost-sharing schemes would cover animal diseases with high public relevance (possible significant negative impact on human health or animal health/welfare, wider economy)

→ Cost-sharing schemes would be regionally oriented, coverage may depend on public relevance of disease in the region

→ Cost-sharing schemes focus on farmers. Other operators from the livestock industry (e.g. traders) can be included. Rule: Only those operators that are compensated for losses should contribute
Contributions to harmonised cost-sharing schemes

→ Contributions of operators to cost-sharing scheme could be adjusted to individual risk
  • Number of animals
  • Species and type of animals
  • Regional risk adjustment

→ Bonus system for prevention measures
  • “Safety bonus” (e.g. premium reduction for all-in-all-out production)
  • “Disease-free bonus” (granted if farm remains disease free for a certain period)

→ Incentive based compensation rules to reduce adverse incentives and penalise late reporting
Incentive based compensation rules - also an option in developing countries

• Incentive based compensation rules can be applied even where cost-sharing is not feasible:
  – **Higher compensation rates** for commercial livestock producers meeting higher predefined bio-security standards → Low, moderate and high bio-security farms would be compensated at rates of 60%, 75% and 90% of the type-specific animal value for healthy animals and half of these rates for visibly diseased animals. Dead animals not compensated (exceptions possible)
  – **Community based compensation approach** for small-scale and backyard holders of livestock to increase collective responsibility and communal accountability for animal health → Visibly diseased and dead animals would reduce compensation payments to the community as a whole
Limitations for involving private insurers in covering losses caused by epidemic livestock diseases

- There is limited experience, in comparison to other classes of insurance, of epidemic scheme design and of best practices to act as examples for international transfer of know-how
- Disease outbreak, with infrequent but potentially severe claims, require major risk transfer by domestic insurance sectors → International reinsurers would need to play important role
- Need for a well-planned government disease prevention and control programme → Effectiveness of Veterinary Services influences risk of infection and size of losses
- Operation of a market-based product would need to be integrally linked to a government compensation system for livestock diseases. Private livestock insurance cannot replace such a system (need of linkage for loss assessment, moral hazard)