Outstanding results from modelling the CAP

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Structure

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1 CAP and consequences for modelling

Successive reforms of CAP since 1992 evolving from global towards specific policy measures taking into account farm and regional characteristics

→ Demand for micro level based modelling

→ Bottom-up approach (modelling at the decision level of farms, aggregation of results at sector level)
  • Access to representative FADN data and other data sources
  • Integrated micro-macro modelling framework

→ Increasing interest of policy makers on e.g. distribution, environmental and regional effects
2 Examples of model based results
The Mid-term Review – much more than a review

Decoupling of direct payments and partial transfer of budget vs Pillar-II via modulation; various options for MS

• Historical model (farm DPs taken as reference for entitlements)
• The regional model (the German proposal) via regional flat rates
• Hybrid models based on historic / regional references; static or dynamic
  • ... Combined with partial decoupling, e.g. in the beef sector

→ Impacts of decoupling on production of highly subsidized activities ... depending on degree of partial decoupling
Change of suckler cow number depending on the degree of coupling - Germany

Source: Küpker, Genedec
Distribution and income effects of decoupling depending on the implementation of SFP

Income effects

- positive in case of full decoupling

But redistribution effects depending on the implementation SFP

- Historic (almost zero)
- Hybrid (middle)
- Regional (can be high) → the German case
Redistribution effects of the German Dynamic Hybrid Model by Type and Size of Farms (% of 2009)

Source: BMELV Testbetriebe; Kleinhanss (2010).
Modelling land market - Effects of decoupling on land rental prices - Germany

Source: Küpker, Genedec
Modulation / redistributive payments

Several COM proposals wrt modification of DP’s

- **Capping DP > 300,000 € p. farm** since Agenda 2000, opposition by MS during negotiation of draft or legislative proposals
- **Agenda 2000**: voluntary *modulation* by MS (France)
- **MTR**: compulsory modulation (voluntary upscale by MS (e.g. UK)
- **CAP after 2013**: Modulation replaced by optional re-distributional payment (1st hectares) / capping (e.g. Hungary)
CAP after 2013: Change from Modulation towards Net Budget

Source: Kleinhanss (2012)
Impact of latest CAP reform (incl. redistributional payment) on income in Germany, by farm size (ha UAA)

Offermann et al., 2014
Milk market reform

Various modelling activities

• **Results of Partial Equilibrium modelling heavily influenced by value of milk quota based on estimates or assumptions** in case of non-existing quota markets → Reallocation towards regions with high quota prices, i.e. Poland and Ireland (FAPRI)

• **INRA model** appropriate, further developed in EDIM and applied for COM document wrt phasing out of quota (Requillart, Jongeneel)

  → Stepwise increase of milk quota approaching market equilibrium (increase of supply, lowering milk and quota prices) → implemented in HC reform

• **Modelling impact of quota (exit) on structural change** big challenge

  → One possible approach: Combining Farm Structure Survey (**econometric model of farm exit**) and FADN (**ex-ante farm model**)
Modelling the impact of milk market scenarios on structural change (farm numbers)

- Number of small farms highest under quota scheme
- Number of medium-sized farms increases especially with higher prices
- Number of large farms lowest under quota scheme

Offermann and Margarian, 2013
3 Summary and conclusions

Evolution of agricultural policy making from closed shop, increasingly transparent especially with respect to quantitative ex-ante assessments

A lot of modelling activities and tools initiated and developed in the EU Commission and MS to support policy decision making

However, far reaching proposals from agricultural economists not implemented, e.g. the Bond scheme
Summary and conclusions

Future need for farm level modelling increasing further: greening of CAP after 2013 and a lot of national options for design and evaluation of CAP

Accessing FADN became a key data base especially for micro level modelling --> bottom up approach

Challenge: Linking FADN with other data sources, e.g. administrative data and statistics
References

Kleinhanss W: Die Begrün(d)ung der Gemeinsamen Agrarpolitik. Loccumer Landwirtschaftstagung 3-5. 2. 2012

Küpker B, Kleinhanss W: Genedec - A quantitative and qualitative assessment of the socio-economic and environmental impacts of decoupling of direct payments on agricultural production, markets and land use in the EU. Wissenschaftliches Kolloquium der ökonomischen Institute der FAL, 13.06.2007

Offermann F, Margarian A: Modelling structural change in ex-ante policy impact analyses. EAAE Seminar, Chania, Crete 15.06.2013