Structural changes in family and corporate farming in the New Member States of the EU (and in Eurasia)

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The CAP towards 2020: Market regulation and farm structures policy
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Some stylised facts

- Actual farm structures strongly differ from expectations
  - "western type" family farms play almost nowhere a particular role

- In general: dualistic farm structures
  - large and very large farms
    - relatively small in numbers
    - high share in land and capital intensive production (e.g. cereals, granivores)
    - often successors of former collective (and state) farms
  - subsistence, semi-subsistence and small farms
    - huge in numbers
    - high share in labour intensive production (e.g. potatoes, vegetables, dairy)
    - motives: self-employment, self-sufficiency
  - shares vary among countries
  - shares changed only gradually after first years of transition
Explanations

• Path dependence
  – farm structures change very slowly
    • sunk costs for assets and human capital, market frictions, …
    • with the exception of "catastrophic" events (bifurcations)
  – institutional change is slow
    • new institutions "don't fall from heaven" but evolve
    • existing institutions in transition economies deviate from textbook assumptions
  – interdependence of structures and institutions
    • institutions and policies in favour of status quo
    • existing structures affect institutional change

➢ structures are outcome of their history not of their superiority
  ➢ surviving large farms
  ➢ emerging (semi-)subsistence farms
Surviving large farms

- Profit orientation was necessary for survival
  - Employment reduction of successors of collective farms
    - abolition of public services
    - reduction of hidden unemployment
    - reduction in livestock production
  - But employment reduction and profit orientation somewhat delayed
    - existing assets for livestock production (sunk costs)
    - identity of ownership and employment (sunk costs of human capital)
    - avoiding competition with newly/re-established farms
    - legitimisation strategy of managers

- Still many cooperatives
- Recent trend in CIS: Establishment of agro-holdings
  - partly as a response to corruption, bad policies and lack of capital
Small and subsistence farms

- Households continued farming as in socialist times
- Employment reduction of successors of collective farms
- Missing alternative employment opportunities in rural areas
  - Overaging of small farmers

Survey results Hungary (www.scarled.eu)

<table>
<thead>
<tr>
<th>Farms between</th>
<th>4 and 10 ha</th>
<th>10 and 25 ha</th>
<th>25 and 60 ha</th>
<th>&gt; 60 ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share</td>
<td>41 %</td>
<td>20 %</td>
<td>19 %</td>
<td>20 %</td>
</tr>
<tr>
<td>Mean age</td>
<td>53</td>
<td>54</td>
<td>52</td>
<td>47</td>
</tr>
</tbody>
</table>

Survey results Poland (www.scarled.eu)

<table>
<thead>
<tr>
<th>Farms between</th>
<th>2 and 5 ha</th>
<th>5 and 10 ha</th>
<th>10 and 20 ha</th>
<th>&gt; 20 ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share</td>
<td>31 %</td>
<td>22 %</td>
<td>29 %</td>
<td>18 %</td>
</tr>
<tr>
<td>Mean age</td>
<td>53</td>
<td>48</td>
<td>47</td>
<td>48</td>
</tr>
</tbody>
</table>
Small and subsistence farms

- a strategy to generate at least some income from own resources (particularly if land and local markets available)

- (in general) rather a by-product of transition than a perspective (limited land availability, financial resources and market access)
Where are we heading?

- Traditional problems
  - Existing inefficiencies (farm level, sector level)
  - Structural deficits
Productivity and profitability

Milk production costs and margins for milk specialised farms in EU NMS in 2006 **

<table>
<thead>
<tr>
<th>Class of number of dairy cows</th>
<th>EU 15</th>
<th>Hungary</th>
<th>Poland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25&lt; &lt;=50</td>
<td>&gt;=150</td>
<td>25&lt; &lt;=75</td>
</tr>
<tr>
<td>Milk yield - kg/cow</td>
<td>6.543</td>
<td>&lt; 7.688</td>
<td>5.969</td>
</tr>
<tr>
<td>Total receipts from milk</td>
<td>306</td>
<td>296</td>
<td>280</td>
</tr>
<tr>
<td>Total operating costs</td>
<td>188</td>
<td>181</td>
<td>130</td>
</tr>
<tr>
<td>Total costs</td>
<td>384</td>
<td>304</td>
<td>280</td>
</tr>
<tr>
<td>Margin over total inputs with coupled payments</td>
<td>-78</td>
<td>&lt; -8</td>
<td>-1&gt;</td>
</tr>
</tbody>
</table>

* in €/ton

** European Commission: EU DAIRY FARMS ECONOMICS - 2008 REPORT

- higher productivity of larger farms!
- but: profitability depends also on factor costs!
Where are we heading?

- Traditional problems
  - Existing inefficiencies (farm level, sector level)
  - Structural deficits

- Recent trends
  - Globalisation and verticalisation
  - Biological manufacturing
  - ...
Globalisation and verticalisation

International structural change in the pork chain

- **Denmark (2007)**
  - 34 % of all pigs in facilities with more the 5000 pigs
  - 20 % of all pigs in facilities with more the 10000 pigs

- **US pork production (2008)**
  - 90 % of all pork from vertically integrated systems
  - 61 % of all pigs in facilities with more than 5000 pigs

- **Smithfield Foods**
  - USA: ~1 mill. sows
  - Poland: about 83.000 sows, >1 mill. hogs in 2008 produced
  - Romania: investments in pork chain with capacity for 4 mill. hogs
Globalisation and verticalisation

Pork production in Hungary after EU Accession

Source: KSH, AKI

- Total number of pigs
- Thereof sows
Biological manufacturing

Increasing knowledge intensity of modern agriculture

• Example: farrowing / piglet production in Saxony
  • In 2006 average profit per sow was 300 € higher for farms with more than 1000 sows compared to farms with less than 600 sows
• Success factors
  • lower costs + higher revenues
  • strong positive correlation of number of sows and piglets per sow
Increasing knowledge intensity

- Economies of size result from better managing human capital and know how rather than just from decreasing average costs for facilities
  - division of labour
  - competent managers
  - specialised employees
  - knowledge transfer through supply chain
Increasing capital intensity

- Financial needs to create one job in livestock production in Germany
  - hog feeding: 1,125,000 €
    - facility per 2,500 places at 350 € each, current assets 100 € per place
  - farrowing: 675,000 €
    - facility per 250 sows at 2,300 € each, current assets 400 € per place
  - dairy farming: 300,000 €
    - facility per 50 cows at 4,000 € each, current assets 2,000 € per place
Conclusions

- Subsistence, semi-subsistence and small farms in NMS
  - a strategy to generate at least some income from own resources (particularly if land and local markets available)
  - but (in general) rather a by-product of transition than a perspective (limited land availability, financial resources and market access)

- Structural change is path dependent
  - transferring western "paradigm" to transition economies misleading

- Relevant question for small farms in NMS
  - is not, whether they can compete with large farms,
  - but, whether they can benefit from strong value chains!