Assessing RDP impacts in Austria: Lessons learned from the ex-post evaluation 07-13 and the way ahead for AIR 2019

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Outline

RDP overview
Evaluation purpose and questions
Evaluation approach
Data
Preliminary findings
Strengths and weaknesses of the approach
Lessons learned and recommendations
RDP overview in AT

• RDP is a major policy in Austria
  o RDP volume appr. 1 bn €/a
  o compare: Pillar 1 Direct Payments: 0.67 bn €/a in AT
  o compare: share of UAA 1.5%, share of EU RDP funds 5.3%

• In 2017, RDP funds were equivalent to 37% of factor income

• Share of measures in 2017:
  o 29% for agri-environment and climate
  o 27% for areas facing constraints
  o 13% for investment support
Total RDP public support: € 7.6 bn (national and EU)

RD Priority 1
(knowledge transfer)
2%

RD Priority 2
(viability & competitiveness)
11%

RD Priority 3
(food chain)
7%

Other RDP measures programmed under Priorities 4, 5 and 6 contributing to FA 1a, 1b, 1c, 2a, 2b, 3a, 3b e.g. M10, M11, M12, M13, M14

Sources: based on Fiala, BMNT, 2016
Level of AT RDP uptake by end 2017

Table 1: Overview on the level of RDP uptake in Austria

<table>
<thead>
<tr>
<th>Programme</th>
<th>Target</th>
<th>Approved</th>
<th>Implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority 1</td>
<td></td>
<td></td>
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<tr>
<td>Priority 2</td>
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<td>Priority 3</td>
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<td>Priority 4</td>
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<td>Priority 5</td>
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<tr>
<td>Priority 6</td>
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</tbody>
</table>

Source: based on Meier, BMNT, 26-06-2018
Evaluation purpose

• **Commissioned by BMNT** (Federal Ministry of Sustainability and Tourism)

• **Main purposes:**
  - impact (mainly sector and socio-economic) of AT-RDP
  - contribution of RDP for the achievement of EU 2020 strategy indicators
  - answers to specific questions relevant for BMNT strategies

• **Timeline:**
  - preliminary results: 3 Dec 2018
  - final results: 28 Feb 2019
Evaluation elements

• Common Evaluation Questions: 4, 22, 23, 24, 25, 27, 29
• Common Indicators used:
  o I.01 Agricultural entrepreneurial income
  o I.02 Agricultural factor income
  o I.03 Total factor productivity in agriculture

• Additional Evaluation Questions:
  o Impact on entrepreneurial income on conventional farms?
  o Impact on entrepreneurial income on organic farms?
  o How did the production portfolio change?
• Additional indicators:
  o concentration measures (e.g. Herfindahl)
  o structural change

Source: REGULATION (EU) No 808/2014; Annex V
Evaluation approach

1. **Quantitative assessment at micro-level**: PSM combined with DiD

2. **Quantitative assessment at regional (municipality, NUTS3) and macro-level (AT)**: agricultural sector model, regional input-output model, national dynamic macro model (spatial) econometric models based on municipality / NUTS3 data (e.g. fixed-effects)

**Reasons for using the methods**

- access to FADN, municipality and NUTS3 panel data
- previous experience with the method in RDP 2007-2013 ex-post and RDP 2014-2020
- robustness & validity,
- transparency & credibility
- practicability & cost effectiveness
Evaluation approach 1/3: concept

**NUTS-3-regions ⇒ whole economy**

*integrated modelling framework*

- economic models and process analytical models
  - DYNK (whole economy) ⇔ ASCANIO (regional economy) ⇔ PASMA (primary sector) ⇔ EPIC / others

**IMPACTS**

- **economic**
  - value added / income
  - employment
  - productivity / competitiveness

- **ecologic**
  - GHG and SOM
  - water quantity / quality
  - bio-energy

- **social**
  - distribution
  - poverty risks
  - gender aspects

**IMPACTS**

- panel-data-analysis (municipality), household data, scores (district)

*micro- or spatial econometric analyses*

- household / municipality / district

Source: own construction
Evaluation approach 2/3: PASMA

Input: prices, production costs, policy payments, yields, nutrient and feed requirements, regional endowments, observed land use activities...

Model Equations

Objective function
max regional producer surplus (for each NUTS3)

Model constraints
Endowments (e.g. land, livestock housing)
Feed balances (e.g. concentrated feed, fodder)
Fertilizer balances (e.g. manure, nutrient needs)
Product balances (e.g. imports, sales, intra-regional trade)
Mixes for observed:
- land use types (spatial HRU level)
- crop and livestock activities (NUTS3 level)

Model Activities

Land use [spatial/HRU level]
- Land use type (e.g. cropland, grassland)
- Cultivar (e.g. wheat, corn, alfalfa)
- Management intensity (e.g. high, moderate, low, organic)
- Soil management (e.g. conventional tillage, reduced tillage, winter cover crops)

Sales (e.g. cash crops, meat, milk)

Imports (e.g. mineral fertilizer)

Livestock [NUTS3 level]
- Livestock type (e.g. dairy cattle, fattening pigs)
- Management intensity (i.e. conventional, organic)
- Housing system (e.g. loose housing, deep litter)

Output: Comparative static scenario analysis of land use development indicators (e.g. regional producer surplus, fertilization intensity, emissions)

Source: own construction
Evaluation approach 3/3: DYNK
# Data situation in Austria

## Table 2: Data sources used - overview (selection)

<table>
<thead>
<tr>
<th>Data description</th>
<th>Source</th>
</tr>
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<tbody>
<tr>
<td>administrative data</td>
<td>BMNT</td>
</tr>
<tr>
<td>farm book keeping</td>
<td>national FADN via BMNT</td>
</tr>
<tr>
<td>farm structure survey</td>
<td>STAT, BMNT</td>
</tr>
<tr>
<td>economic accounts of agriculture NUTS3</td>
<td>STAT</td>
</tr>
<tr>
<td>EUSILC</td>
<td>STAT</td>
</tr>
<tr>
<td>income data (municipality)</td>
<td>STAT</td>
</tr>
<tr>
<td>foreign trade data</td>
<td>STAT, WIFO</td>
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<tr>
<td>gender data</td>
<td>WIFO</td>
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<tr>
<td>energy data</td>
<td>STAT</td>
</tr>
<tr>
<td>GHG emission data, water quality</td>
<td>WIFO, BOKU, UBA</td>
</tr>
<tr>
<td>survey data</td>
<td>evaluators</td>
</tr>
</tbody>
</table>

Source: own construction
Experience from previous evaluations

Source: Sinabell et al. 2016
Preliminary findings

to be presented on the 5th Dec 2018
### Strengths and weaknesses

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
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<tbody>
<tr>
<td><strong>Methodology</strong></td>
<td><strong>Methodology</strong></td>
</tr>
<tr>
<td>• well founded in applied welfare analysis context</td>
<td>• more advanced approaches still lacking, e.g. causality not based on RCTs</td>
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<tr>
<td>• integrated assessment modelling approach – interdisciplinary team</td>
<td>• modelling: regional model not (yet) dynamic</td>
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<tr>
<td>• combination of programming model and econometric modeling approaches</td>
<td><strong>Practicability</strong></td>
</tr>
<tr>
<td>• fully consistent with EU-2020-strategy and ESI-funds evaluation approaches</td>
<td>• evaluation of ESI-funds not made in an integrated manner</td>
</tr>
<tr>
<td><strong>Practicability</strong></td>
<td>• evaluation not linked to national programs and EU 2020 strategy reporting but separate</td>
</tr>
<tr>
<td>• scaling very well: relevant results for many purposes</td>
<td>• integration into planned strategic plan preparation not yet accomplished</td>
</tr>
<tr>
<td>• teams working on impact and result indicators are well integrated (forward – backward linkages)</td>
<td>• data set generation is still a big challenge</td>
</tr>
</tbody>
</table>
Lessons learned and recommendations

- **Planning**: RDP design needs to have programme evaluation already in mind (learning from previous evaluations)
- **Human resources**: appr. 30 person months (many more in managing authority to provide data etc.) for this approach
- **Timing**: preparation well in advance necessary
- **Coordination**: regular meetings (every 4 months) of all evaluators very helpful
- **Support**: detailed guidance on reporting (number of words, details of indicators, etc.) very helpful
- **Look ahead**: all ESI funds plus national programmes together
Thank you

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