Setting-the-scene:
Which is the best risk management tool?

Alba Castañeda Vera
18 December 2017

The 2017 EU Agricultural Outlook conference
Agriculture is a risky activity...

Primary commodity prices (2011)

Source: IMF
Farmers face risks

**Types**

Production risks
- Climate variability
- Animal diseases
- Plant pests & diseases

Market risk
- Price variability
- Price volatility

**Level of damage**

Non-severe
- < 30 % (normal)

Severe
- > 30 %

**Scope**

Systemic
- Generalized

Non-systemic
- Localized

Garrido et al (2016) - DG Internal Policies of the Union
Levels of intervention to address those risks?

Garrido et al (2016) - DG Internal Policies of the Union
Objective

Estimate the effects of CAP 2014-2020 by analysing the role of alternative risk management tools and strategies

1. Farm income and income stability
   - farmers’ perspective

2. Efficiency of public expenditure
   - society’s perspective
Study case

Valladolid (Castilla y León)

Scale: farm
Methodology

Risk management tools
- None
- CAP direct payments
- Crop insurance
- Income Stabilization tool (IST)

Farm strategies
- Wheat monoculture
- Crop rotation (greening requirements)
Farmers’ perspective

Results

Expected income (€/ha)

- No protection
- CAP direct support
- Insurance
- IST

[Bar chart showing expected income for different scenarios with monoculture and rotation practices]
Results

Farmers’ perspective

Expected income (€/ha)

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<tr>
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<th>No protection</th>
<th>CAP direct support</th>
<th>Insurance</th>
<th>IST</th>
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<tbody>
<tr>
<td>Expected income (€/ha)</td>
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<td>MONOCULTURE</td>
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<td>ROTATION</td>
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Likely low incomes in worst 5% of years (€/ha)

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<th>No protection</th>
<th>CAP direct support</th>
<th>Insurance</th>
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<td>Low income (p5, €/ha)</td>
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<td>MONOCULTURE</td>
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Society’s perspective

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<th>Public cost (€/ha)</th>
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<tr>
<td>No protection</td>
<td>0</td>
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<tr>
<td>CAP direct support</td>
<td>150</td>
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<tr>
<td>Insurance</td>
<td>0</td>
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<td>IST</td>
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- **MONOCULTURE**: Yellow bars
- **ROTATION**: Green bars
Society’s perspective

What is the efficiency of each public € invested in...

...increasing likely low incomes in worst 5% of years (\(\Delta€/€\))
Society’s perspective

What is the efficiency of each public € invested in...

...increasing likely low incomes in worst 5% of years (Δ€/€)

...decreasing variability (ΔCV/€)
Conclusions

✓ From the farmers’ perspective, direct payments were the most favourable measure.

✓ From the society’ perspective, IST and crop insurance were the most efficient tools in terms of increasing income in the worst years and decreasing variability, respectively.

✓ Crop diversification does not require any direct public support but…
  … provides itself a significant improvement in farm income stability
  … brings down the public cost of risk management tools.
Thank you for your attention

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