



Methods for calculation Priority 2 effects of RDP 2014-2020



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What will it be about?

- Background
- Main evaluation elements and methods used
- Results
- Conclusions
- Recommendations

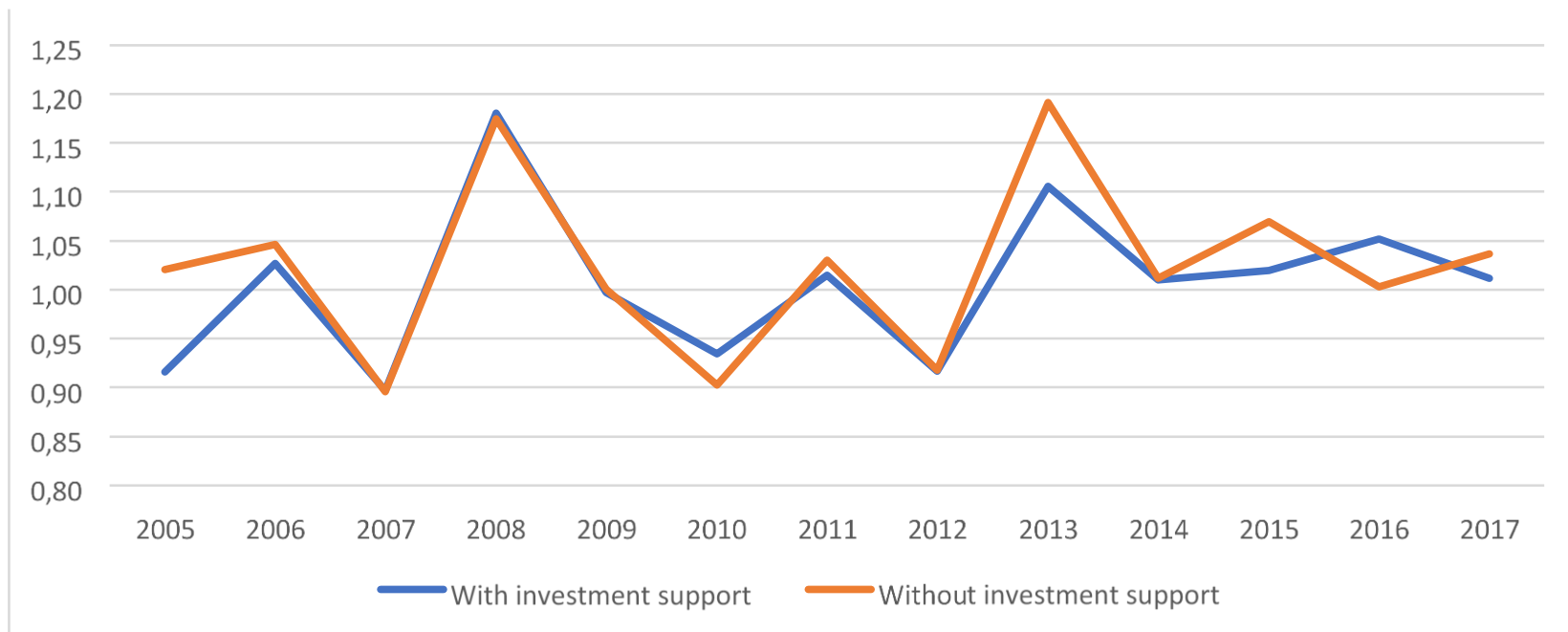


Background

RDP investments' results are significantly affected by...

- Macroeconomic environment
- Volume of allocated resources
- Investment type

TFP change in agriculture, by farm groups, 2004 to 2017



Source: AKI calculations based on FADN

Evaluation elements used

FA P2A, EQ4: To what extent have RDP interventions contributed to improving the economic performance, restructuring and modernization of supported farms in particular through increasing their market participation and agricultural diversification?

Judgement criteria:

- Agricultural output per annual working unit of supported agricultural holdings has increased
- Farms have been modernized and restructured

Result Indicators

R1/T4 - % of agriculture holdings with RDP support for investments in restructuring or modernisation

R2 - Change in agricultural output on supported farms/AWU

Common output indicators

O3 – Number of operations supported

O4 – Number of holdings supported for investment in agriculture holdings (for R1)

Common context indicators (for measuring impact)

- **CCI 26** Agriculture entrepreneurial income
- **CCI 27** Total factor productivity income
- **CCI 14** Labour productivity in agriculture

Evaluation methods and data sources used

- **Quantitative Method:** Propensity Score Matching and Difference in Differences (PSM-DID)
- **Data:** FADN 2014-2017
- **PSM-DID main steps:**
 - 1. Selection of covariates included in the propensity score calculation (retention of significant variables)
 - 2. Calculation of propensity score
 - 3. Propensity score stratification, fulfilment of the balancing property test
 - 4. Selecting a matching method (nearest neighbour, Kernel, Radius Caliper), pairing control and supported group
 - 5. Calculation of the average impact of beneficiaries (ATT)

Effects of agricultural investment measures

- Farm entrepreneurial income 😊
- Agricultural factor income 😊
- TFP change 😞

Impact of investment support on TFP of farms and control group (2014 to 2017)

	No.	Malmquist index (%)
Supported (1)	168	1,17
Not supported (0)	934	1,13
Average of the whole population (T)	1102	1,14
Difference (1-0)		0,03
Difference (1-T)		0,03
Matching supported (1)	156	1,17
Matching control (0)	904	1,17
ATT		0,00

Source: AKI

Conclusions

- Evaluation of RDP investment measures considered successful
- At measure level, the effectiveness of analysis improves with the sample size
- Measures with higher TFP potential should be promoted for more effective use of resources
- FADN data representativeness on measure level is low
- Robustness of PSM-DiD would increase with the number of treated group

Recommendations

- Ongoing evaluation: experiment on measure level analysis to change to appropriate database (Tax Office). Problem with small private farms without double entry bookkeeping, representativeness issues.
- Ex-post evaluation: PSM-Did method should not change, robustness should increase with population size
- Next programming period: Widen evaluation complexity on competitiveness through inclusion Pillar I measures and trade with EU-27 wide country level comparisons.



Thank you for your attention

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