

Assessment of CAP Generational Renewal subsidies with ABM

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Objectives

Assess the effectiveness of Generational Renewal subsidies in motivating young farmers to enter the agricultural sector by measuring their economic viability.

Are current Pillar 1 and 2 subsidies sufficient to overcome the financial and/or economical barriers preventing young farmers to start an independent agricultural activity?

The impact is measured in terms of number of farms and variation of gross margin.

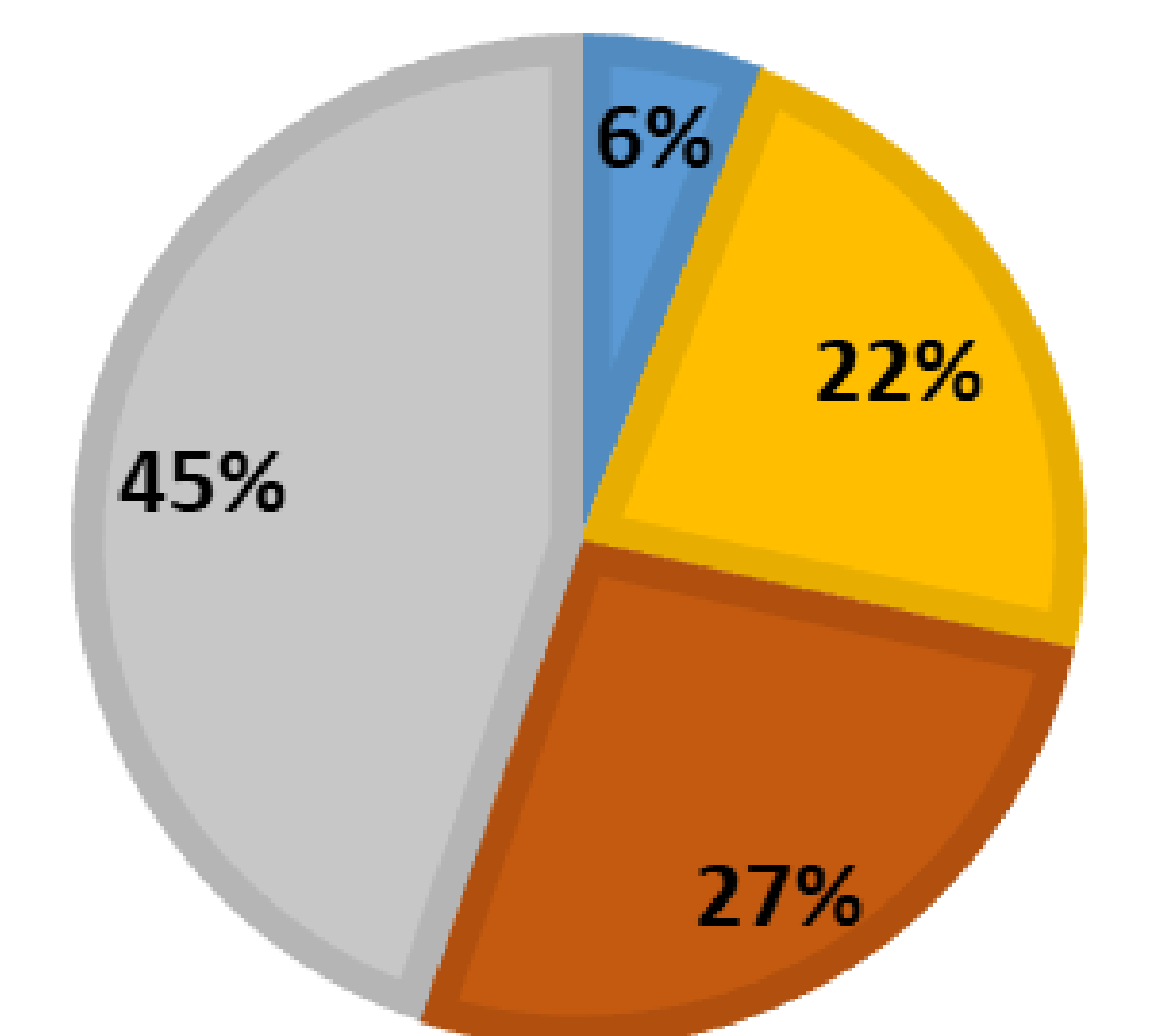
Methods

- Agent-based model based on Positive Mathematical Programming (GAMS).
- The model estimates variable costs per crop using a generalized least square approach.
- Farms heterogeneity is captured in terms of farms' structure and production strategies.
- Farmers are individual agents which behave under the assumption of not-fully rational production choices.

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Data

FARMS DISTRIBUTION BY HOLDER'S AGE



■ ≤ 40 ■ 41-54 ■ 55-64 ■ ≥ 65

The sample investigated is limited to farms located in the Emilia Romagna region (NUTS-2). It refers to the 2020 Italian FADN (RICA) census that counts 35459 farms.

- ❖ The average farm-holders age is 61
- ❖ Young farmers (<40) represent 6%
- ❖ 45% of the sample is over 65
- ❖ 1969 farmers (5.5%) have successors and, among those, only 628 are aged 41-64, target of the P2 measure in the model.
- ❖ No date of first establishment available.

Results

- **Number of farms:** the number of farms with young holders (<40) increases by 6.17% when Pillar 1 subsidy is introduced, whereas no significant impact is due to Pillar 2 subsidy.
- **Gross margin:** young farmers' gross margin increase by 5.98% as result of the introduction of Pillar 1 subsidy. Pillar 2 measure has little impact, increasing only by 0.03%.

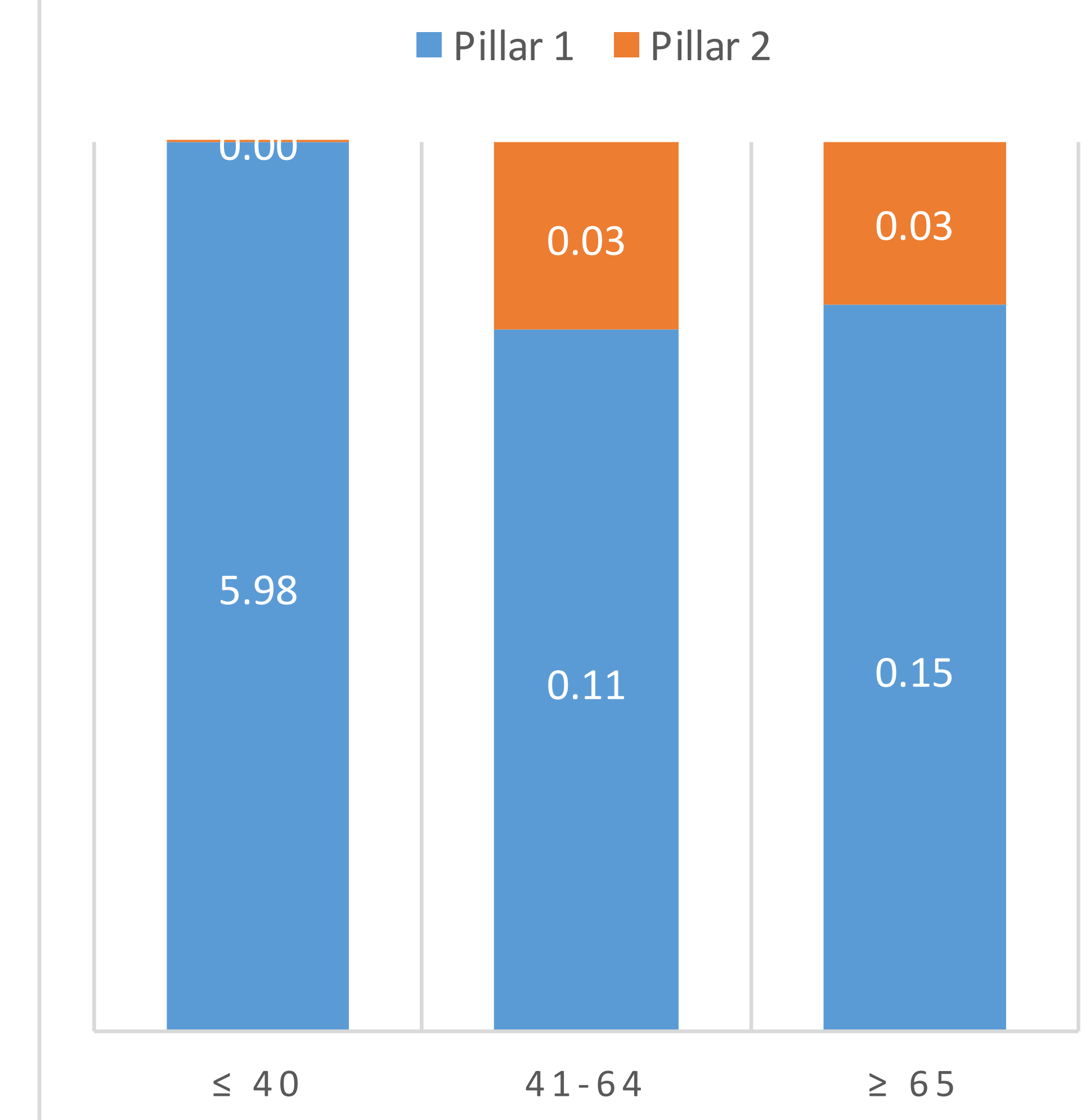
Conclusions

- The new CAP measure introduced in P1 seems to have positive impact on GM and number of new young farmers entering the market.
- The small sample size and the lack of first establishment data could explain the limited impact of P2 subsidy.

References

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- Arfini F., Donati M., (2013). *Organic Production and the Capacity to Respond to Market Signals and Policies: An Empirical Analysis of a Sample of FADN Farms, Agroecology and Sustainable Food Systems*, 37:2, 149-171.
- Zagata, L. et al. (2017). *Research for AGRI Committee – Young farmers: policy implementation after the 2013 CAP reform*. European Union.

% VAR GROSS MARGIN (MILLION €)



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