

Extended Abstract

Please do not add your name or affiliation

Paper/Poster Title	How can cooperatives promote environmental practices? A choice experiment to identify contracting strategies in the wine sector
---------------------------	--

Abstract prepared for presentation at the 98th Annual Conference of The Agricultural Economics Society will be held at The University of Edinburgh, UK, 18th - 20th March 2024.

Abstract	200 words max
<p>We explore the role of agricultural cooperative in encouraging the adoption of organic standards by their members through contracting. We conducted a discrete choice experiment with all the 70 winegrowers of a wine cooperative. Results show that winegrowers are highly responsive to market-based economic incentives such as a 30% premium and compensation options for yield loss. They have heterogeneous preferences regarding the inclusion of environmental requirements within farming contracts. Winegrowers who declare enjoying testing risky solutions and feeling ready to convert to organic farming are more willing to adopt a contract where organic farming is a requirement. We identify three distinct winegrower profiles. The <i>Reluctant to organic</i> group exhibits a positive attitude toward the possibility of adopting a new contract on 50% of their land. Contrarywise, <i>Reluctant to change</i> winegrowers view this option negatively. They also have a negative perception of the possibility of receiving advice from the cooperative on economic and labor organizations. Only <i>Organic lovers</i> winegrowers, who represent 13% of the sample, hold a positive view on environmental requirements. While cooperatives' farming contracts can be a potential instrument to increase organic farming uptake, additional policies are needed, at least in the short-term, to scale up organic farming uptake.</p>	
Keywords	contracting, agricultural cooperative, organic farming, choice experiment
JEL Code	L14, Q13, Q52 see: www.aeaweb.org/jel/guide/jel.php?class=Q)
Introduction	100 – 250 words
<p>The Green Deal set the ambitious objectives of converting 25% of agricultural land to organic farming. Yet, many farmers still face barriers to converting into organic farming, as it requires meeting stringent requirements that entail adopting new environmental practices and redesigning the farming system. The farm structure, the socio-demographic characteristics of farmers and behavioral factors influence the adoption of organic farming (Latruffe and Nauges, 2014; Dessart et al., 2019; Serebrennikov et al., 2020; Sapbamrer and Thammachai, 2021). As agricultural cooperative hold 40% of the total agri-food market shares (La coopération agricole, 2022), they are key stakeholders in the agri-food supply chain and they can thus play a role in encouraging the adoption of organic farming. Their governance organization favors a close</p>	

relationship with farmers. They can participate both upstream by supplying inputs and downstream by managing the farm production sales.

To examine more in depth the potential role of agricultural cooperatives in encouraging farmers to adopt organic farming practices, we first analyze farmers' preferences for different contracts in a wine cooperative. We chose the wine sector as the focus of our case study due to its important reliance on pesticides. The sector faces a major challenge in aligning with societal expectations by reducing or eliminating pesticide usage, as is the case in organic farming. Second, we intend to categorize winegrowers profiles based on their willingness to adopt organic farming.

Methodology

100 – 250 words

Given the scarcity of statistical data on contracts between farmers and cooperatives, we conducted a discrete choice experiment with all 70 winegrowers of a wine cooperative producing under the Buzet protected designation of origin. Interviews were conducted face-to-face. During the choice experiment, each winegrower were confronted with the choice among the three alternatives contracts for 6 choice situations (corresponding to 6 tasks). One of the three alternatives represents the status quo and was therefore identically repeated in each choice situation. We examine several contract attributes whose objective is to encourage winegrowers to adopt organic farming: (1) the option to obtain a cooperative advisor to assess the impact of practice changes on the economic performance of the vineyard and the farm labor organization, (2) the opportunity to contract for only 50% of the vineyard area, and (3 and 4) the pricing formula, encompassing the potential to receive a 30% premium on the base price and access to a compensation mechanism to cope with yield loss.

When analyzing choice data, the aim is to understand the impact of the contract attributes of the different alternatives offered to the agents' level of utility. We use a random parameters logit model, also called mixed logit (MXL). We consider random coefficients for the variables characterizing environmental requirements, thus assuming that preferences for environmental quality are heterogeneous across participants. Afterwards, we analyze whether there is a segmentation of winegrowers according to their responses to the choice experiment. To do this, we conducted a latent class analysis.

Results

100 – 250 words

Our results show that winegrowers are more willing to adopt contracts where the base price is complemented by a 30% premium and where compensation for yield loss is included. Winegrowers show no preferences for economic and labor organization advice; they may not wish for the cooperative to intrude into their economic and organizational management. Winegrowers' preferences for the option of a contract with only 50% of their vineyard area are mixed. We highlight that winegrowers have heterogeneous preferences regarding the adoption of organic farming. Winegrowers who declare that they enjoy testing risky solutions and feel ready to convert to organic farming are more willing to adopt a contract where organic farming is a requirement. With a latent class model, we identify three groups of winegrowers: *Organic lovers*,

Reluctant to organic and *Reluctant to change*. Merely 13% of the winegrowers would consider shifting to organic farming in their vineyards. *Organic lovers* winegrowers stand out from the other two groups regarding their perception of organic farming and willingness to adopt new practices. Most of them feel ready to convert their vineyards to organic farming and do not anticipate a decrease in their profits as a consequence. The majority of them declare that they enjoy experimenting new practices, testing risky solutions, are open to modifying usual practices, make decisions promptly and do not delay investments.

Discussion and Conclusion

100 – 250 words

Overall, this study suggests that while cooperatives' farming contracts can be a potential instrument to increase uptake of organic farming, they will need to be complemented, at least in the short-term, with other tools and more public policies in order to scale the uptake of organic farming to a larger share of winegrowers.

Over the long term, we identify two potential drivers that could promote the adoption of organic farming among winegrowers. The first factor relates to winegrowers potentially modifying their contract preferences if they witness positive outcomes experienced by their fellow winegrowers who have already adopted organic farming. Moreover, if the adoption of organic farming reaches a critical mass within the cooperative, the influence of social norms could encourage reluctant winegrowers to adopt organic farming. The second long-term driver relies on market incentives. In the context of the wine sector, the organic segment is expanding, sales of organic wines increased by 2.2% from 2021 to 2022, despite a 0.4% decline in overall organic product consumption (Agence Bio, 2023). The adoption of organic agriculture could become a market access requirement in the future. This mechanism is strengthened by the fact that PDO is a collective brand, necessitating the commitment of all its members to ensure its persistence in the market.