CARES
Pre-Analysis Plan
Webinar and Mentorship Support for Social Cooperatives Managing Confiscated Assets

1. Experimental Design

1.1. Study population and recruitment

We study Italian social cooperatives managing assets confiscated from organized crime. Eligible cooperatives are drawn from a matched registry combining LIBERA's list of organizations managing confiscated assets and administrative records from the Registro Unico Nazionale del Terzo Settore (RUNTS). Cooperatives are invited to participate after completing baseline questionnaires used for the project diagnostic.

1.2. Unit of randomization, arms, and stratification

The social cooperative is the unit of randomization. Cooperatives are randomly assigned to one of two arms:

- **Control:** diagnostic assessment and tailored improvement plan.
- **Treatment:** diagnostic assessment and tailored improvement plan plus webinar training and mentorship.

Random assignment is stratified by (i) macro-area (Center–North vs. South) and (ii) cooperative size (terciles of number of workers). Randomization is implemented in Stata 17.

1.3. Intervention components

All cooperatives receive a diagnostic and improvement plan. Treated cooperatives additionally receive (i) an online webinar series and (ii) an online mentorship program organized in mentoring groups.

1.4. Measurement

Outcomes are measured using (i) administrative financial statements and (ii) self-reported survey data. Baseline measures draw on the two to three fiscal years preceding the intervention and the corresponding pre-intervention survey wave(s). Post-intervention outcomes are collected

in subsequent fiscal years, with planned follow-up for two to three fiscal years, subject to data availability.

2. Outcomes

2.1. Primary outcomes: Economic sustainability

Economic sustainability outcomes are measured from financial statements:

1. **Net Operating Income (NOI):** Total Production Value − Total Production Costs.
2. **Operating Cost Ratio:** Total Production Costs/Total Production Value.
3. **Overall Debt Ratio:** Total Liabilities/Total Assets.
4. **Funding concentration (HHI):** Herfindahl–Hirschman Index of funding sources (higher values indicate greater concentration).

2.2. Primary outcomes: Social sustainability

Social sustainability outcomes are measured from questionnaires and social reporting:

1. **Perceived Social Return:** 1 (No impact) to 5 (Highest).
2. **Perceived difficulty of the communication campaign:** 1 (None) to 5 (Extreme).
3. **Perceived difficulty in networking:** 1 (None) to 5 (Extreme).
4. **Integration of vulnerable people:** 1 (Formal or Minimal), 2 (Functional), 3 (Participatory), 4 (Full).

3. Hypotheses (two dimensions)

3.1. Economic sustainability

Offering the webinar + mentorship program improves economic sustainability relative to controls. We expect higher net operative income, lower operating cost ratio, and lower overall debt ratio in the post-intervention period.

3.2. Social sustainability

Offering the webinar + mentorship program improves social sustainability relative to controls. We expect lower funding concentration (HHI), higher perceived social return, lower perceived difficulty in communication and networking, and stronger integration of vulnerable people.

4. Econometric Models

4.1. Intention-to-Treat (ITT)

We estimate ITT effects using a panel model with cooperative and year fixed effects:

$$Y_{it} = \alpha + \beta Treatment_{it} + \tau_t + \mu_i + \boldsymbol{\theta'}\mathbf{X_{it}} + \varepsilon_{it}, \tag{1}$$

where Y_{it} denotes a primary outcome for cooperative i in year t; $Treatment_{it}$ is a variable indicating whether a cooperative is randomly selected into the treatment (webinar + mentoring program) starting in year t (i.e., 2026); τ_t are year fixed effects; μ_i are cooperative fixed effects; and X_{it} is a vector of municipal/provincial controls. The coefficient β captures the average post-intervention ITT effect of being offered webinars and mentorship.

4.2. Compliance and Treatment-on-the-Treated (2SLS / IV)

Because participation may be incomplete among treated cooperatives, we will estimate a treatment-on-the-treated effect using randomized assignment as an instrument for attendance.

Let $Attend_i$ denote the cooperative's level of participation in the program, measured by recorded attendance. Specifically, we will register presence at each webinar session and each mentoring meeting, and construct $Attend_i$ from these attendance records (e.g., as the total number of sessions attended, and/or as separate counts for webinars and mentoring). We estimate a local average treatment effect (LATE) for compliers via two-stage least squares.

First stage.

$$Attend_{it} = \pi_0 + \pi_1 Treatment_{it} + \boldsymbol{\rho'}\mathbf{X_{it}} + u_i, \tag{2}$$

where X_i is a vector of covariates measured at the municipality/province level.

Second stage.

$$Y_{it} = \alpha + \beta^{TOT}\,\widehat{Attend}_{it} + \tau_t + \mu_i + \boldsymbol{\theta'}\mathbf{X_{it}} + \varepsilon_{it}. \tag{3}$$

We will report first-stage strength (including the first-stage F-statistic) and interpret β^{TOT} as the causal effect of participation for compliers under standard IV assumptions.

5. Inference and Standard Errors

5.1. Clustering

Standard errors are clustered at the mentoring-group level to account for potential correlation among cooperatives that share the same mentor and group interactions. Treated cooperatives are organized into mentoring groups of up to eight units, whereas control cooperatives do not participate in mentoring groups and therefore each constitutes a singleton cluster. This implies at most five mentoring-group clusters among treated cooperatives and 35 singleton clusters among control cooperatives, for a maximum of 40 clusters overall.

6. Exploratory Analysis

As a further step, we plan to compare the recruited cooperatives with social cooperatives that share similar observable characteristics but did not participate in the intervention.