Savings or Capital Support in a Livelihood Package for the Poor: Micro-entrepreneurship, social outcomes and local spillovers in post-conflict Côte d'Ivoire.

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Introduction and Motivation 1/2

- Graduation interventions have shown promising impacts
- Policymakers now consider graduation/economic inclusion/livelihood programs for multiple objectives (PEI, 2021):
  - Social protection and poverty reduction
  - Raising productivity in self-employment or micro-entrepreneurship as part of employment policy in low-income settings
  - Improving "social cohesion" in post-conflict settings

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  - Improving "social cohesion" in post-conflict settings

- We conduct a RCT of a livelihood intervention providing skills and capital to vulnerable individuals in post-conflict Cote d'Ivoire.
  - We test the effectiveness of the overall intervention
  - We test the relative impacts of 3 alternative instruments to relax capital or savings constraints as part of the package
  - We document direct impacts on beneficiaries as well as local spill-overs on non-beneficiaries within localities
  - We consider both economic and social outcomes

Introduction and Motivation 2/2

- There are open questions about the optimal content of graduation programs (Sedlmayr et al., 2019; Banerjee et al, 2020; Bossuroy et al., 2020)
  - Assets or cash grants are typically the most expensive components.
  - We compare alternative instruments to relax capital constraints:
    - ⋆ Cash grants
    - ⋆ Cash grants with repayment (lower amount of capital support, but possibly addressing behavioral constraints to investments)
    - ⋆ Village savings and loans association (VSLA) (relaxes constraints to savings instead of injecting capital)
  - Complements literature on cash grants, VSLAs and micro-credit.

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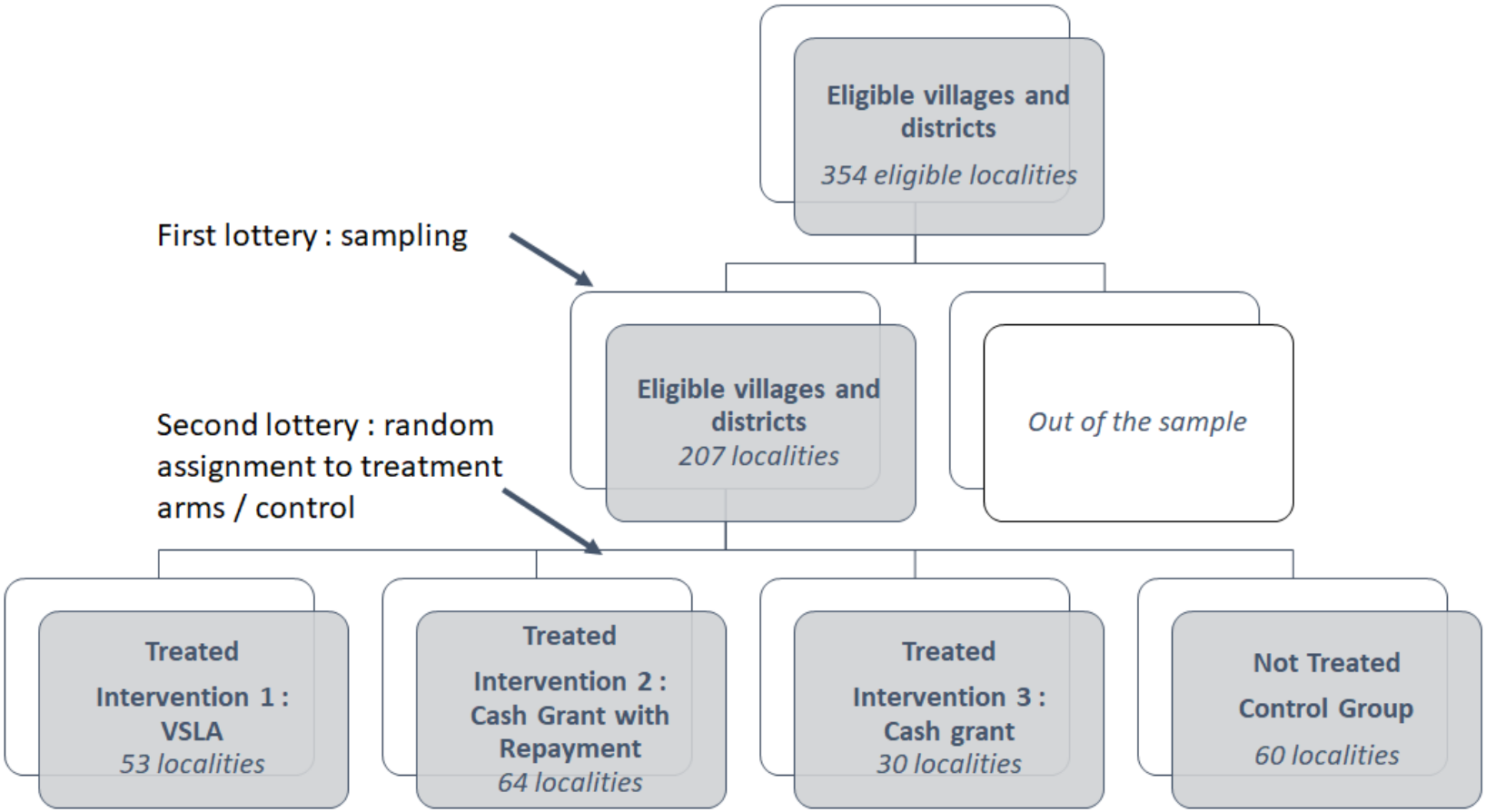
- Growing literature on livelihood programs in fragile settings:
  - Positive impacts in Afghanistan and South Sudan (Bedoya et al, 2019; Chowdury et al., 2017), more mixed in Yemen (Brune et al., 2020)
  - What about non-economic well-being impacts, e.g. social outcomes?
    - ⋆ Cash grants and VSLA may have differential effects
  - Indirect effects on the broader community?
    - ⋆ Concerns about negative spill-overs on non-beneficiaries
    - ⋆ But also possibility of broader economic or social benefits

The Cote d'Ivoire Livelihood intervention

- **Stated objectives:**
  - Improve livelihoods, economic empowerment and micro-entrepreneurship
  - Strengthen integration and social cohesion between ethnic groups
- **Coverage:** 4 regions in post-conflict areas of Western Cote d'Ivoire, mostly rural localities. ▸ Map
- **Target group:** vulnerable youth (18-40) + specific groups.
- **Content:** Integrated package with 2 main components :
  - Micro-entrepreneurship training (with peacebuilding and life skills modules) (55 hours)
  - 3 randomized modalities to address capital or savings constraints :
    - ★ (T1) Village Saving and Loan association (VSLA: Weekly meeting to buy shares, take or repay credits. Share-out after 9-12 months.)
    - ★ (T2) Cash-grant-with-repayment (US$175, half to be repaid)
    - ★ (T3) Cash grant (US$175)
  - Note: no regular consumption support ▸ More details on intervention

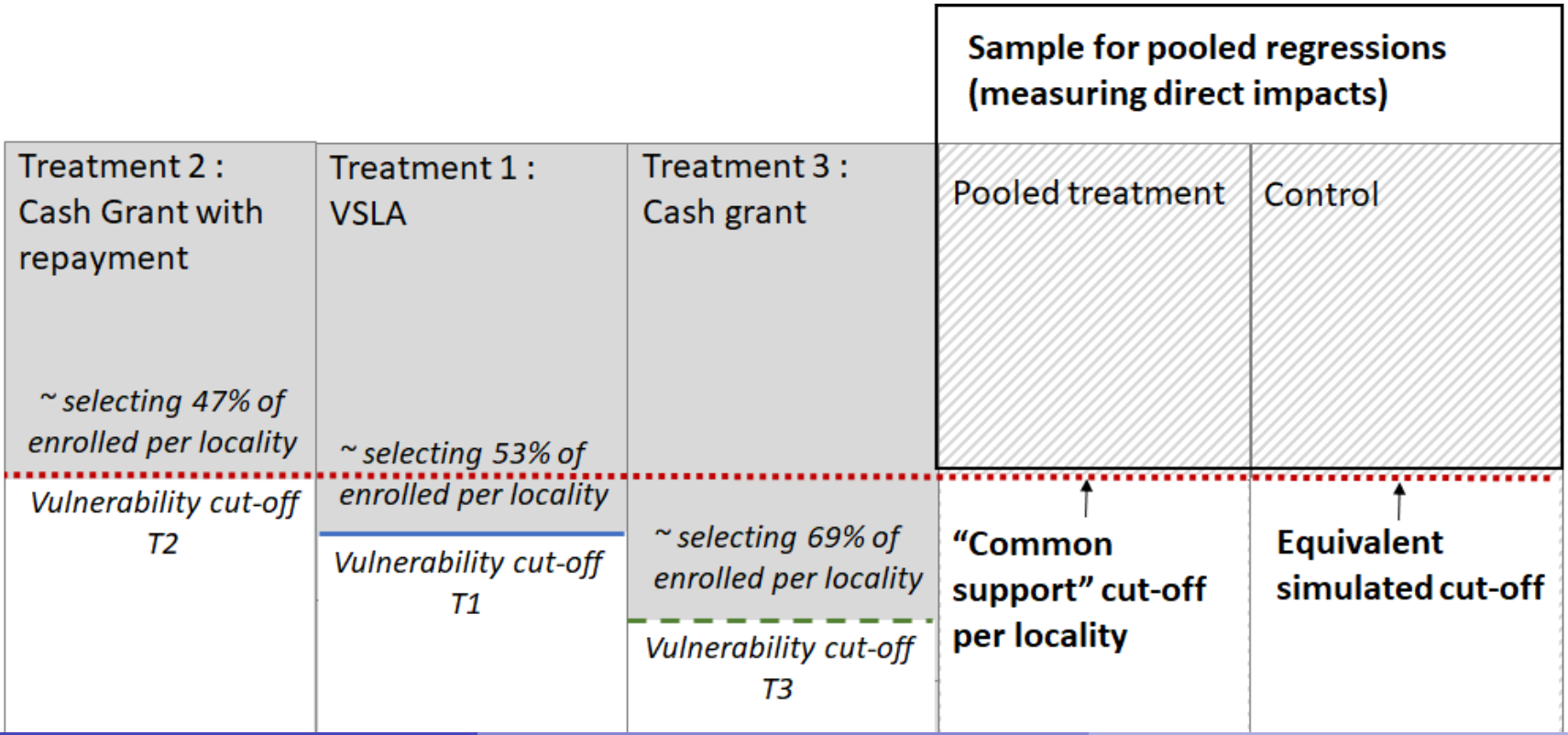
Clustered RCT design

1. Basic parameters of the program explained in 207 eligible localities
2. Pre-enrollment of individuals interested to participate
3. Public lotteries to randomly assign 207 localities to control or 3 treatment arms (stratified by department x urban/rural localities)



Empirical Strategy (1/2)

- Selection of individual beneficiaries is based on a vulnerability score calculated from pre-enrollment data
- The selection cut-off varies by intervention due to pre-set beneficiary quotas
- Pooled treatment analysis and comparisons between arms are based on a "common support' cut-off
  - All individuals in treatment group are beneficiaries above that cut-off
- Robustness: ITT comparison for each arm with control using actual cut-off.



Empirical Strategy (2/2)

- Follow-up survey conducted 12-18 months after program termination
  - Sample of 5,220 individuals (main & spillover samples),
  - 10.6% attrition (7.8% for spillover sample), balanced by treatment arm

Intention To Treat (ITT) estimates, using "common support" sample:

(1) Pooled treatment : $Y_i = \alpha + \beta\, Treatment_j + \delta\, Controls_j + \epsilon_{i,j}$

(2) Arm : $Y_i = \alpha + \beta_1\, VSLA_j + \beta_2\, Grant.Repayment_j + \beta_3\, Cash.Grant_j + \delta\, Controls_j + \epsilon_{i,j}$

- Standard errors clustered at locality level (207 loc.).
- Controls for lottery stratification : Department x (Urban/Rural) locality
- Balance for sample of selected and non-selected ▸ Balance checks
- Take-up : ▸ Take up
  - 80% of beneficiaries received funds in grant interventions (T2 and T3)
  - 70% of beneficiaries started a VSLA (T1)

More independent activities, but limited diversification

Panel A. Pooled Estimates	(1)	(2)	(3)	(4)	(5)
	Employment (Has an activity of any type)	Self employed (at least 1 activity)	Wage employed (at least 1 activity)	# Independent Activities per indiv.	# Agricultural Ind. Activities per indiv.
	coef/(se)	coef/(se)	coef/(se)	coef/(se)	coef/(se)
Pooled Treatment (ITT)	0.01	0.03**	-0.03**	0.32***	0.25**
	(0.01)	(0.01)	(0.01)	(0.10)	(0.11)
Department X (Urban/Rural)	Yes	Yes	Yes	Yes	Yes
Mean in Control	95.0%	91.6%	10.4%	3.13	2.45
Observations	2,620	2,620	2,620	2,620	2,620

Robust standard errors clustered at locality level. * $p < .1$, ** $p < .05$, *** $p < .01$

- Limited impacts on likelihood or composition of employment.
- Increase in the number of independent activities per person : 1 out of 3 individuals added an independent activity to their portfolio.
  - These impacts are limited in magnitude (10 percent increase relative to control), and driven by agricultural activities.
- No significant difference by treatment modality.

But not sufficient to increase profits or household welfare

Panel A. Pooled Estimates	(1)	(2)	(3)
	Earnings in Self Employment (Profits)	Earnings in Wage Employment	Food Consumption Score
	coef/(se)	coef/(se)	coef/(se)
Pooled Treatment (ITT)	1,726.78	-68.05	0.79
	(1,777.12)	(718.09)	(0.99)
Department X (Urban/Rural)	Yes	Yes	Yes
Mean in Control	24,050.42	3,057.36	52.57
Observations	2,620	2,615	2,618

Robust standard errors clustered at locality level. Monthly earnings in CFA franc, winsorized at 99%.
The Food Consumption Score (FCS) is based on World Food Programme definition.
* $p < .1$, ** $p < .05$, *** $p < .01$

- No impact on activities' profits. Holds when looking separately at non agricultural / agricultural activities. Similar results by treatment modality.
- No impact on household welfare variables, including food security (food consumption score), education expenditures, durables, or subjective well-being.

Dynamics of investment vary by treatment arm

Panel B. Treatment Arm	(1)	(2)	(3)
	Start-up capital (all operating businesses)	Value of assets (all operating businesses)	Investments in main business (last 6 mths)
	coef/(se)	coef/(se)	coef/(se)
VSLA (T1)	7,666.52**	11,581.19***	2,410.21
	(2,998.70)	(3,947.51)	(1,614.32)
Cash Grant with repayment (T2)	14,970.75***	9,452.43**	37.43
	(3,162.20)	(3,873.84)	(911.81)
Cash Grant (T3)	17,897.50***	13,283.04**	1,867.79
	(5,215.74)	(6,282.30)	(1,929.52)
Deptmt X (Urb./Rur.)	Yes	Yes	Yes
Mean in Control	15,260.21	39,538.50	5,094.23
p-val T1=T2=T3	0.07	0.80	0.21
Observations	2,620	2,620	2,620

Robust standard errors clustered at locality level. Capital and Investment in CFA francs, winsorized at 99%.

- Treated individuals have activities with higher starting capital, especially in cash grant interventions.
- Substantial impacts on business assets at endline. Interestingly, we cannot reject equality of impacts between VSLA and cash grant interventions.
- No impact on investments in the 6 months before the endline survey.

Dynamics of savings vary by treatment arm

Panel B. Treatment Arm	(1)	(2)	(3)	(4)	(5)
	Has Saved (last 6 mths)	Savings stock (All)	VSLA particip.	Savings stock (VSLA)	Credits from VSLA
	coef/(se)	coef/(se)	coef/(se)	coef/(se)	coef/(se)
VSLA (T1)	0.06**	-9245.95	0.38***	9,504.65***	9,780.88***
	(0.03)	(10,139.02)	(0.04)	(2,601.07)	(2,114.22)
Cash Grant with repayment (T2)	0.03	13,317.48	0.07**	8,143.30	3.84
	(0.03)	(13,883.07)	(0.03)	(5,257.53)	(1,649.10)
Cash Grant (T3)	0.07**	29,300.76**	0.08	2,496.31	430.83
	(0.03)	(13,803.35)	(0.05)	(2,434.49)	(1,983.03)
Deptmt X (Urb./Rur.)	Yes	Yes	Yes	Yes	Yes
Mean in Control	81.8%	59,411	16.8%	4,983.39	3,730.34
p-val T1=T2=T3	0.30	0.00	0.00	0.01	0.00
Observations	2,620	2,620	2,620	2,620	2,620

Robust standard errors clustered at locality level. Savings and credit amounts are in CFA francs and winsorized at 99%.

- A large share of the cash grant is saved (30%)
- VSLA treatment does not impact savings stock, but savings shift to more efficient instrument. Higher participation in VSLA sustained 12-18 months post-intervention.
- VSLA also increase access to credit (likely channel for investments).

Indirect impacts : local economic spillovers within localities

Panel A. Pooled Estimates	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	# Independent Activities per indiv.	# Agricultural Ind. Activities per indiv.	# Independent Activities jointly owned	Earnings in Self Employment.	Start-up capital	Value of assets	Investments (last 6 mths)
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Pooled Treatment (ITT)	0.35**	0.32**	0.13	1,141.09	1,091.27	10,210.73**	6,609.88*
	(0.15)	(0.14)	(0.11)	(3,964.52)	(5,120.99)	(3,927.38)	(3,751.85)
Department X (Urban/Rural)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean in Control	3.23	2.72	0.79	32,513.35	25,358.29	29,296.44	7,126.27
Observations	1,102	1,102	1,102	1,102	1,102	1,102	1,102

Robust standard errors clustered at locality level. Earnings, assets and investments in CFA francs and winsorized at 99%.

- We can clearly reject negative spill-overs
- Evidence of positive spill-overs on non-beneficiaries within treated localities
  - Number of independent activities, value of assets and investments in agricultural activities
  - Not driven by beneficiaries partnering with other villagers to set up the same new activities

Impacts on social outcomes limited to beneficiaries

A. Pooled Estimates	(1)	(2)	(3)	(4)	(5)
	Participation to groups / assoc. (# groups)	# times gave help to so. else (last 12 mths)	# times received help from so. else (last 12 mths)	Trust Index (z-score)	Insecurity Index (perception) (z-score)
	coef/(se)	coef/(se)	coef/(se)	coef/(se)	coef/(se)
Pooled Treatment (ITT)	0.18***	0.16**	0.28**	0.03	0.04
	(0.05)	(0.08)	(0.11)	(0.06)	(0.06)
Department X (Urban/Rural)	Yes	Yes	Yes	Yes	Yes
Mean in Control	1.19	0.84	1.28	-0.06	0.01
Observations	2,620	2,620	2,620	2,374	2,617

- Positive impacts on social outcomes : increase in group participation (more economic groups, more "mixed" ethnic groups) and in solidarity (both help received and given).
- No broader impact on participation in community events or trust in other groups.
- Similar social impacts from VSLA and cash grants. Possibly driven by economic effects rather than more frequent social interactions.
- No spill-over on social outcomes among non-beneficiaries.

Conclusion

- The livelihood intervention increased the number of independent activities and led to investments (starting capital, assets)
  - These impacts are not sufficient to increase earnings or household welfare at endline.
  - Also: very little signs of heterogeneity.
- At endline, impacts are very similar between treatment arms. But note: VSLA impacts are achieved without capital injection.
  - VSLA beneficiaries catch up over time with cash grant beneficiaries.
  - Cash grant beneficiaries appear to save a large share of grants (30%).
- Given the fragile setting, results are consistent with higher needs for precautionary savings or consumption smoothing:
  - Results contrast with large welfare impacts in Niger or Afghanistan, where beneficiaries *do* receive regular consumption support (cash transfers) (Bossuroy et al., 2020 ; Bedoya et al., 2019)
  - In Yemen, where consumption support was disrupted, impacts also appear more muted (Brune et al., 2020)

Conclusion - additional results

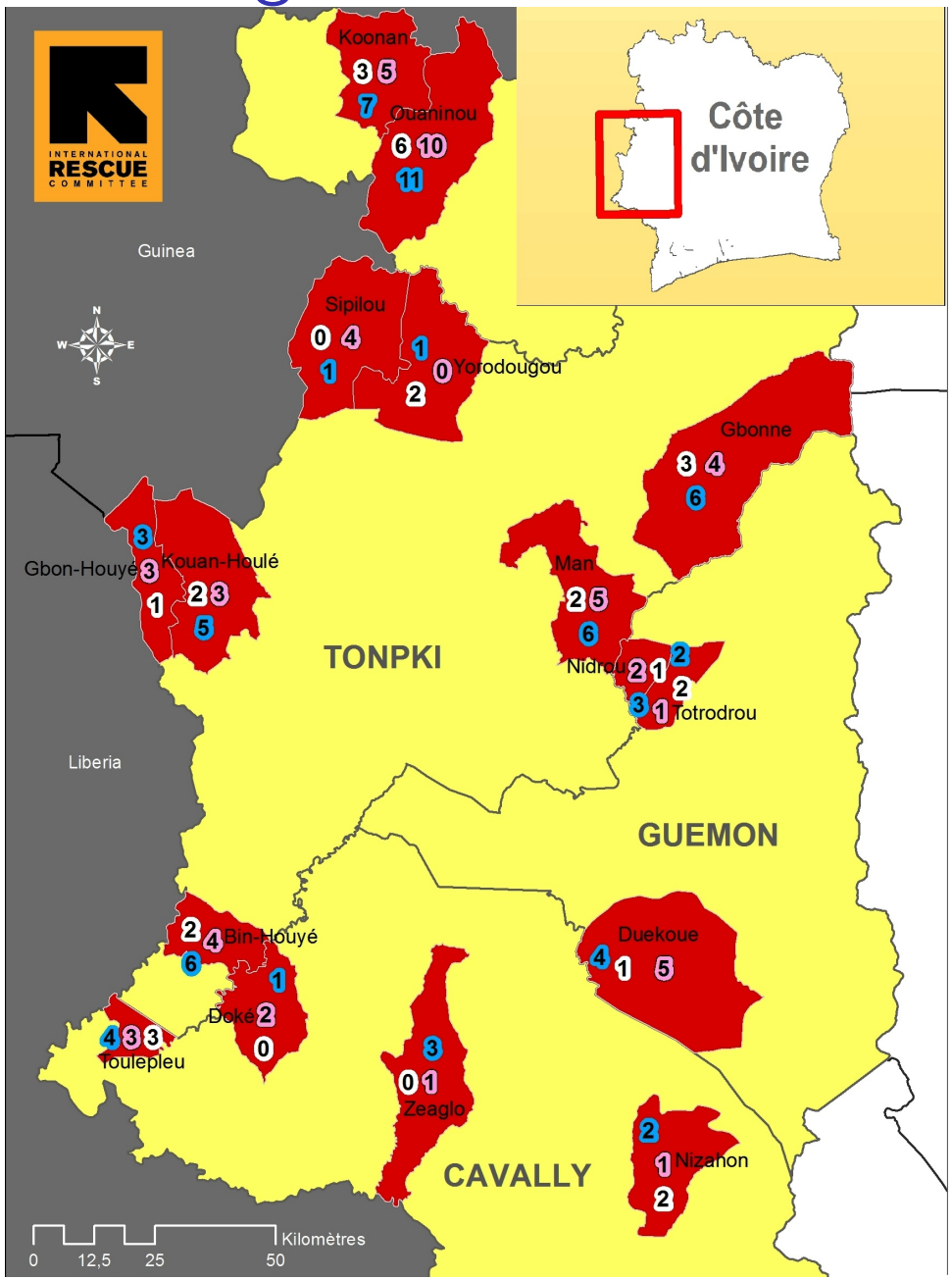
- No evidence of negative economic spillovers within localities.
  - No crowding-out of other businesses (in line with Bandiera, 2017)
- Evidence of positive economic spill-overs on non-beneficiaries within localities.
  - Increase in the number of independent activities, as well as increase in productive assets (mostly in agricultural activities).

- The intervention affects social outcomes by increasing participation in economic groups and solidarity among beneficiaries.
- However, impacts on social outcomes are limited to beneficiaries.
  - No increase in trust in the broader community or local spill-overs on social outcomes.

Appendix Section

APPENDIX

Geographical coverage



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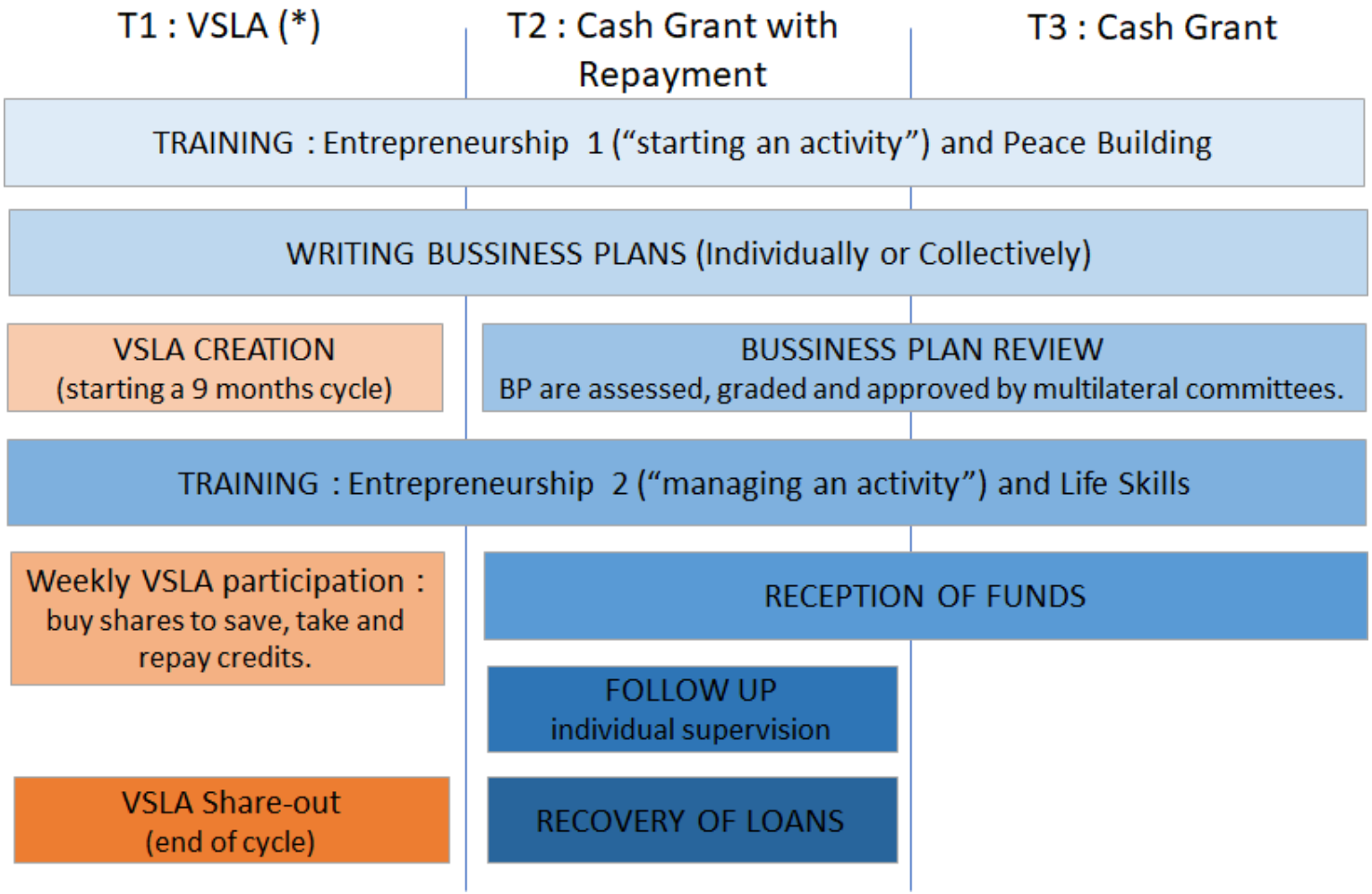
The Cote d'Ivoire Livelihood intervention



- Training : Twice, 55 hours in total + field work
- Funds : US$175 per indiv (95,000 CFA) in T2 & T3

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Sample and Surveys

- Baseline Data on 12,692 individuals
  - 9,042 in treated sites + 3,650 in control sites (eligible individuals)
  - No attrition because enrolment and baseline done jointly.
- Endline Data on 3,624 individuals
  - 2,406 in treated sites + 1,218 in control sites
  - Representative of the 207 localities
  - Attrition : 10.8% (balanced treatment / control)

- Survey content : it includes

(1) Detailed modules on employment and self-employment, including specific modules for investment and capital.

(2) Module on social cohesion measures (participation to groups, activities in the community, trust perception, insecurity perception, conflicts / tensions in the locality).

(3) Detailed module on savings and credit.

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Balance checks

	(1) Mean in Control (C)	(2) Mean in Treated Group	(3) Pvalue (1)=(2)	(4) Pvalue T2=C	(5) Pvalue T1=C	(6) Pvalue T3=C
Loc = village	82.4%	79.9%	0.71	0.89	0.50	0.82
Female	70.6%	70.8%	0.91	0.73	0.65	0.44
Age	34.94	35.28	0.50	0.76	0.52	0.67
Ever attended school	46.0%	42.8%	0.34	0.63	0.93	0.22
Schooling up to primary school	91.3%	92.8%	0.30	0.63	0.50	0.82
Has an activity (last 7 days)	94.5%	94.5%	0.96	0.56	0.93	0.02
Is Self-employed	73.4%	71.9%	0.58	0.89	0.59	0.25
Has Saved (last 3 mths)	53.6%	48.8%	0.15	0.27	0.28	0.67
Has mobile money	15.9%	15.0%	0.75	0.78	0.52	0.40
Has bank/svg account	1.5%	1.2%	0.45	0.74	0.63	0.18
Has participated to a ROSCA	54.8%	50.7%	0.23	0.11	0.12	0.83

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Timeline of the Experiment and Surveys

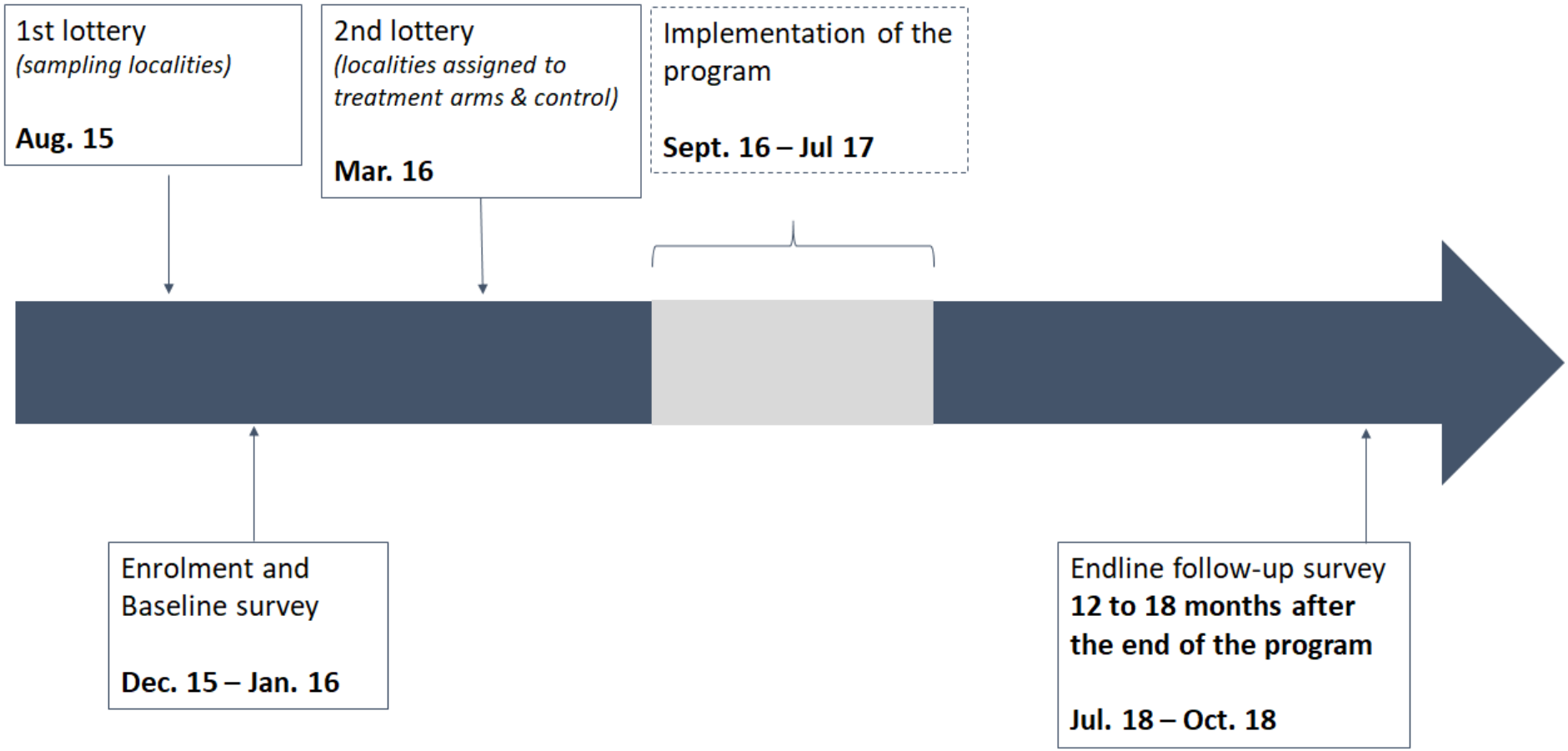

Figure 1: Timeline

Empirical Strategy : Take-up

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	VSLA (T1)	Cash grant with repayment (T2)	Cash grant (T3)
Take up for financial support (*)	**69.5%**	**78.9%**	**81.1%**
Training 1 : Entrepreneurship 1 ("starting an activity") and Peace Building	64.7%	88.4%	91.5%
Writing business plans	*not available*	82.4%	84.2%
Business plan review and approval	n.a.	80.9%	82.0%
Training 2 : Entrepreneurship 2 ("managing an activity") and Life Skills	59.8%	61.8%	64.1%

Note : Based on monitoring data. Participation rates are unconditional (i.e. computed over all selected beneficiaries, even if some activities were conditional, e.g. conditional on business plan approval).

(*) For VSLA intervention, this means joining a VSLA. For other interventions, this means receiving a business grant.

Table 1: Take-up rates