

## **Economic inclusion, micro-entrepreneurship and social cohesion**

### **Experimental evidence from post-conflict Côte d'Ivoire**

***[PRELIMINARY DRAFT - Please do not cite or circulate without permission]***

*This version: 1st April 2019*

Alicia Marguerie (World Bank and CREST – ENSAE Paristech, University Paris Saclay)

Patrick Premand (World Bank and ETH Zürich)

#### **Abstract**

For poverty reduction to take place in Africa, disadvantaged populations in rural or post-conflict settings will need pathways to more productive employment. Multi-dimensional economic inclusion or graduation programs are increasingly considered. Questions remain about the most cost-effective instrument to facilitate access to capital as part of these interventions. There is also limited evidence on linkages between improved livelihoods and social cohesion. We conduct a multi-arm RCT of an intervention seeking to improve livelihoods for vulnerable groups in post-conflict Côte d'Ivoire. The intervention provides capital, training, and encourages social cohesion. We test the overall effectiveness of the integrated package, as well as the relative cost-effectiveness of 3 alternative instruments to relax capital constraints: cash grants, semi-credit and village savings and loan association (VSLA). We also test linkages between improved employment outcomes and social cohesion. We find that participants engage in more small business activities, but it is not sufficient to significantly increase earnings. This is despite the program increasing savings and, to a less extent, investments in larger-scale income-generating activities. There is little variation in economic effects between cash grants, semi-credit and VSLA interventions. Finally, beneficiaries are more active in economic groups and solidarity increases, but we do not observe a broader increase in trust or a decrease in insecurity at the community level.

## 1 Introduction

A large share of individuals in Sub-Saharan African engage in low-productivity self-employment, particularly in rural and peri-urban areas (Filmer et al., 2014). In this context, promoting access to more productive employment opportunities is at the core of the poverty reduction challenge. A specific issue is to find effective policies and interventions for poor, low-skilled populations in fragile settings.

Economic inclusion or graduation programs deliver multi-dimensional interventions to improve livelihoods (Banerjee et al., 2015a and Bandiera et al., 2013). While integrated graduation programs have been shown to be effective, additional research is underway to identify the most cost-effective packages to address binding constraints to productive employment across settings and sub-populations. While capital support in the form of grants, in-kind transfers, or microcredit is often at the core of these interventions, questions remain about the most cost-effective instrument to alleviate capital constraints. This question is raised in several meta-analysis on employment and entrepreneurship programs (Blattman and Ralston, 2015; McKenzie and Woodruff, 2014; Cho and Honorati, 2013). Some studies have documented impacts of cash grants (Macours et al., 2012; Blattman et al., 2013; Haushofer & Shapiro, 2016), with encouraging results, at least in the short-term. The effectiveness of micro-credit (Banerjee et al., 2015b and Crepon et al., 2015) or savings enhancement mechanisms such as village savings and loan association (VSLA) (Karlan et al., 2016; Beaman et al., 2014; Ksoll et al., 2016 and Dupas and Robinson, 2013) in promoting more productive employment and improve livelihoods has been more mixed. While it is clear that many among the poor face binding capital constraints, the most effective instruments to address these constraints remains a topic of active research.

There is also limited evidence on linkages between improved economic opportunities and social cohesion. Most of the related evidence comes from the literature on crime and violence.<sup>1</sup> Relevant to Africa, several economic programs in post-conflict settings target high risk individuals such as former soldiers. The evidence points to modest impact for interventions focused on productivity and employment (Blattman and Ralston, 2015). Interventions addressing psycho-social constraints (such as psychological or socio emotional therapy) have appeared more effective (Blattman and Annan, 2014; Blattman et al., 2015). Evidence on how to promote social cohesion has remained scarce. In addition, social cohesion and peace-building objectives have often been addressed through community-driven development (CDD) projects that are difficult to evaluate. Social cohesion can also be challenging to measure. Overall, it remains a topic of debate whether economic conditions are a key factor -or a condition- to rebuild social cohesion.

In this paper, we present results from a multi-arm randomized experiment of an intervention seeking to improve livelihoods for vulnerable and marginalized groups in the Western post-conflict region of Côte d'Ivoire. The paper seeks to address two main questions that complement the literature. First, what is the relative impact of an integrated livelihood-support package on employment and earnings, and what is the relative effectiveness of three modalities to relax capital constraint for business development (cash grants, semi-credit and VSLA)? Second, are there linkages between economic empowerment outcomes and improved social cohesion across ethnic groups?

The study analyzes a program developed in post-conflict Cote d'Ivoire, specifically after the 2011 post-electoral crisis. The Western regions were severely affected by the conflict and include many internal migrants and displaced populations from various ethnic groups. In this context, the program seeks to promote economic inclusion of people who are economically vulnerable after the conflict, especially

---

<sup>1</sup> See Blattman and Ralston (2015) for an overview of employment programs fighting violence and crime.

youth and women. Improvements of economic opportunities are expected to also facilitate social and economic interactions between ethnic groups and in turn improve social cohesion.

The program combined both a human and financial interventions to foster micro-entrepreneurship and improve livelihoods. As part of this broader package, we design an experiment to isolate the relative effectiveness of three alternative modalities to facilitate investments in income-generating activities: (i) semi-credit (up to 100,000 FCFA per person, around US\$180) conditional on writing a viable business plan, with 50% to be reimbursed within 6 months, (ii) set-up of Village Savings and Loan Associations, promoting savings among participants based on their own resources (without capital injection), and (iii) Cash grant (up to 100,000 FCFA per person, around US\$180) conditional on writing a viable business plan, with no reimbursement required. All program participants also receive 55 hours of training, which covers (i) peace building and social cohesion, (ii) support for the creation of income-generating activities and writing of a business plan, (iii) business skills, and (iv) life skills.

Results show that participants engage in more small business activities, but it is not sufficient to significantly increase earnings. This is despite the program increasing savings and, to a less extent, investments in larger-scale income-generating activities. There is little variation in economic effects between cash grants, semi-credit and VSLA interventions. Finally, beneficiaries are more active in economic groups and solidarity increases, but we do not observe a broader increase in trust or a decrease in insecurity at the community level.

The paper is structured as follows. Section 2 presents the intervention and data. Section 3 presents the experimental design. Section 4 presents the results. Section 5 concludes. Tables are presented in appendix.

## **2 Intervention and Data**

### **2.1 Context: Post-conflict economic recovery in Western Côte d'Ivoire**

Although Côte d'Ivoire developed steadily during the 1990s, episodes of conflict slowed down its economic performances between 2002-07 and 2010-11. The Western regions were especially affected by these conflicts. The intensity of the outbreaks was particularly high because the 2010-11 post-electoral crisis was sustained by mercenaries crossing the Liberian border. This region was the last to be considered safe and stable and disarmament campaigns continued until June 2015.

The fragility of Western Côte d'Ivoire is also associated with high ethnic fragmentation. This results from regional migration from neighboring countries (Guinea, Burkina Faso, Mali) and internal displacement of population during the conflict. Currently, native ethnic groups (*nationals and native*) live together with displaced people including Ivorian ethnic groups recently arrived (*nationals not native*) and foreigners (*not nationals*)<sup>2</sup>. The tension between local and foreign ethnic groups revolved around nationality issues ("Ivoirité") and associated rights and left sizable tensions in the region. Because of the conflict, many people have never been to school or failed to complete primary school and many families were displaced. At the national level, the conflict was mainly about political representation, nationality acquisition and right to vote. At local level, tensions across ethnic groups materialize around land status and ownership.

---

<sup>2</sup> In the Western area, there are two main native ethnic groups: Mende ("Mandés") and Kru ("Krous"). The Mende includes Dan and Yacouba, among others. The Kru includes We, Guere and Wobe, among others.

We study a program designed as a post-conflict intervention aiming to promote social cohesion through economic empowerment.<sup>3</sup> It was implemented in one of the most fragile areas of the country, namely Western Côte d'Ivoire. The program was coordinated by the "Office Coordinating Employment Programs" (BCP Emploi), which is part of the Ministry of Youth Employment. The program was implemented by a prominent NGO, International Rescue Committee (IRC), which has offices in the Western area and a long experience of both this region and this type of interventions.

The intervention stands out compared to traditional social cohesion or peace building programs. Many Community Driven Development (CDD) interventions focus on building public goods or delivering training on social cohesion or peace-building. The impact of pure peace building programs also remains unclear. The PRISE program tested whether social cohesion could be improved and restored through economic empowerment. Therefore, the program focuses on promoting productive self-employment which is indirectly expected to lead to the creation of economic ties among people and businesses, independently of their ethnic groups. Social cohesion is expected to strengthen through various ethnic groups working and interacting with each other, as each group benefits from the economic growth of the others.

## **2.2 The economic inclusion and social cohesion program**

The Program was rolled out between 2014 and 2017, in a total of 37 sub-prefectures across four Western regions of Côte d'Ivoire (Tonkpi, Cavally, Guémon and Bafing, see Figure 1).<sup>4</sup> The impact evaluation focuses on the largest phase of implementation, which started in July 2015, lasted for 2 years and covered 16 sub-prefectures. Figure 1 summarizes the geographical scope of the phase intervention in which the RCT was embedded.<sup>5</sup>

---

<sup>3</sup> The program is named « PRISE ». It was funded by the Japanese Social Development fund, which funds are administered by the World Bank.

<sup>4</sup> These sub-prefectures had been identified at project conception and agreed by the donor, the coordinating agency and the government counterparts. The selection was based on economic needs, vulnerability and displacement levels, and in sub-prefectures with lower levels of interventions from other donors.

<sup>5</sup> The program was rolled out in three phases. The first phase was used to test implementation including the targeting instrument, the organization of public lotteries, the relevance of the training curricula, and the organization of the business plan competition. The second phase was designed as the largest implementation scale for the program in terms of number of participants. Hence the impact evaluation focuses only on this second phase. The third phase used funds recollected from first and second phase to finance some additional localities. Note that each of the 37 sub-prefectures were initially assigned to a given phase, to ensure that there is no overlap of localities across phases. Therefore, the impact evaluation is not affected by phase one or three of the program.

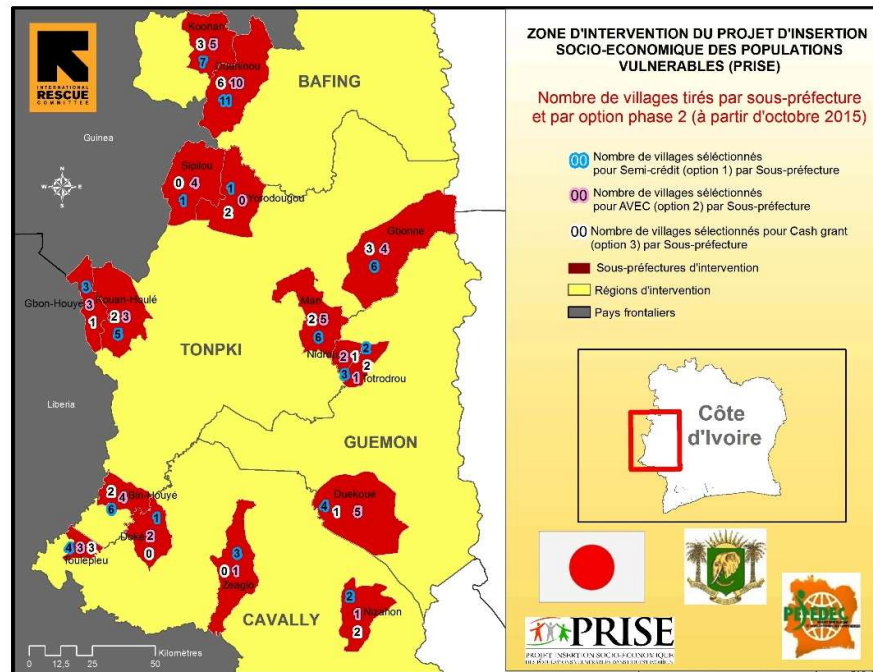


Figure 1: Map of the intervention evaluated, Western Côte d'Ivoire

The program was conceived as an economic empowerment intervention addressing both human and financial capital constraints. Accordingly, it has two components: a training component to enhance human capital which is common to the three modalities, and a “financial” component to facilitate access to financial capital which varies across the three program modalities. We provide a summary of the three interventions in Figure 2 and Table 1.

The training component focuses on building entrepreneurship and business skills, but also includes other topics such as peace building, social cohesion and life skills. In total, this is a 55 hours curriculum delivered over 8 days to small groups in each locality. It was implemented in three stages. First, the basic training offered to all covers entrepreneurship fundamentals (focused on starting your own activity) and a peace building and social cohesion module.<sup>6</sup> Then, individuals (or groups) work on a business plan with regular feedback and supervision from the trainers.<sup>7</sup> This second phase is mostly field-based, as they have to find relevant information on prices, costs and competitors to fill their business plans. A third phase included more advanced topics on entrepreneurship (focused on managing your activity) and a life skills training.<sup>8</sup> The trainings were organized by the implementing agency (IRC) and delivered by the NGO staff, which received a specific training on the curriculum. The

<sup>6</sup> The topics of the basic entrepreneurship curriculum are focused on starting a business: how to choose the right business to start, how to attract potential clients, how to deal with competition, how to manage costs, how to set the right price.

<sup>7</sup> This phase is not included in the 55 hours total.

<sup>8</sup> The topics of the advanced entrepreneurship training are focused on developing an existing business: managing stocks, following sales, basic accounting, following running capital.

training content was specifically designed for a low-skilled target group, based on pictures and hands-on exercises.<sup>9</sup>

For two of the three interventions (“Semi-Credit” and “Cash Grant”), business plans were evaluated. At the end of the review, the business project is either approved to get funds, rejected, or sent back for revisions. Beneficiaries who were not rejected could modify and re-send the business plans. For the evaluated phase, three rounds of evaluations were organized.

For the remaining intervention (“VSLA intervention”), business plans were drafted in the same conditions but were not evaluated. In parallel to the business trainings, the NGO trained and helped beneficiaries to form Village Saving and Loan Associations (VSLAs), following a well-defined methodology.<sup>10</sup> In particular, a facilitator from the locality was trained to support directly the beneficiaries in the implementation and bookkeeping of the VSLA. VSLAs are usually presented as “improved” rotating savings and credit associations (ROSCAs).<sup>11</sup> Compared to ROSCAs, VSLA have the advantages of being more secure, providing access to savings when one needs (and not only on a rotating basis), and providing loans at low interest rates. Beneficiaries are invited to create an association, elect a council, and regularly meet (weekly or biweekly) to put savings in a common pot. After they have reached a certain level of savings, participants can request loans from the VSLA at a common rate, pre-determined at the start of the cycle. At the end of the cycle (which lasts 9 to 10 months), the pot is distributed among participants proportionally to their saving shares. The savings include some remuneration for participants as the final pay-out includes interests paid by borrowers to the pot.

Note that the capital support is different across the three interventions. For “Semi-Credit” and “Cash Grant” interventions, business projects approved by the committees received the funds they requested (up to a limit). They either receive the cash but must reimburse half of it within six months (“semi credit” intervention) or receive the cash with no other requirement (“cash grant” intervention). On average, beneficiaries with selected business plans received 95,000 CFA (US\$175).<sup>12</sup> In the “VSLA” intervention, there is no cash injection, but beneficiaries can request a loan from their VSLA to access additional capital to start their businesses.

---

<sup>9</sup> The curriculum itself was the output of many tests and adjustments, jointly led by IRC and a consulting firm specialized in trainings. It was based on a curriculum developed for low-skilled beneficiaries of a Public Works program (Bertrand et al., 2017), and IRC own curriculum “EASE”. The curriculum was revised after the 1<sup>st</sup> year of the program to be fully relevant to the type of beneficiaries and the geographical area.

<sup>10</sup> The VSLA model was launched by CARE in Niger in 1991, and later implemented by many NGOs. IRC developed its VSLA methodology in 2012, based on knowledge and tools shared by practitioners in particular The VSL Associates.

<sup>11</sup> A ROSCA is an informal association or group in which members contribute to a common pot of money that is awarded to a different member at each meeting.

<sup>12</sup> On average, each business plan received 185,000 CFA (US\$340) because beneficiaries can develop businesses in groups.



Figure 2: Components of the three interventions offered

There was some follow-up for the semi-credit intervention after disbursement of the funds, but the cash grant intervention did not receive monitoring. VSLAs received regular follow-up during the full first cycle, but not after.

For the “semi credit intervention”, the NGO followed the set-up of businesses by regularly meeting the participants during the month following funds disbursement.<sup>13</sup> For agriculture projects, technical experts visited participants to provide technical support and advice. The reimbursement was supposed to start three months later, with a grace period of one month. Beneficiaries were expected to go every month to the local branches of the banking partner, and the partner was supposed to send collectors in the field especially for remote villages. However, money recollection suffered from delays and under-staffing. Recollection started 6 months later, and only 39.96% of the targeted recollection was achieved.<sup>14</sup> It is important to mention that field visits by the NGO suggest that most of the participants remained convinced that they would have to reimburse half of the funds at some point. Therefore, this intervention cannot be fully assimilated to the “cash grant” one, as incentives and beliefs remained different.

For the “VSLA intervention”, the NGO came back in the localities to celebrate the end of the first cycle and supervise the distribution of the money pot (“share-out”). They invited beneficiaries to pursue the VSLA and start a second cycle. As local facilitators had been trained in each locality by the NGO, they could continue providing support to new cycles. At the end of this phase, facilitators were also trained and encouraged to diffuse the VSLA model to other interested inhabitants and neighboring villages.

<sup>13</sup> In the absence of monitoring data on the follow-up, we cannot provide an estimate of the follow-up hours, but it is likely to be between 3h-8h per business activity. The implementing NGO increased follow-up support for businesses facing difficulties, compared to the others.

<sup>14</sup> At the end of money recollection, 232 groups (15%) did reimburse the totality of their due, 823 (55%) had a partial recovery of debt and 450 (30%) had no recovery at all.

### 3 Experimental design

#### 3.1 Design

This section presents the design of the experiment, which was set-up to assess the effectiveness of the overall program, while also isolating the relative effectiveness of three alternative modalities to address capital constraints: (i) semi-credit, (ii) Village Savings and Loan Associations, promoting, and (iii) Cash grants. One of the main objectives of the experiment was to measure impacts on both economic inclusion and social cohesion. The experiment also aims to identify externalities in treated villages, though this is not the focus of this paper.

##### *Locality randomization*

The RCT was embedded in the second phase of the program, operating in 16 sub-prefectures across the four regions. Two public lotteries were organized. A first lottery was used to sample 207 localities out of the 354 eligible ones.<sup>15</sup> We refer to it as the “sampling lottery”. The second lottery sought to assign the 207 selected localities to the three interventions (corresponding to three treatment arms) or control group. We refer to it as the “assignment lottery”. Organizing the two lotteries was crucial for the design. It allowed to enroll individuals and collect baseline data by ensuring the same level of information, including for individuals later assigned to control villages. This process ensures there is no differential selection into the 3 treatment modalities.

The sampling lottery took place in August 2015.<sup>16</sup> It was public and included many regional and local officials. It was stratified by clusters of sub-prefectures and by type of sites (urban versus rural).<sup>17</sup> Following the sampling lottery, selected localities knew about the 3 potential interventions and it was made very clear that some localities would not be selected during the second lottery, but all of them were given the opportunity to enroll inhabitants. Table 2 presents the distribution of localities across interventions with the breakdown of rural/urban sites.

The enrollment phase took place between December 2015 and January 2016, led by IRC supported by a data collection team. 14,880 individuals enrolled across the 207 sites, among which 12,696 were considered eligible. We provide more details on the selection of individuals below.

The assignment lottery was public and took place in March 2016. It was again stratified by cluster of sub-prefectures and type of sites. Following the lottery, 60 sites were assigned to the control group (C), 64 sites were assigned to the “semi-credit” intervention (T1), 53 sites to the “VSLA” intervention (T2), and 30 sites to the “cash grant” intervention (T3). Figure 3 summarizes the experimental design.

---

<sup>15</sup> In each sub-prefecture, the implementing NGO identified eligible localities. A total of 415 localities were listed, out of which 345 were considered eligible for the intervention. Eligibility criteria included (i) having at least one micro-finance institution within 30km, (ii) a high concentration of vulnerable population and people displaced by the conflict, (iii) a population size reasonable for program implementation (i.e. no micro settlements), (iv) locality not already crowded with another similar program of assistance..

<sup>16</sup> For practical matters, two lotteries were organized at the same time in different regions.

<sup>17</sup> Separate lotteries were held for each strata (cluster of sub-prefectures x type of site). Sub-prefectures are clustered by county (“départements”), which is 11 clusters for 16 sub-prefectures. In each cluster, sites are either in “urban settings” or “rural settings” bin. “Urban” comprises neighborhoods of a city as well as settlements (locally known as “*campements*”) closely located next to an urban center. “Rural” comprises villages. We use the terms “urban” and “rural” for simplicity, but some settlements are in between urban and rural settings.



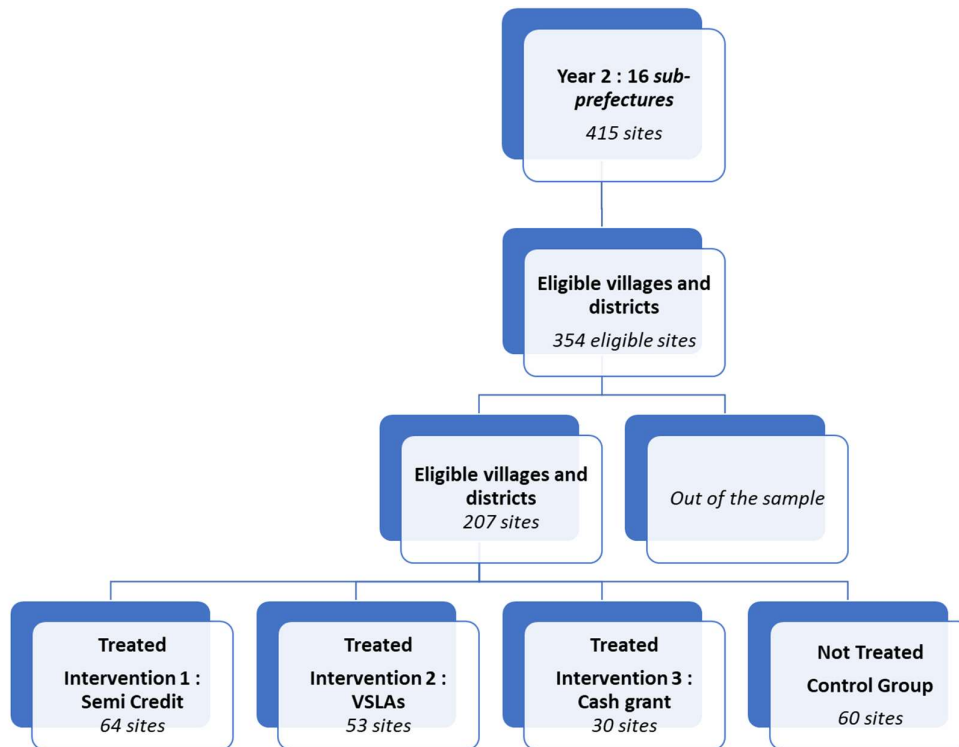


Figure 3 : Experimental design

### ***Selection of individual beneficiaries***

During the enrollment phase, individual information was collected for all applicants across the 207 sites. This was done before the final assignment to treatment and control groups. Individuals were selected based on two steps, implemented by IRC with support from the research team: (i) compliance with eligibility rules and (ii) level of vulnerability.

Eligibility criteria were defined at the start of the program and carefully explained by village committees during the enrollment phase in each locality.<sup>18</sup> Individuals outside of the 18-40 years-old range were ineligible.<sup>19</sup> People who had already benefitted from an assistance program were also ineligible.<sup>20</sup> Enrollment data were used to verify eligibility status. Communities were involved in the selection process and verified the list of individuals, which led to further identify 442 (3.3%) ineligible

<sup>18</sup> “Village committees” comprises highly respected inhabitants in their communities (members of the village council, teachers, etc.).

<sup>19</sup> With exceptions for single mothers (above 15 years old) and widows or disabled people (up to 60 years old).

<sup>20</sup> The process was further enhanced by cross-validation using administrative data from development partners. The list was triangulated with similar programs implemented in the region to confirm whether some individuals had already benefitted from assistance. 0.4% of the remaining applicants were therefore identified as ineligible.

applicants.<sup>21</sup> Based on the whole process, 2184 (15%) of applicants were deemed ineligible, and 12,696 individuals were considered eligible for the program.<sup>22</sup>

The final selection of candidates was based on an individual vulnerability score, computed using baseline data. Table 3 provides more details on the composition of the score. The score weights criteria including disability, marital status, education, employment, economic status, assets and economic responsibility towards household. Weights were chosen to maximize the dispersion of the score. Selected individuals are those above the vulnerability cut-off established in each of the 207 locations, ordering vulnerability score in descending order. Then, the cut-off depends on the capacity of the program which differs across interventions and depends on the number of people enrolled in each site (allocating more program slots in sites with more demand for the program).<sup>23</sup>

In total, 5,116 individuals were selected for the program<sup>24</sup>: 1247 in localities assigned to cash grant, 1870 in localities assigned to semi-credit, and 1999 in localities assigned to VSLA. The final lists of beneficiaries were publicly posted in each site and in the sub-prefecture.

### 3.2 Program take-up

Overall, the take-up of the program is high across interventions, but lower for VSLA intervention compared to the others. Table 5 presents the overall take-up rates and the break-down of take-up rates for various elements of the program.<sup>25</sup>

The final number of fund recipients compared to selected beneficiaries provides an overall indicator of participation. Using this indicator, the take-up rates are respectively 78.9% for semi-credit and 81.1% for cash grant. Training participation rates are higher than 85% for basic entrepreneurship training in these two interventions.<sup>26</sup> The take-up rate for the subsequent activities (submitting a business plan, business plan approval, complementary training) are higher than 75%. The largest dropouts were observed between business plan approval and the complementary training.

---

<sup>21</sup> A list of “pre-selected” individuals was shared to village committees. Committees were asked to verify if people might have lied on their personal information or eligibility status during enrollment. Detailed information about applicants were sent back to the implementing NGO, which reviewed each case and decided if it would led to a disqualification, thus ineligibility.

<sup>22</sup> Note that, although the two first eligibility checks (using baseline data and cross-validating with lists from other programs) were performed uniformly across the 207 sites, the last check (village committee feedbacks) could not be implemented in the 60 control villages because the assignment lottery had already taken place.

<sup>23</sup> Specifically, it depends on the number of eligible enrolled candidates before the cross-validation and village committee checks. In each location, the capacity of the program is set at  $N_{ij}$ , which is determined as  $N_{ij} = \text{Population target}_i \times \text{Nb of eligible people}_j / \text{Total nb of eligible people}_i$ , where  $i$  refers to the treatment arm and  $j$  to a locality.

<sup>24</sup> The program had been funded with the explicit target of 4,500 individuals trained and receiving financial access (more precisely 1500 for the Semi-credit, 2000 for the VSLA and 1000 for the Cash grant). Given expected drop-outs as well as the design of interventions 1 and 3 with business plan approval required to receive funds, the number of people invited in the program was raised from 4,500 to 5,143. However, the study sample is 5,116 taking into account few cases of non-compliance. In particular, VSLAs required a minimum number of 17 people, so a dozen of un-selected participants were invited to create a VSLA together with selected participants.

<sup>25</sup> Several take-up rates can be considered: the take-up of the first business training, the submission of a business plan, the take-up of the second business training or the reception of funds (or participation in a VSLA).

<sup>26</sup> An individual is considered trained if he/she has participated in at least 60% of the training.

The VSLA intervention has a lower take-up rate (69.5%).<sup>27</sup> This is mainly driven by urban areas (districts of cities) because demand for VSLA is lower in these settings. Conditional on launching a VSLA, participation rates in the training are 85% (for both entrepreneurship trainings).<sup>28</sup>

As discussed further below, we focus on intent-to-treat measures of program impacts among all selected applicants.

### 3.3 Data, timeline and surveys

#### 3.3.1 Timeline and Surveys

**Timeline.** *Figure 4* summarizes the timeline of both the implementation and surveys. The sampling lottery took place in August 2015, selecting 207 sites out of 354. The 207 localities compose the sample of the evaluation.

The enrollment was implemented in all the 207 sites between December 2015 and January 2016. The process consisted in visiting each site, organizing a public meeting to describe the program content and the targeted population, and collecting personal information as well as baseline data on individual applicants. This phase was carried out by the staff of the implementing NGO, based on a survey instrument designed by the research team.<sup>29</sup> At the end of process, 14,880 individuals were enrolled, out of which 12,696 were considered eligible for the program.

Enrollment data included basic measures of employment, assets, education level, household characteristics. It also captured some information on indicators related to social cohesion. At the village level, a questionnaire was also administered to collect relevant information on infrastructure, accessibility and social cohesion.

The assignment lottery took place in March 2016, when 147 sites were assigned to treatment and 60 sites to control. The final list of beneficiaries was publicly released in each site between July and September 2016.<sup>30</sup>

Beneficiaries of “semi-credit” and “cash grant” interventions received the basic training between September and October 2016. Business plans were submitted and reviewed between November 2016 and February 2017 and led to the delivery of funds to approved projects between March and July 2017.<sup>31</sup>

---

<sup>27</sup> The trainings could only be implemented once the group of selected beneficiaries had formed a VSLA. Therefore, participation to a VSLA is a more meaningful measure of take-up.

<sup>28</sup> The analysis of drop-out determinants can be used to assess whether there was systematic selection in the activities of the program. For interventions the semi-credit and cash grants, the characteristics of those who completed the training and received the funds are very similar. The vulnerability score is positively and significantly associated with take-up.

<sup>29</sup> The standard enrollment procedure was adjusted for the phase of the program being evaluated, to ensure higher data quality for the impact evaluation. Teams of IRC staff received a reinforced training on the survey tool, similar to a standard enumerator training. In addition, a team of experienced enumerators unrelated to the program was hired to supervise the baseline survey in each site for quality checks. Data entry was organized as a blind double data-entry process to ensure greater data quality.

<sup>30</sup> This was due to delays in the data entry process, completed only in April 2016, once the data analysis, cross-validation and “village committee” review had been performed.

<sup>31</sup> The delivery of funds was delayed for two reasons. First, military unrest in the area led to the suspension of fund delivery between May and June 2017. Military unrest was led by mutinous soldier who claimed unpaid salaries for their help to the current president during the former post electoral crisis. Second, the banking

In parallel, in “VSLA” localities, VSLA groups were set up between October and December 2016, and later received their basic training between January and April 2017. The first cycle of the saving groups ended between September and December 2017. Although there was no cash injection, beneficiaries had the opportunity to take loans from the group from February 2017 and received an important cash inflow (the total amount of savings plus interests) at the end of the first cycle when the pot was shared across members.

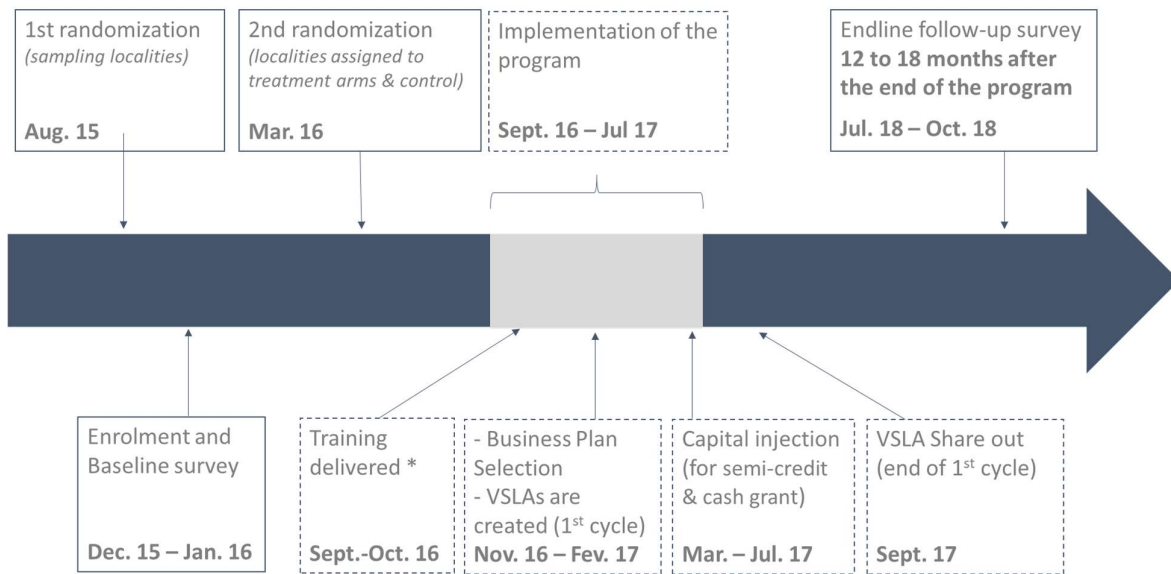
**Endline Survey.** The endline survey was conducted on a sub-sample of 5220 individuals between July and September 2018, which is between 12 and 18 months after the end of the program (i.e. after receiving the funds for interventions “cash grant” and “semi-credit”, or after the end of the 1<sup>st</sup> cycle of the VSLA).<sup>32</sup> The endline sample is made of two samples: 3624 “selected” individuals (equivalent to invited to the trainings, in treated and control sites) and 1596 “non-selected” individuals (equivalent to not invited to trainings based on the implemented vulnerability cut-off, in treated and control sites). For each type, in the control group individuals were sampled using simulated vulnerability cut-off. The final attrition rate was respectively 10.8% and 8.4% for each sample and was balanced between treatment and control groups. The detail of baseline and endline samples are provided in Table 4.

The questionnaire is designed to collect information on selected participants. It captures information about household characteristics, employment, assets, food security, well-being, saving and debt, social relationships, community activities and interpersonal trust. A women agency module is administered to female respondents. There is an additional module focused on sensitive questions about social cohesion, in the form of a “list experiment”.

---

partners encountered difficulties in delivering funds in remote locations. To solve this issue, beneficiaries in remote locations were given a lump sum to reimburse the transportation costs to the closest bank branch.

<sup>32</sup> The endline survey sample was established based on power calculations to detect impacts between treatment arms and the control group. Hence, 15 “selected” individuals (respectively 17 and 22) were sampled out of localities in T1 treatment arm (respectively T2 and T3). Finally, 10 “non-selected” were sampled out of all localities to study spillovers. Note that the spillover sample has been restricted to villages (therefore excluding districts of cities) in which the magnitude of the spillovers is likely to be higher.



\* This is training 1 (entrepreneurship 1 + peace building). For VSLA intervention, Dec. 16 – Apr. 17, after the group has created the VSLA. Training 2 (entrepreneurship 2 + life skills) was delivered conditional on having a selected business plan for semi-credit and cash grant interventions.

Figure 4 : Experiment timeline

### 3.3.2 Key outcomes and descriptive statistics

#### 3.3.2.1 Descriptive statistics

81% of the applicants live in rural areas (Table 6, Appendix).<sup>33</sup> Applicants are on average 34 years-old and 62% are women.<sup>34</sup> They have on average 3 children and live in large household comprising around 7 members (including themselves). Most of the applicants have limited education. 80% of them have no diploma, meaning they have not reached the end of primary school. 48% report that they have not attended school at all.

Nearly all applicants report having an activity (96%). 83% have been involved in agricultural work over the last 6 months. They are primarily self-employed (80%), while less than 10% report being in a wage job. Among the self-employed, the main activity is farming (two thirds of the self-employed). This is very much in line with the structure of labor markets in Côte d'Ivoire and especially in rural areas. (Filmer et al, 2014; Christiaensen and Premand, 2017).

Poor access to finance is prevalent: only 2% of applicants report holding a bank account and 20% use mobile money. On average half of applicants reports having saved some money over the last 3 months, but most of these savings are in cash. However, applicants also use other forms of savings, as 52% have already participated in a ROSCA.

Selected applicants differ from non-selected applicants in a range of vulnerability dimensions, as expected given the selection based on a vulnerability score. Selected applicants are significantly less educated than non-selected applicants (20pp difference in the share of people who did not complete primary school), and with lower earnings (around 20,000 CFA less). Other characteristics not directly used in the score also point towards more vulnerability among selected applicants: lower use of mobile money (10pp less for both), higher constraints on education and health expenditures (5pp more).

<sup>33</sup> The sample used here is all applicants baseline data. See Table 6.

<sup>34</sup> The program was advertised both for youth and vulnerable adults, therefore this average age hides large variation as 61% are between 15 and 35 years old.

Finally, the share of women is larger in the selected group (around 70%, which is 15pp more than in the non-selected group) although gender is not an explicit selection criterion.

### 3.3.2.2 *Main outcomes*

We measure a first set of key outcomes that document whether the program improved participants' livelihood. *Employment* is a dummy variable taking the value of 1 if the individual has worked at least 1 hour in the past 7 days. We decompose this measure between self-employment (which includes independent activities in agriculture and non-agricultural self-employment). The *Number of independent activities* includes all self-employment activities in which one has worked over the last 30 days to draw an accurate picture of the portfolio of activities. *Monthly Earnings* (in CFA franc<sup>35</sup>) are reported separately for both wage-employment and self-employment. In the case of self-employment, the measure used is profits (over the last 30 days).<sup>36</sup> *Hours* are computed for the 3 main activities worked over the last 7 days.

We also measure intermediary outcomes related to the main elements of the intervention. *Savings Stock* (in CFA franc) is calculated at the time of the survey. It accounts for different types of savings including cash, mobile money, Micro Finance Institutions (MFI), bank, farmers' cooperatives, group of savings (ROSCA or VSLA). *Start-up capital* (in CFA franc) is the retrospective amount of capital used to launch the current main independent activity, regardless of the origin of the funds (personal or not). *Value of productive assets* is an estimation of main activity's assets at the time of the survey and *Investments* aggregate any investment amounts in the main activity over the last 6 months (both are in CFA franc). *Entrepreneurship knowledge* is the score obtained on a quiz administered which focuses on the core topics covered during the general training. *Business practices* is an index of business best practices in self-employment, such as how to do accounting, what to include in a business plan and where to get information. Both measures are demeaned and standardized.

We measure a second set of key outcomes related to social cohesion.<sup>37</sup> We capture the *total number of groups or associations* in which the individual participates in the last 12 months. It aggregates economic associations and non-economic associations (political, religious, women and youth groups). *Solidarity* is the sum of the number of times the participant received help from other and the number of times she/he helped others. "Help" is defined as giving cash for food or health care, school fee, or business inputs. *Participation to community works* (cleaning, rebuilding public infrastructure) and *to social activities* (celebrations, funerals, traditions) proxies involvement level in the community and is computed as the number of participations to the related activities over the last 12 months. *Trust* is a z-score index that demean and standardizes the level of trust in general and of different groups. Because in-group and out-group trust might differ we create subgroup variables. Here, the out-group is defined as people from other ethnic groups. *Conflicts* is z-score index that accounts for the frequency of robbery, racket, physical assault and armed conflicts.<sup>38</sup> We also capture the *perception about insecurity*, by questions about whether the participants ever feared to be victim of physical violence inflicted by other inhabitants in the past 12 months and about how she/he sees the general level of insecurity which might be linked to the presence of other ethnic groups in the locality.

---

<sup>35</sup> We use the exchange rate US\$1=XOF 546.54 (as of Dec 31<sup>st</sup> 2017) to convert CFA francs to US dollars.

<sup>36</sup> Self-employment profits are aggregated across activities of the portfolio of the individual. It is calculated based on the business cycle of each activity, and then an equivalent measure for 30 days is built.

<sup>37</sup> See Bauer et al. (2016) for a discussion of the most widely used indicators.

<sup>38</sup> For robbery and racket, the variable takes the value of 1 if those events happen "often". For physical assault and armed conflicts, it takes the value of 1 when it happens "sometimes" and "often" (and 0 when it never happens).

### 3.3.3 Estimation strategy

We estimate intent-to-treat treatment effects for endline outcomes. For a given outcome  $Y_i$  we run the following ordinary least squares (OLS) regression:

$$Y_{ij} = \alpha_1 + \beta T_{j,k} + S_j + \epsilon_{ij} \quad (1)$$

where  $i$  indexes the individual and  $j$  indexes the locality.  $T_{j,k}$  is assignment to treatment  $k$  in locality  $j$  and  $S_j$  includes stratification variables corresponding to the lotteries, i.e. a dummy (village or city district) and sub-prefecture fixed effects. Robust standard errors are clustered at locality level. Monetary outcomes are winsorized at the 99<sup>th</sup> percentile.

$\beta$  is the pooled ITT estimate of the program's overall impact. To estimate  $\beta$ , the sample includes the selected individuals from localities  $j$  assigned to treatment and the equivalent sample from control localities identified based on the implementation of the vulnerability score and related cut-off. Figure 5 provides a visual explanation for the sample used when treatment is pooled across arms (for both specifications (1) and (2)). Because for each treatment arm a different cut-off was implemented to select beneficiaries (see dot, plain and dashed lines for T1, T2 and T3 respectively, Figure 5), it is not possible to simply aggregate beneficiaries across arms. A common cut-off needs to be used, so that the sample is restricted to strictly comparable individuals, as shown on the right side of Figure 5.<sup>39</sup> For the control group, the same cut-off is implemented so one can simulate "who would have been selected" if the locality was assigned to treatment rather than control.

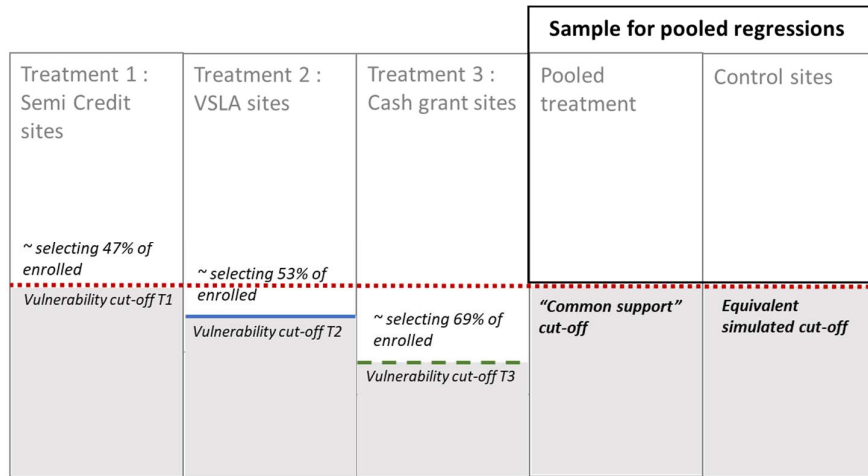


Figure 5 : Sample for pooled treatment regressions

To obtain estimates of the relative impact of each treatment modality, we estimate the following equation:

$$Y_{ij} = \alpha_1 + \beta_1 T_{j,1} + \beta_2 T_{j,2} + \beta_3 T_{j,3} + S_j + \epsilon_{ij} \quad (2)$$

$\beta_k$  coefficient corresponds to the effect of being in a locality assigned to intervention modality  $k$ .<sup>40</sup>

<sup>39</sup> However, this approach comes at the cost of losing statistical power in comparison with estimating (1) separately for each intervention. As shown in Figure 5, a smaller sample of T2 and T3 is used compared to what is available, because the "common support cut-off" used is stricter than the real cut-off implemented in these interventions to select beneficiaries.

<sup>40</sup> Coefficient  $\beta_k$  can also be estimated separately for each treatment arm T1, T2 and T3. This provides more statistical power because the full sample of selected individuals is used in each regression. However, specification (2) is preferred because it allows for an easier comparison of the impacts across treatment arms.

### 3.3.4 Balance

Table 7 displays the sample means for the selected group in treated localities and equivalent group in control sites. Table 8 shows balance for selected individuals for each treatment arm. To perform this analysis, we restrict the sample to a common support, which means using a common vulnerability cut-off for the three treatment arms. Results shows that the experiment achieved satisfactory balance both between the pooled treatment and control group, and between treatment modalities.

## 4 Results

Table 9 to Table 13 present ITT estimates for the direct impact of the intervention on the main outcomes and intermediary outcomes, capturing respectively employment and independent income-generating activities (Table 9), earnings (Table 10), savings (Table 11) business practices and skills (Table 12) and social cohesion (Table 13). This corresponds to the specifications in equation (1) and (2). The ITT coefficients presented in Panel A of each table correspond to the overall impact of the (pooled) intervention. Panel B presents the relative impacts across treatment modalities ( $\beta_1 =$  “semi credit”,  $\beta_2 =$  “VSLA” and  $\beta_3 =$  “cash grant”).<sup>41</sup> We provide p-values for the pairwise test of equality across modalities, and the p-value of the joint test  $\beta_1 = \beta_2 = \beta_3$ . Impacts are measured 12 to 18 months after the end of the program, close to 24 months after the start of the interventions.

### 3.1 Economic outcomes.

The results show limited impacts on the level of employment (Table 9). At the extensive margin, there is no impact on the overall share of individuals employed (Table 9, column 1, Panel A). This is not surprising in a context where employment (in the sense of engaging in any type of income-generating activity) is naturally high. 95% in the control group has an activity, which is consistent with the evidence on the employment situation in sub-Saharan Africa and in Côte d’Ivoire. Although self-employment rate is high (91.6% in the control group), there is a small but significant entry into self-employment (+3pp, Table 9, column 2, Panel A).

Impacts on employment mostly take the form of an increase of activities along the intensive margin. First, there is a slight change in the composition of individuals’ portfolio of activities, with less wage employment (Table 9, column 3, Panel A). Second, there is an increase in the number of independent activities and diversification at the margin (Table 9, column 4, Panel A). The decrease in wage-employed activities is outweighed by an increase in the number of independent activities. The total number of independent activities per individual increases by 0.32 which means that on average, one out of three beneficiaries has added a new activity while the level in the control group is 3.13 activities per person.<sup>42</sup> This 10% increase in the number of independent activities is mainly driven by agricultural activities. There are few differences across interventions. The semi-credit modality leads to marginally

---

<sup>41</sup> For the pooled treatments specification, we use the “most restrictive” cut-off to pool together the treatments. In the control group, a similar cut-off is used to simulate who would have been selected.

<sup>42</sup> For the remaining two-thirds, one cannot disentangle between replacement of a former activity by a new one, and no change.



more diversification, with a significant increase in the number of non-agricultural activities (mainly in trade) (Table 9, column 5, Panel B).<sup>43</sup>

Dynamics in independent activities are observed after the program, as some are created and stopped (Table 9, column 7, Panel A). Retrospective measures on independent activities over the last 12 months suggest that an important number of new activities started in the last 12 months, and a significantly higher number of them are still operating (+31% compared to the control group). This amounts to an average of 28% of new independent activities surviving in the next 12 to 16 months.

The number of hours worked is not affected by the program (Table 10, column 1, Panel A). Impacts are consistent with what is observed in terms of number of activities: a slight reduction in hours worked as wage-employed, compensated by an increase in hours as self-employed.

Despite the increase in the number of economic activities, there are no impacts on activities' profits (Table 10, column 3, Panel A). As earnings mostly come from independent activities, total earnings are also unchanged. A slight decrease in earnings from wage employment is observed (especially for the cash grant modality), driven by exits from wage jobs (Table 10, column 2, Panel A). However, for self-employment, total profits across independent activities do not significantly increase in agricultural or non-agricultural activities (Table 10, column 4-5, Panel A).

### **3.2 Mechanisms.**

The important mechanism relates to savings and access to capital. Results show that the program succeeded in facilitating savings in new instruments (Table 11). The propensity to save is slightly but significantly higher (+5pp, a 6% increase, column 1), but the main impact is on the type and the stock of savings (Table 11, column 2-4, Panel A). The program increased savings through group savings. This impact is driven by VSLAs (+38pp impact on participation in VSLA arm, rising participation from 17% to 55%, column 2), which substitute current ROSCAs, a type of savings group considered less secure and less profitable than VSLA (-12pp impact on ROSCA participation, decreasing from 30% to 18%). The impact on VSLA participation is particularly persistent 12 to 18 months after the end of the program. Given that VSLA cycles are 9 months, this means that beneficiaries have successfully continued their groups and launched new cycles, in which other village members might be included. The program also slightly increased VSLA participation in other treatment modalities, although the methodology of savings groups was not developed with them (+7pp) (Table 11, column 2, Panel B). This is likely to be "late" spillovers across villages from former beneficiaries who spread the model.

Impacts on participation are followed by significant impacts on the stock of savings coming from VSLAs (+9,500 CFA in VSLA arm, close to the double of the control group) (Table 11, column 4, Panel B). In the control group, savings stock mostly comes from ROSCAs (41%) and informal sources others than saving groups. The share of total savings in VSLA increase from 7% to 20% (for VSLA arm). However, the overall saving stock does not increase (Table 11, column 3, Panel A). There is substitution across savings instruments rather than an increase in the savings rate (share of earnings saved), which is consistent with the constant level of earnings. In the case of the cash grant intervention, the large impact on savings stock (+43,000 CFA, a 60% increase) is likely to be explained by a share of the grant being saved rather than being invested (Table 11, column 3, Panel B). For the semi-credit modality, the

---

<sup>43</sup> As both groups received the same training, this cannot be attributed to "framing" in the curriculum. The capital received in semi-credit is larger than what one can borrow from a VSLA. Capital constraints to start a non-agricultural business (which might require larger investments) could explain this difference, however we see no differential impacts on the cash grant beneficiaries.

coefficient is positive but much smaller (divided by more than two) and not significant. In this latter intervention, monitoring was strong after the disbursement of the capital and mandatory reimbursement of 50% of the credit made it harder to save it. On the contrary, the cash grant intervention left beneficiaries with little monitoring on how they use the grant.

The amount saved can be contrasted with amounts invested in business creation (Table 11, column 6-8, Panel A). The main independent activity significantly differs in terms of scale at endline. As one could have expected given the capital support interventions, the starting capital for the main independent activity is significantly higher for beneficiaries (+12,700 CFA, which is an 83% increase) (Table 11, column 6, Panel A). The impact is twice as high for interventions with capital injection (semi-credit and cash grant) compared with the VSLA (respectively +15,000 CFA and +17,900 CFA versus +7,700 CFA) (Table 11, column 6, Panel B). However, it is important to emphasize the magnitude of the impact for the latter intervention (+7,700 CFA is close to a 50% increase) given that in VSLA intervention there is no capital injection. This also reflects in the current value of the assets of the activity, which are significantly higher (+10,300 CFA, a 25% increase) (Table 11, column 7, Panel B). This result indicates that the assets acquired at the start of the activity have not been lost or sold.

Another mechanism relates to the effectiveness of the business training (Table 12). We analyze two sets of indicators: a knowledge score on entrepreneurship practices (i.e. what you know you should do), and a business practices indicator (i.e. what you do in reality). These two intermediate outcomes help us understand what happens along the causal chain. We observe overall significant impacts on both knowledge (+0.2 standard deviations to the score) and business practice (+0.2 standard deviations to the score). However, the magnitude of the impact is moderate.<sup>44</sup> For business practices, the percentage increase is high given the very low levels in the control group, but this only leads to less than 10% beneficiaries doing a market analysis prior to starting their activity, developing a business plan or having a formal bookkeeping system.

### **3.3 Social cohesion outcomes.**

One of the main objectives of the experiment was to measure impacts on both economic inclusion and social cohesion. Table 13 presents results on a range of social cohesion indicators.

Results show a moderate increase in the number of groups in which individuals participate (+0.18 groups, from a mean of 1.2 in the control group) (Table 13, column 1, Panel A). This is particularly driven by an increase in participation in economic groups, but not by an increase in participation in social groups. Higher group participation is associated with larger participation in group meetings, as well as a larger share of individuals in leadership positions. Notably, nearly all additional groups in which individuals participate are mixed ethnic groups. These effects are in part explained by the increase in savings groups, though not fully as they are observed consistently across program modalities.

Results also show a significant increase in solidarity between locality members (Table 13, column 2-3). In addition, there are significant increases both in the number of times individuals who have been helped by someone else (+0.16pp) or have helped someone else themselves (+0.28pp) (Table 13, column 2-3, Panel A). Increases in solidarity are consistent across treatment arms, suggesting again no

---

<sup>44</sup> The order of magnitude is comparable with the impact of another similar training led in Cote d'Ivoire (+0.18 standard deviation in the treatment arm receiving entrepreneurship training) (Bertrand et al., 2017). A quasi-identical quiz had been conducted in the evaluation of this Public Works program, and its curricula was the basis of PRISE training curriculum. However, the PRISE training was less intensive (55h versus 80h).

strong trade-offs in the social cohesion effects of the various modalities (Table 13, column 2-3, Panel B).

Besides increases in group participation and in solidarity, no effects on broader indicators of community participation, trust, or insecurity are observed (Table 13, column 4-8, Panel A). A composite indicator capturing the level of trust and attitudes is unaffected by the intervention (Table 13, column 6). No increases in the participation in locality-wide events or community works are observed, consistent with very limited exclusion from these events being observed in the first place (Table 13, column 4-5). Finally, there are no changes in indices of insecurity perception nor on the conflict index capturing exposure to various of crime or other violent activities in the community (Table 13, column 7-8).

Overall, we interpret these results as pointing to localized effects on social cohesion through group participation or solidarity, but which did not translate to more widespread gains in social cohesion in the localities. For semi-credit and cash grant interventions, this is likely also related to limited impacts on economic final outcomes despite some impacts on intermediary outcomes.

## **5 Conclusion**

We conducted an experiment as part of a program seeking to improve livelihoods and social cohesion in a post-conflict region of Côte d'Ivoire. The program provided a support package including entrepreneurship training and access to capital, in line with graduation or economic inclusion approaches implemented around the world. The randomized control trial allows us to assess the effectiveness of the integrated package of training and capital. We also test 3 alternative instruments to relax capital constraints: cash grants, semi-credit and village savings and loan association (VSLA).

Beyond promoting more productive self-employment, an interesting aspect of the program is that it also aimed to improve social cohesion. This makes it an interesting model for policy makers searching for interventions in post conflict settings, in places where wage employment opportunities are limited. As part of the study, we assess the linkages between improved employment outcomes and social cohesion.

We find that participants engage in more small business activities. 12 to 18 months after the intervention, these businesses are still operating at larger scale, as measured by their level of assets. Individuals assigned to the VSLA option have formed sustainable savings groups, which led to higher savings and facilitate access to credit. However, these effects on savings, investments and small business activities are not sufficient to significantly increase earnings. There is also little variation in economic effects between cash grants, semi-credit and VSLA interventions. While economic impacts are mixed, the program induced different ethnic groups to regularly interact with each other's, including through activities such as VSLA, trainings, self-help entrepreneurship groups. As a result, beneficiaries are more active in economic groups and solidarity increased in targeted villages. However, we do not observe a broader increase in trust or a decrease in the perception of insecurity or conflicts at the community level.

The results contrast with positive impacts on earnings documented in other graduation-type of economic inclusion programs, which have generally found to be effective (Banerjee et al., 2015a and Bandiera et al., 2013). In additional research, we will try to tease out the mechanisms that may

explain limited observed impacts on earnings, and potential heterogeneity behind these effects. Additional research will also complement the overall assessment of the program performance by analyzing local spill-overs to eligible individuals that were not selected for the program. In addition, the relative costs of the 3 instruments differ substantially. The randomized controlled trial provides a framework to compare their cost-effectiveness, which we intend to do. Finally, differences in results may also be influenced by contextual factors, including the post-conflict setting in which the program operated.

## 6 References

- Bandiera, O., Burgess, R., Das, N., Gulesci, S., Rasul, I., Sulaiman, M. (2013). *Can basic entrepreneurship transform the economic lives of the poor? IZA Discussion Paper.*
- Banerjee, A., Duflo, E., Goldberg, N., Karlan, D., Osei, R., Pariente, W., Shapiro, J., Thuysbaert, B., Udry, C. (2015). A multifaceted program causes lasting progress for the very poor: Evidence from six countries. *Science, 348*(6236)
- Banerjee, A., Duflo, E., Glennerster, R., & Kinnan, C. (2015). The Miracle of Microfinance? Evidence from a Randomized Evaluation. *American Economic Journal: Applied Economics, 7*(1), 22–53.
- Banerjee, A., Karlan, D., & Zinman, J. (2015). Six randomized evaluations of microcredit: Introduction and further steps. *American Economic Journal: Applied Economics, 7*(1), 1–21.
- Beaman, L., Magruder, J., & Robinson, J. (2014). Minding small change among small firms in Kenya. *Journal of Development Economics, 108*(October), 69–86.
- Bertrand, M., Crépon B., Marguerie A., & Premand P. (2017) Contemporaneous and Post-Program Impacts of a Public Works Program: Evidence from Côte d'Ivoire. Draft.
- Blattman, C., & Annan, J. (2014). Can Employment Reduce Lawlessness and Rebellion? A Field Experiment with High-Risk Youth in a Fragile State. *SSRN Electronic Journal.*
- Blattman, C., Fiala, N., & Martinez, S. (2014). Generating Skilled Self-Employment in Developing Countries: Experimental Evidence from Uganda. *The Quarterly Journal of Economics, 129*(2), 697–752.
- Blattman, C., Jamison, J. C., & Sheridan, M. (2015). Reducing crime and violence: Experimental evidence on adult non-cognitive investments in Liberia.
- Blattman, C., Jamison, J., Green, E., & Annan, J. (2014). The Returns to Cash and Microenterprise Support Among the Ultra-Poor: A Field Experiment. *SSRN Electronic Journal, 36.*
- Blattman, C., & Ralston, L. (2015). Generating Employment in Poor and Fragile States: Evidence from Labor Market and Entrepreneurship Programs. *Working Paper.*
- Bruhn, M., & Zia, B. (2013). Stimulating managerial capital in emerging markets: the impact of business training for young entrepreneurs. *Journal of Development Effectiveness, 5*(2), 232–266.
- Cho, Y., & Honorati, M. (2013). Entrepreneurship programs in developing countries: A meta regression analysis. *Policy Research Working Paper.*
- Crépon, B., Devoto, F., Duflo, E., & Parienté, W. (2015). Estimating the Impact of Microcredit on Those Who Take It Up: Evidence from a Randomized Experiment in Morocco. *American Economic Journal: Applied Economics, 7*(1), 123–150.
- De Mel, S., McKenzie, D., & Woodruff, C. (2014). Business training and female enterprise start-up, growth, and dynamics: Experimental evidence from Sri Lanka. *Journal of Development Economics, 106*, 199–210.
- De Mel, S., Mckenzie, D., & Woodruff, C. (2009). Are Women More Credit Constrained? Experimental Evidence on Gender and Microenterprise Return. *American Economic Journal: Applied Economics, 0519*, 1–32.

- De Mel, S., McKenzie, D., & Woodruff, C. (2008). Returns to Capital in Microenterprises: Evidence from a Field Experiment. *Quarterly Journal of Economics*, 123(4), 1329–1372.
- Dupas, P., & Robinson, J. (2013). Savings constraints and microenterprise development: Evidence from a field experiment in Kenya. *American Economic Journal: Applied Economics*, 5(1), 163–192.
- Fafchamps, M., McKenzie, D., Quinn, S., & Woodruff, C. (2014). Microenterprise growth and the flypaper effect: Evidence from a randomized experiment in Ghana. *Journal of Development Economics*, 106, 211–226
- Fafchamps, M., & Quinn, S. (2015). *Aspire*. NBER Working Paper. Cambridge, MA.
- Filmer, Deon and Louise Fox. 2014. Youth Employment in Sub-Saharan Africa. *Africa Development Series*. Washington, DC: World Bank.
- Giné, X., Bank, W., Mansuri, G., & Jel, C. (2011). Money or Ideas? A Field Experiment on Constraints to Entrepreneurship in Rural Pakistan. *The World Bank Policy Research Working Paper Series*.
- Karlan, D. S., & Zinman, J. (2012). List randomization for sensitive behavior: An application for measuring use of loan proceeds. *Journal of Development Economics*, 98(1), 71–75.
- Karlan, D., Knight, R., & Udry, C. R. (2012). Hoping to win, expected to lose: Theory and lessons on micro enterprise development. *NBER Working Paper*, (November 2012).
- Karlan, D., & Valdivia, M. (2011). Teaching Entrepreneurship: Impact of Business Training on Microfinance Clients and Institutions. *Review of Economics and Statistics*, 93(2), 510–527.
- Karlan, D., & Zinman, J. (2010). Expanding Microenterprise Credit Access: Using Randomized Supply Decisions to Estimate the Impacts in Manila. *Working Paper*. Economic Growth Center, Yale University.
- Klinger, B., & Schündeln, M. (2011). Can Entrepreneurial Activity be Taught? Quasi-Experimental Evidence from Central America. *World Development*, 39(9), 1592–1610.
- Macours, Karen, Patrick Premand, and Renos Vakis. 2012. "Transfers, Diversification and Household Risk Strategies: Experimental Evidence with implications for climate change adaptation.", Policy Research Working Paper Series, The World Bank (No. 6053)
- Mano, Y., Iddrisu, A., Yoshino, Y., & Sonobe, T. (2011). How Can Micro and Small Enterprises in Sub-Saharan Africa Become More Productive? The Impacts of Experimental Basic Managerial Training. *Policy Research Working Paper*.
- McKenzie, D. (2015). Identifying and spurring high-growth entrepreneurship: experimental evidence from a business plan competition. *Policy Research Working Paper*.
- Mckenzie, D., & Woodruff, C. (2008). Experimental evidence on returns to capital and access to finance in Mexico. *World Bank Economic Review*, 22(3), 457–482.
- McKenzie, D., & Woodruff, C. (2014). What Are We Learning from Business Training and Entrepreneurship Evaluations around the Developing World? *The World Bank Research Observer*, 29(1), 48–82.
- Valdivia, M. (2015). Business training plus for female entrepreneurship? Short and medium-term experimental evidence from Peru. *Journal of Development Economics*, 113, 33–51.

## 7 Appendix and Tables

|   | Option 1 :<br>Semi Credit | Option 2 :<br>VSLA | Option 3 :<br>Cash Grant |
|---|---------------------------|--------------------|--------------------------|
| <b>Basic training</b> : -Peace building and Social Cohesion - Entrepreneurship                                    | ✓                         | ✓                  | ✓                        |
| <b>Writing of a business plan</b>   | ✓                         | ✓                  | ✓                        |
| <b>Validation committee</b> of the business plans. (Competition)  | ✓                         |                    | ✓                        |
| <b>Village Loan Saving Association</b> VLSA   |                           | ✓                  |                          |
| <b>Complementary training</b> : - Life competencies - Managing an small business (*conditioned on being selected) | ✓*                        | ✓                  | ✓*                       |
| <b>Reception of funds</b> (*conditioned on validation of business plan)   | ✓                         |                    | ✓*                       |
| <b>Follow-up</b> : management tools and support of business expert in creating the business.                      | ✓                         |                    |                          |
| <b>Recovery of the loan</b> (50% of given funds. starting 3 month after installment)                              | ✓                         |                    |                          |

\*To complete this step, the beneficiary's business plan must have been accepted by the committee.

*Table 1 : Treatment content*

|                  | Beneficiaries        |            |                     | Non Beneficiaries |
|------------------|----------------------|------------|---------------------|-------------------|
|                  | T1<br>Semi<br>Credit | T2<br>VSLA | T3<br>Cash<br>Grant | Control Group     |
| Total Villages   | 52                   | 43         | 24                  | 49                |
| Total Districts  | 12                   | 10         | 6                   | 11                |
| Total Localities | 64                   | 53         | 30                  | 60                |

*Table 2 : Distribution of the localities across treatments and type of sites*

| Criteria  | Weights        | Score if true   |
|---|----------------|---|
| <b>Vulnerable situation</b> <ul style="list-style-type: none"> <li>• Never been to school or dropouts in primary</li> <li>• Single mothers</li> <li>• Jobless</li> <li>• Disabled</li> </ul>  | 20%            | =1 if any is true   |
| <b>Level and source of income</b> <ul style="list-style-type: none"> <li>• Employment instability (type of status or contract)</li> </ul>   | 5%             | =1 if : <ul style="list-style-type: none"> <li>• Family worker or Domestic or Intern/Apprentice</li> <li>• Employed but paid on piece-work by the hour or daily paid</li> <li>• Unemployed</li> </ul> |
| <ul style="list-style-type: none"> <li>• Level of income (sum of incomes and money transfers last 30 days)</li> </ul>   | 20% (negative) | =Total income from all paid work  |
| <b>Financial dependence of the household</b> <ul style="list-style-type: none"> <li>• Ratio of people who participate to the expenses of the household to total members of the household [A]</li> <li>• Share of financial dependant people in the household [B]</li> </ul> | 10%            | = $[A] + (1 - [B])$   |
| <b>Living Standards of the household</b> <ul style="list-style-type: none"> <li>• Economic and agriculture assets</li> <li>• Other economic goods</li> </ul>  | 10% (negative) | = Livestock   |
| <ul style="list-style-type: none"> <li>• Transportation related goods</li> </ul>  | 10% (negative) | = Nb of plows + field sprayer + carriage + wheelbarrows   |
| <ul style="list-style-type: none"> <li>• Equipment and comforts goods</li> </ul>  | 10% (negative) | = Nb of bikes + motorcycles + cars  |
| <ul style="list-style-type: none"> <li>• Nb of room in the house/Nb of people in the household [C]</li> </ul>   | 5% (negative)  | = Nb of fridge + A/C + Televisions  |
|   |                | = [C]   |

Table 3 : Vulnerability score computation



|       |   | T1          | T2    | T3         |         |        |
|-------|---|-------------|-------|------------|---------|--------|
|       |   | Semi credit | VSLA  | Cash grant | Control | Total  |
| A     | Number of localities (villages and districts) | 64          | 53    | 30         | 60      | 207    |
| B     | Number of selected individuals (eligible)     | 1 870       | 1 999 | 1 247      | -       | 5 116  |
| C     | Main sample                                   | 919         | 871   | 616        | 1218    | 3 624  |
| D     | Number of non-selected individuals (eligible) | 1 925       | 1 558 | 443        | -       | 3 926  |
| E     | Complementary sample for spillover effects    | 512         | 426   | 209        | 449     | 1 596  |
| (B+D) | Total Baseline                                | 3795        | 3557  | 1690       | 3650    | 12 692 |
| (C+E) | Total Endline                                 | 1431        | 1297  | 825        | 1667    | 5 220  |

Table 4 : Baseline and Endline survey samples

|   | Semi Credit (T1) | Cash Grant (T3) | VSLA (T2)              |
|---|------------------|-----------------|------------------------|
| <b>VSLA CREATION (Starting a group)</b>                                   |                  |                 | <b>69.5%</b>           |
| TRAINING : Entrepreneurship 1 (“starting an activity”) and Peace Building | 88.4%            | 91.5%           | 64.7%                  |
| WRITING BUSSINESS PLANS   | 82.4%            | 84.2%           | <i>Data processing</i> |
| BUSSINESS PLAN REVIEW & APPROVAL  | 80.9%            | 82.0%           | n.a.                   |
| TRAINING : Entrepreneurship 2 (“managing an activity”) and Life Skills    | 61.8%            | 64.1%           | 59.8%                  |
| <b>RECEPTION OF FUNDS</b>   | <b>78.9%</b>     | <b>81.1%</b>    | n.a.                   |

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. See Table 1 for more details on that.

Table 5 : Take-up rate by treatment arms

| Sample : all eligible candidates enrolled (12 692 obs)        |                         |                     |            |                       |
|---|-------------------------|---------------------|------------|-----------------------|
|   | (2)                     | (3)                 | (4)        | (5)                   |
| Label variable  | Mean in Non Selected gp | Mean in Selected gp | Mean (all) | p-val of test (2)-(3) |
| Type of locality (1 = village)                                | 0.81                    | 0.80                | 0.81       | 0.65                  |
| Gender  | 0.56                    | 0.71                | 0.62       | 0.00                  |
| Age   | 32.72                   | 35.28               | 33.75      | 0.00                  |
| Single  | 0.24                    | 0.19                | 0.22       | 0.00                  |
| Married   | 0.35                    | 0.28                | 0.32       | 0.00                  |
| Cohabitant  | 0.23                    | 0.19                | 0.21       | 0.01                  |
| Divorced / Separated  | 0.03                    | 0.03                | 0.03       | 0.23                  |
| Widowed   | 0.16                    | 0.30                | 0.22       | 0.00                  |
| Number of children  | 3.16                    | 3.62                | 3.35       | 0.00                  |
| Number of dependent children (<15 years)                      | 2.52                    | 2.67                | 2.58       | 0.01                  |
| Has been to school  | 0.58                    | 0.43                | 0.52       | 0.00                  |
| Currently at school   | 0.00                    | 0.00                | 0.00       | 0.23                  |
| No Diploma  | 0.71                    | 0.93                | 0.80       | 0.00                  |
| Primary school  | 0.21                    | 0.05                | 0.15       | 0.00                  |
| Middle school   | 0.05                    | 0.02                | 0.04       | 0.00                  |
| High school and more  | 0.02                    | 0.00                | 0.01       | 0.00                  |
| Has completed professional training (last 5 years)            | 0.11                    | 0.08                | 0.10       | 0.00                  |
| Head of the household   | 0.52                    | 0.57                | 0.54       | 0.01                  |
| Spouse of the head of the household                           | 0.27                    | 0.25                | 0.26       | 0.16                  |
| Child of the head of the household                            | 0.14                    | 0.11                | 0.13       | 0.00                  |
| Other household status  | 0.07                    | 0.07                | 0.07       | 0.88                  |
| Single mother   | 0.01                    | 0.01                | 0.01       | 0.61                  |
| Out of school or out of school in primary school              | 0.71                    | 0.93                | 0.80       | 0.00                  |
| Disabled  | 0.04                    | 0.05                | 0.05       | 0.04                  |
| Number of animal heads (livestock, poultry, others)           | 5.46                    | 2.45                | 4.25       | 0.00                  |
| Number of agricultural tools owned                            | 0.30                    | 0.09                | 0.21       | 0.00                  |
| Number of owned transport vehicles (bicycle, motorcycle, car) | 0.31                    | 0.12                | 0.23       | 0.00                  |
| Number of comfort objects owned                               | 0.32                    | 0.14                | 0.25       | 0.00                  |
| Number of rooms   | 3.19                    | 2.87                | 3.06       | 0.00                  |
| Number of household members (excluding individual)            | 5.64                    | 5.51                | 5.59       | 0.17                  |

Table 6 : Descriptive Statistics

| Sample : all eligible candidates enrolled (12 692 obs)  |        |        |        |      |
|---|--------|--------|--------|------|
|   | (2)    | (3)    | (4)    | (5)  |
| Nb members participating in household expenses          | 1.21   | 0.97   | 1.11   | 0.00 |
| Number of dependent members                             | 2.31   | 2.70   | 2.46   | 0.00 |
| Transfers received outside the household (last 30 days) | 4 001  | 1 808  | 3 117  | 0.00 |
| Has done an agricultural activity (last 6 months)       | 0.84   | 0.82   | 0.83   | 0.18 |
| Has an activity (last 7 days)                           | 0.97   | 0.95   | 0.96   | 0.00 |
| Number of hours (last 7 days)                           | 39.82  | 36.64  | 38.54  | 0.00 |
| Nb of days (last 30 days)                               | 18.75  | 17.35  | 18.18  | 0.00 |
| Main Activity- Employee                                 | 0.08   | 0.09   | 0.08   | 0.42 |
| Main Activity- Independent                              | 0.26   | 0.25   | 0.26   | 0.48 |
| Main Activity- Independent farmer                       | 0.56   | 0.51   | 0.54   | 0.04 |
| Main Activity- Other                                    | 0.08   | 0.13   | 0.10   | 0.00 |
| Remuneration - Fixed                                    | 0.02   | 0.01   | 0.01   | 0.01 |
| Remuneration - Profit                                   | 0.66   | 0.59   | 0.63   | 0.00 |
| Remuneration - Nature                                   | 0.17   | 0.20   | 0.18   | 0.15 |
| Remuneration - Unpaid                                   | 0.07   | 0.12   | 0.09   | 0.00 |
| Remuneration - Other                                    | 0.08   | 0.08   | 0.08   | 0.69 |
| Total income (lastmonth)                                | 44 461 | 22 878 | 35 761 | 0.00 |
| Self-employed   | 0.77   | 0.72   | 0.75   | 0.00 |
| Second independent activity                             | 0.23   | 0.24   | 0.23   | 0.66 |
| Accounting - No   | 0.14   | 0.14   | 0.14   | 0.72 |
| Accounting - Memorize                                   | 0.71   | 0.78   | 0.74   | 0.00 |
| Accounting - Note                                       | 0.13   | 0.06   | 0.10   | 0.00 |
| Accounting - Other                                      | 0.02   | 0.01   | 0.02   | 0.62 |
| Has already had another IGA                             | 0.47   | 0.48   | 0.48   | 0.47 |
| Has a project to create an AGR currently (not realized) | 0.89   | 0.89   | 0.89   | 0.77 |
| Has Saved over the last 3 months                        | 0.59   | 0.49   | 0.55   | 0.00 |
| Savings flows (last 3 months)                           | 27 944 | 15 297 | 22 845 | 0.00 |
| Savings stock   | 42 472 | 15 762 | 31 703 | 0.05 |
| Has a mobile money account                              | 0.24   | 0.15   | 0.20   | 0.00 |
| Has a bank account or savings                           | 0.02   | 0.01   | 0.02   | 0.00 |
| Has participated to a Tontine                           | 0.52   | 0.51   | 0.52   | 0.47 |
| Is indebted   | 0.23   | 0.23   | 0.23   | 0.78 |
| Debt stock  | 9 425  | 8 027  | 8 861  | 0.05 |
| Cash savings (first form of savings)                    | 0.44   | 0.37   | 0.41   | 0.00 |
| Education expenses (last 3 months)                      | 17 585 | 16 933 | 17 322 | 0.50 |
| Health expenditure (last 3 months)                      | 13 565 | 17 205 | 15 033 | 0.45 |
| No constraint on education expenses                     | 0.27   | 0.25   | 0.26   | 0.07 |

Sample : all eligible candidates (12 692 obs)

| Variable Labels   | (2)           | (3)           | (4)                   | (5)              | (6)       | (7)             | (8)                            |
|---|---------------|---------------|-----------------------|------------------|-----------|-----------------|--------------------------------|
|   | Control Group | Treated Group | p-val of test (2)-(3) | T1 (Semi-credit) | T2 (VSLA) | T3 (Cash Grant) | p-val of join test (5)=(6)=(7) |
| Type of locality (1 = village)                            | 0.83          | 0.80          | 0.70                  | 0.83             | 0.76      | 0.81            | 0.70                           |
| Gender  | 0.62          | 0.62          | 0.92                  | 0.62             | 0.62      | 0.61            | 0.86                           |
| Age   | 33.77         | 33.74         | 0.93                  | 33.84            | 33.46     | 34.10           | 0.49                           |
| Single  | 0.23          | 0.21          | 0.36                  | 0.20             | 0.22      | 0.22            | 0.65                           |
| Married   | 0.31          | 0.33          | 0.71                  | 0.32             | 0.33      | 0.34            | 0.95                           |
| Cohabitant  | 0.20          | 0.22          | 0.51                  | 0.23             | 0.22      | 0.18            | 0.28                           |
| Divorced  | 0.03          | 0.03          | 0.51                  | 0.03             | 0.03      | 0.02            | 0.62                           |
| Widowed   | 0.22          | 0.21          | 0.66                  | 0.21             | 0.20      | 0.24            | 0.53                           |
| Nb of children  | 3.35          | 3.35          | 0.94                  | 3.36             | 3.33      | 3.37            | 0.92                           |
| Nb of dependent children (<15 years)                      | 2.61          | 2.57          | 0.59                  | 2.56             | 2.59      | 2.54            | 0.93                           |
| Has been to school (at least once)                        | 0.53          | 0.51          | 0.50                  | 0.51             | 0.52      | 0.49            | 0.68                           |
| Currently at school                                       | 0.00          | 0.00          | 0.81                  | 0.00             | 0.00      | 0.00            | 0.82                           |
| No Diploma  | 0.81          | 0.80          | 0.67                  | 0.80             | 0.79      | 0.80            | 0.90                           |
| Primary school  | 0.16          | 0.15          | 0.52                  | 0.15             | 0.14      | 0.14            | 0.87                           |
| Middle school   | 0.03          | 0.04          | 0.03                  | 0.03             | 0.05      | 0.04            | 0.30                           |
| High school and more                                      | 0.01          | 0.01          | 0.21                  | 0.01             | 0.02      | 0.01            | 0.60                           |
| Has completed professional training                       | 0.09          | 0.10          | 0.10                  | 0.09             | 0.11      | 0.11            | 0.27                           |
| Head of the Household                                     | 0.56          | 0.53          | 0.24                  | 0.54             | 0.51      | 0.56            | 0.40                           |
| Spouse of the Head of the Household                       | 0.25          | 0.27          | 0.46                  | 0.27             | 0.28      | 0.22            | 0.22                           |
| Child of the Head of the Household                        | 0.12          | 0.13          | 0.27                  | 0.13             | 0.14      | 0.13            | 0.79                           |
| Other Status  | 0.07          | 0.07          | 0.99                  | 0.06             | 0.07      | 0.09            | 0.08                           |
| Single mother   | 0.02          | 0.01          | 0.05                  | 0.01             | 0.01      | 0.01            | 0.49                           |
| Out of school or out of school in primary school          | 0.81          | 0.80          | 0.68                  | 0.80             | 0.79      | 0.80            | 0.91                           |
| Disabled  | 0.06          | 0.04          | 0.07                  | 0.04             | 0.04      | 0.04            | 0.80                           |
| Nb of animal heads (livestock, poultry, others)           | 4.29          | 4.23          | 0.89                  | 3.93             | 4.38      | 4.56            | 0.49                           |
| Nb of agricultural tools owned                            | 0.18          | 0.23          | 0.07                  | 0.23             | 0.23      | 0.23            | 0.99                           |
| Nb of owned transport vehicles (bicycle, motorcycle, car) | 0.18          | 0.25          | 0.03                  | 0.24             | 0.26      | 0.26            | 0.85                           |
| Nb of comfort objects owned                               | 0.21          | 0.26          | 0.37                  | 0.21             | 0.33      | 0.25            | 0.38                           |
| Nb of rooms   | 2.95          | 3.10          | 0.09                  | 3.12             | 3.02      | 3.22            | 0.38                           |
| Nb of household members (excluding individual)            | 5.39          | 5.66          | 0.08                  | 5.62             | 5.62      | 5.85            | 0.62                           |

Table 7 : Balance checks (1/2) - Full sample

Sample : all eligible candidates (12 692 obs)

|   | (2)       | (3)       | (4)  | (5)       | (6)       | (7)       | (8)  |
|---|-----------|-----------|------|-----------|-----------|-----------|------|
| Nb members participating in household expenses          | 1.04      | 1.14      | 0.08 | 1.14      | 1.12      | 1.22      | 0.59 |
| Nb of dependent members                                 | 2.46      | 2.46      | 1.00 | 2.49      | 2.40      | 2.55      | 0.73 |
| Transfers received outside the household (last 30 days) | 2 936.47  | 3 189.97  | 0.66 | 2 568.62  | 4 026.41  | 2 824.73  | 0.14 |
| Has done an agricultural activity (last 6 months)       | 0.83      | 0.83      | 0.99 | 0.84      | 0.79      | 0.88      | 0.24 |
| Has an activity (last 7 days)                           | 0.96      | 0.96      | 0.58 | 0.96      | 0.96      | 0.98      | 0.01 |
| Nb of hours (last 7 days)                               | 38.66     | 38.49     | 0.88 | 38.66     | 37.87     | 39.40     | 0.64 |
| Nb of days (last 30 days)                               | 18.30     | 18.14     | 0.77 | 18.39     | 17.72     | 18.45     | 0.51 |
| Main Activity- Employee                                 | 0.08      | 0.08      | 0.95 | 0.09      | 0.08      | 0.08      | 0.83 |
| Main Activity- Independent                              | 0.27      | 0.25      | 0.71 | 0.23      | 0.28      | 0.24      | 0.59 |
| Main Activity- Independent farmer                       | 0.53      | 0.55      | 0.79 | 0.58      | 0.51      | 0.55      | 0.52 |
| Main Activity- Other                                    | 0.10      | 0.10      | 0.75 | 0.09      | 0.11      | 0.12      | 0.10 |
| Remuneration - Fixed                                    | 0.01      | 0.02      | 0.59 | 0.01      | 0.02      | 0.01      | 0.65 |
| Remuneration - Profit                                   | 0.66      | 0.62      | 0.31 | 0.63      | 0.63      | 0.59      | 0.66 |
| Remuneration - Nature                                   | 0.17      | 0.19      | 0.47 | 0.19      | 0.17      | 0.21      | 0.61 |
| Remuneration - Unpaid                                   | 0.08      | 0.09      | 0.23 | 0.08      | 0.11      | 0.11      | 0.05 |
| Remuneration - Other                                    | 0.08      | 0.08      | 0.75 | 0.08      | 0.07      | 0.07      | 0.81 |
| Total income from main activity over the last month     | 32 759.72 | 36 972.38 | 0.19 | 37 668.89 | 35 443.75 | 38 625.70 | 0.80 |
| Self-employed   | 0.76      | 0.75      | 0.75 | 0.75      | 0.73      | 0.78      | 0.35 |
| Independent activity different from the main one        | 0.23      | 0.23      | 0.87 | 0.22      | 0.21      | 0.31      | 0.18 |
| Accounting - No   | 0.15      | 0.13      | 0.56 | 0.15      | 0.14      | 0.10      | 0.26 |
| Accounting - Memorize                                   | 0.72      | 0.74      | 0.44 | 0.74      | 0.74      | 0.76      | 0.89 |
| Accounting - Note                                       | 0.10      | 0.10      | 0.99 | 0.10      | 0.10      | 0.12      | 0.48 |
| Accounting - Other                                      | 0.02      | 0.01      | 0.27 | 0.01      | 0.01      | 0.01      | 0.97 |
| Has already had another IGA                             | 0.51      | 0.46      | 0.12 | 0.47      | 0.46      | 0.44      | 0.65 |
| Has a project to create an AGR currently (not realized) | 0.89      | 0.89      | 0.87 | 0.89      | 0.89      | 0.89      | 0.97 |
| Has Saved over the last 3 months                        | 0.57      | 0.54      | 0.34 | 0.52      | 0.54      | 0.58      | 0.47 |
| Savings flows (last 3 months)                           | 17 353.28 | 25 059.97 | 0.21 | 30 357.04 | 20 509.01 | 22 744.08 | 0.72 |
| Savings stock   | 45 310.70 | 26 214.63 | 0.50 | 31 754.96 | 22 450.70 | 21 696.45 | 0.84 |
| Has a mobile money account                              | 0.19      | 0.20      | 0.74 | 0.20      | 0.23      | 0.18      | 0.56 |
| Has a bank account or savings                           | 0.02      | 0.02      | 0.54 | 0.02      | 0.02      | 0.01      | 0.19 |
| Has participated to a Tontine                           | 0.54      | 0.50      | 0.21 | 0.49      | 0.50      | 0.55      | 0.39 |
| Is indebted   | 0.23      | 0.23      | 0.74 | 0.24      | 0.22      | 0.20      | 0.63 |
| Debt stock  | 6 808.23  | 9 690.03  | 0.19 | 12 203.45 | 7 831.57  | 7 957.54  | 0.68 |
| Cash savings (first form of savings)                    | 0.44      | 0.40      | 0.16 | 0.41      | 0.39      | 0.42      | 0.78 |
| Education expenses (last 3 months)                      | 15 876.62 | 17 906.04 | 0.17 | 18 323.40 | 17 093.95 | 18 677.50 | 0.71 |
| Health expenditure (last 3 months)                      | 12 163.12 | 16 190.68 | 0.17 | 14 985.08 | 12 398.84 | 26 885.08 | 0.38 |
| No constraint on education expenses                     | 0.29      | 0.25      | 0.09 | 0.24      | 0.25      | 0.27      | 0.79 |
| Strong constraints on education expenses                | 0.57      | 0.61      | 0.12 | 0.62      | 0.61      | 0.61      | 0.95 |
| No constraints health expenses                          | 0.16      | 0.16      | 0.73 | 0.15      | 0.17      | 0.15      | 0.56 |
| Strong health expenditure constraints                   | 0.65      | 0.68      | 0.22 | 0.69      | 0.67      | 0.70      | 0.73 |

Sample : selected candidates (for control group. The selection is simulated using the same cut-off) (7661 obs)

| Variable Labels   | (1)<br>Control<br>Group | (2)<br>Treated<br>Group | (3)<br>p-val<br>of test<br>(1)-(2) | (4)<br>T1<br>(Sem1<br>Credit) | (5)<br>T2<br>(VSLA) | (6)<br>T3<br>(Cash<br>grant) | (7)<br>p-val<br>of test<br>(4) | (8)<br>p-val<br>of test<br>(5) | (9)<br>p-val<br>of test<br>(6) |
|---|-------------------------|-------------------------|------------------------------------|-------------------------------|---------------------|------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Type of locality (1 = village)                            | 0.82                    | 0.80                    | 0.71                               | 0.83                          | 0.76                | 0.80                         | 0.89                           | 0.50                           | 0.82                           |
| Gender  | 0.71                    | 0.71                    | 0.91                               | 0.72                          | 0.71                | 0.68                         | 0.73                           | 0.65                           | 0.44                           |
| Age   | 34.94                   | 35.28                   | 0.50                               | 35.64                         | 34.97               | 35.22                        | 0.76                           | 0.52                           | 0.67                           |
| Single  | 0.21                    | 0.19                    | 0.27                               | 0.18                          | 0.20                | 0.19                         | 0.15                           | 0.74                           | 0.47                           |
| Married   | 0.28                    | 0.28                    | 0.82                               | 0.26                          | 0.29                | 0.32                         | 0.61                           | 0.36                           | 0.43                           |
| Cohabitant  | 0.19                    | 0.19                    | 0.77                               | 0.20                          | 0.20                | 0.17                         | 0.26                           | 0.46                           | 0.58                           |
| Divorced  | 0.04                    | 0.03                    | 0.49                               | 0.04                          | 0.03                | 0.03                         | 0.51                           | 0.15                           | 0.26                           |
| Widowed   | 0.29                    | 0.30                    | 0.75                               | 0.31                          | 0.28                | 0.30                         | 0.50                           | 0.25                           | 0.86                           |
| Nb of children  | 3.58                    | 3.62                    | 0.73                               | 3.64                          | 3.63                | 3.58                         | 0.51                           | 0.64                           | 1.00                           |
| Nb of dependent children (<15 years)                      | 2.72                    | 2.67                    | 0.61                               | 2.67                          | 2.69                | 2.64                         | 0.19                           | 0.46                           | 0.58                           |
| Has been to school (at least once)                        | 0.46                    | 0.43                    | 0.34                               | 0.42                          | 0.45                | 0.41                         | 0.63                           | 0.93                           | 0.22                           |
| Currently at school                                       | 0.00                    | 0.00                    | 0.99                               | 0.00                          | 0.00                | 0.00                         | 0.60                           | 0.99                           | 0.99                           |
| No Diploma  | 0.91                    | 0.93                    | 0.30                               | 0.94                          | 0.92                | 0.92                         | 0.60                           | 0.50                           | 0.84                           |
| Primary school  | 0.07                    | 0.05                    | 0.10                               | 0.04                          | 0.05                | 0.06                         | 0.45                           | 0.89                           | 0.54                           |
| Middle school   | 0.01                    | 0.02                    | 0.77                               | 0.01                          | 0.02                | 0.02                         | 0.65                           | 0.21                           | 0.47                           |
| High school and more                                      | 0.00                    | 0.00                    | 0.43                               | 0.00                          | 0.01                | 0.00                         | 0.71                           | 0.12                           | 0.84                           |
| Has completed professional training                       | 0.08                    | 0.08                    | 0.47                               | 0.07                          | 0.09                | 0.09                         | 0.59                           | 0.08                           | 0.25                           |
| Head of the household                                     | 0.57                    | 0.57                    | 0.95                               | 0.59                          | 0.55                | 0.56                         | 0.69                           | 0.15                           | 0.97                           |
| Spouse of the head of the household                       | 0.25                    | 0.25                    | 0.86                               | 0.24                          | 0.27                | 0.23                         | 0.28                           | 0.16                           | 0.47                           |
| Child of the head of the household                        | 0.11                    | 0.11                    | 0.66                               | 0.11                          | 0.12                | 0.11                         | 1.00                           | 0.61                           | 0.88                           |
| Other Status  | 0.07                    | 0.07                    | 0.85                               | 0.05                          | 0.06                | 0.09                         | 0.26                           | 0.70                           | 0.18                           |
| Single mother   | 0.02                    | 0.01                    | 0.13                               | 0.01                          | 0.01                | 0.02                         | 0.07                           | 0.20                           | 0.55                           |
| Out of school or out of school in primary school          | 0.91                    | 0.93                    | 0.30                               | 0.94                          | 0.92                | 0.92                         | 0.63                           | 0.50                           | 0.82                           |
| Disabled  | 0.07                    | 0.05                    | 0.14                               | 0.06                          | 0.06                | 0.04                         | 0.18                           | 0.09                           | 0.06                           |
| Nb of animal heads (livestock, poultry, others)           | 2.76                    | 2.45                    | 0.31                               | 2.05                          | 2.43                | 3.09                         | 0.82                           | 0.64                           | 0.41                           |
| Nb of agricultural tools owned                            | 0.08                    | 0.09                    | 0.77                               | 0.07                          | 0.08                | 0.12                         | 0.04                           | 0.15                           | 0.26                           |
| Nb of owned transport vehicles (bicycle, motorcycle, car) | 0.09                    | 0.12                    | 0.23                               | 0.09                          | 0.12                | 0.15                         | 0.10                           | 0.06                           | 0.13                           |
| Nb of comfort objects owned                               | 0.11                    | 0.14                    | 0.46                               | 0.08                          | 0.19                | 0.16                         | 0.66                           | 0.08                           | 0.42                           |
| Nb of rooms   | 2.83                    | 2.87                    | 0.65                               | 2.81                          | 2.82                | 3.02                         | 0.26                           | 0.42                           | 0.13                           |
| Nb of household members                                   | 5.42                    | 5.51                    | 0.54                               | 5.49                          | 5.42                | 5.69                         | 0.73                           | 0.88                           | 0.22                           |
| Nb members participating in household expenses            | 0.95                    | 0.97                    | 0.71                               | 0.95                          | 0.91                | 1.10                         | 0.19                           | 0.62                           | 0.09                           |
| Nb of dependent members                                   | 2.57                    | 2.70                    | 0.43                               | 2.80                          | 2.63                | 2.65                         | 0.86                           | 0.60                           | 0.68                           |
| Transfers received outside the household (last 30 days)   | 2 178                   | 1 808                   | 0.44                               | 1 105                         | 2 335               | 2 016                        | 0.10                           | 0.58                           | 0.83                           |

Table 8 : Balance checks (2/2) - Sample of selected individuals

Sample : selected candidates (for control group. The selection is simulated using the same cut-off) (7661 obs)

|   | (1)    | (2)    | (3)  | (4)    | (5)    | (6)    | (7)  | (8)  | (9)  |
|---|--------|--------|------|--------|--------|--------|------|------|------|
| Has done an agricultural activity (last 6 months)       | 0.81   | 0.82   | 0.98 | 0.82   | 0.78   | 0.87   | 0.64 | 0.59 | 0.22 |
| Has an activity (last 7 days)                           | 0.94   | 0.95   | 0.96 | 0.94   | 0.93   | 0.97   | 0.56 | 0.93 | 0.02 |
| Nb of hours (last 7 days)                               | 37.43  | 36.64  | 0.51 | 36.42  | 35.69  | 38.52  | 0.88 | 0.46 | 0.53 |
| Nb of days (last 30 days)                               | 17.73  | 17.35  | 0.52 | 17.38  | 16.88  | 18.06  | 0.97 | 0.41 | 0.68 |
| Main Activity- Employee                                 | 0.09   | 0.09   | 0.93 | 0.10   | 0.08   | 0.08   | 0.94 | 0.38 | 0.67 |
| Main Activity- Independent                              | 0.27   | 0.25   | 0.60 | 0.22   | 0.28   | 0.25   | 0.40 | 0.81 | 0.70 |
| Main Activity- Independent farmer                       | 0.51   | 0.51   | 0.92 | 0.54   | 0.47   | 0.54   | 0.29 | 0.79 | 0.61 |
| Main Activity- Other                                    | 0.11   | 0.13   | 0.35 | 0.12   | 0.14   | 0.12   | 0.49 | 0.38 | 0.70 |
| Remuneration - Fixed                                    | 0.01   | 0.01   | 0.64 | 0.01   | 0.01   | 0.01   | 0.94 | 0.45 | 0.80 |
| Remuneration - Profit                                   | 0.64   | 0.59   | 0.15 | 0.59   | 0.59   | 0.58   | 0.95 | 0.50 | 0.24 |
| Remuneration - Nature                                   | 0.17   | 0.20   | 0.36 | 0.20   | 0.18   | 0.22   | 0.51 | 0.80 | 0.29 |
| Remuneration - Unpaid                                   | 0.10   | 0.12   | 0.07 | 0.11   | 0.14   | 0.12   | 0.72 | 0.09 | 0.33 |
| Remuneration - Other                                    | 0.09   | 0.08   | 0.59 | 0.09   | 0.07   | 0.08   | 0.54 | 0.21 | 0.69 |
| Total income from main activity over the last month     | 22 494 | 22 878 | 0.85 | 21 507 | 21 339 | 27 400 | 0.13 | 0.36 | 0.13 |
| Self-employed   | 0.73   | 0.72   | 0.58 | 0.71   | 0.70   | 0.78   | 0.89 | 0.59 | 0.25 |
| Second independent activity                             | 0.22   | 0.24   | 0.54 | 0.23   | 0.20   | 0.32   | 0.92 | 0.55 | 0.07 |
| Accounting - No   | 0.15   | 0.14   | 0.62 | 0.16   | 0.15   | 0.11   | 0.88 | 0.74 | 0.15 |
| Accounting - Memorize                                   | 0.75   | 0.78   | 0.32 | 0.77   | 0.78   | 0.80   | 0.52 | 0.41 | 0.24 |
| Accounting - Note                                       | 0.07   | 0.06   | 0.58 | 0.05   | 0.06   | 0.08   | 1.00 | 0.83 | 0.59 |
| Accounting - Other                                      | 0.02   | 0.01   | 0.29 | 0.01   | 0.01   | 0.01   | 0.21 | 0.21 | 0.34 |
| Has already had another IGA                             | 0.52   | 0.48   | 0.28 | 0.50   | 0.49   | 0.46   | 0.41 | 0.24 | 0.17 |
| Has a project to create an AGR currently (not realized) | 0.90   | 0.89   | 0.82 | 0.89   | 0.89   | 0.89   | 0.69 | 0.63 | 0.87 |
| Has Saved over the last 3 months                        | 0.54   | 0.49   | 0.15 | 0.46   | 0.47   | 0.55   | 0.27 | 0.28 | 0.67 |
| Savings flows (last 3 months)                           | 12 403 | 15 297 | 0.27 | 16 438 | 12 672 | 17 797 | 0.34 | 0.31 | 0.13 |
| Savings stock   | 52 248 | 15 762 | 0.35 | 18 212 | 13 114 | 16 336 | 0.38 | 0.33 | 0.36 |
| Has a mobile money account                              | 0.16   | 0.15   | 0.75 | 0.14   | 0.18   | 0.13   | 0.78 | 0.52 | 0.40 |
| Has a bank account or savings                           | 0.01   | 0.01   | 0.45 | 0.01   | 0.01   | 0.01   | 0.74 | 0.63 | 0.18 |
| Has participated to a Tontine                           | 0.55   | 0.51   | 0.23 | 0.49   | 0.49   | 0.56   | 0.11 | 0.12 | 0.83 |
| Is indebted   | 0.24   | 0.23   | 0.64 | 0.24   | 0.23   | 0.21   | 0.79 | 0.62 | 0.43 |
| Debt stock  | 5 976  | 8 027  | 0.19 | 9 998  | 7 083  | 6 583  | 0.31 | 0.30 | 0.62 |
| Cash savings (first form of savings)                    | 0.42   | 0.37   | 0.17 | 0.37   | 0.35   | 0.42   | 0.46 | 0.18 | 0.96 |
| Education expenses (last 3 months)                      | 15 263 | 16 933 | 0.30 | 17 288 | 15 983 | 17 923 | 0.48 | 0.75 | 0.18 |
| Health expenditure (last 3 months)                      | 11 547 | 17 205 | 0.24 | 13 602 | 11 732 | 31 395 | 0.30 | 0.59 | 0.29 |
| No constraint on education expenses                     | 0.27   | 0.25   | 0.23 | 0.24   | 0.24   | 0.25   | 0.28 | 0.37 | 0.53 |
| Strong constraints on education expenses                | 0.60   | 0.63   | 0.25 | 0.63   | 0.63   | 0.63   | 0.60 | 0.47 | 0.47 |
| No constraints health expenses                          | 0.16   | 0.16   | 0.96 | 0.15   | 0.17   | 0.14   | 0.78 | 0.53 | 0.56 |
| Strong health expenditure constraints                   | 0.67   | 0.70   | 0.28 | 0.71   | 0.69   | 0.72   | 0.55 | 0.84 | 0.20 |

|                                  | (1)  | (2)                                    | (3)                                    | (4)                                       | (5)  | (6)  | (7)  |
|----------------------------------|--|--|--|---|--|--|--|
| <b>Panel A. Pooled Estimates</b> | Employment<br>(Has an activity<br>of any type) | Self employed<br>(at least 1 activity) | Wage employed<br>(at least 1 activity) | # Independent<br>Activities per<br>indiv. | # Non-Agricultural<br>Independent<br>Activities per indiv. | # Agricultural<br>Independent<br>Activities per indiv. | # Activities launched<br>last 12 months still<br>operating |
|                                  | coef/(se)                                      | coef/(se)                              | coef/(se)                              | coef/(se)                                 | coef/(se)  | coef/(se)  | coef/(se)  |
| Program Treatment (ITT)          | 0.01<br>(0.01)                                 | 0.03**<br>(0.01)                       | -0.03**<br>(0.01)                      | 0.32***<br>(0.10)                         | 0.08*<br>(0.04)  | 0.25**<br>(0.11)                                       | 0.14***<br>(0.04)  |
| Department X (Urban/Rural)       | Yes  | Yes                                    | Yes                                    | Yes                                       | Yes  | Yes  | Yes  |
| Mean in Control                  | 95.0%  | 91.6%                                  | 10.4%                                  | 3.13                                      | 0.67   | 2.45   | 0.43   |
| Observations                     | 2,620  | 2,620                                  | 2,620                                  | 2,620                                     | 2,620  | 2,620  | 2,620  |

Robust standard errors clustered at locality level.

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

|   | (1)  | (2)                                    | (3)                                    | (4)                                       | (5)  | (6)  | (7)  |
|---|--|--|--|---|--|--|--|
| <b>Panel B. Treatment Arm<br/>Estimates</b> | Employment<br>(Has an activity<br>of any type) | Self employed<br>(at least 1 activity) | Wage employed<br>(at least 1 activity) | # Independent<br>Activities per<br>indiv. | # Non-Agricultural<br>Independent<br>Activities per indiv. | # Agricultural<br>Independent<br>Activities per indiv. | # Activities launched<br>last 12 months still<br>operating |
|   | coef/(se)                                      | coef/(se)                              | coef/(se)                              | coef/(se)                                 | coef/(se)  | coef/(se)  | coef/(se)  |
| Semi Credit (T1) (ITT)                      | 0.02<br>(0.01)                                 | 0.03**<br>(0.01)                       | -0.04**<br>(0.02)                      | 0.37***<br>(0.12)                         | 0.09*<br>(0.05)  | 0.28**<br>(0.13)                                       | 0.15***<br>(0.05)  |
| VSLA (T2) (ITT)                             | 0.01<br>(0.01)                                 | 0.02<br>(0.01)                         | -0.01<br>(0.02)                        | 0.30**<br>(0.12)                          | 0.05<br>(0.06)   | 0.25*<br>(0.13)  | 0.12**<br>(0.05)   |
| Cash Grant (T3) (ITT)                       | 0.01<br>(0.01)                                 | 0.04***<br>(0.01)                      | -0.05**<br>(0.02)                      | 0.27<br>(0.18)                            | 0.10<br>(0.07)   | 0.17<br>(0.21)   | 0.16**<br>(0.08)   |
| Department X (Urban/Rural)                  | Yes  | Yes                                    | Yes                                    | Yes                                       | Yes  | Yes  | Yes  |
| Mean in Control                             | 95.0%  | 91.6%                                  | 10.4%                                  | 3.13                                      | 0.67   | 2.45   | 0.43   |
| p-value T1=T2                               | 0.65   | 0.64                                   | 0.06                                   | 0.58                                      | 0.58   | 0.78   | 0.53   |
| p-value T1=T3                               | 0.82   | 0.38                                   | 0.80                                   | 0.57                                      | 0.86   | 0.58   | 0.91   |
| p-value T2=T3                               | 0.81   | 0.17                                   | 0.05                                   | 0.85                                      | 0.53   | 0.70   | 0.58   |
| p-value T1=T2=T3                            | 0.90   | 0.35                                   | 0.09                                   | 0.79                                      | 0.80   | 0.85   | 0.78   |
| Observations                                | 2,620  | 2,620                                  | 2,620                                  | 2,620                                     | 2,620  | 2,620  | 2,620  |

Robust standard errors clustered at locality level.

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Table 9 : Main impacts on employment

|                                  | (1)                         | (2)                                   | (3)   | (4)   | (5)   |
|----------------------------------|-----------------------------|---------------------------------------|---|---|---|
| <b>Panel A. Pooled Estimates</b> | Total Hours worked (weekly) | Earnings in Wage Employment (monthly) | Earnings in Self Employment (Profits) (monthly) | Earnings in Self Employment : Non Agricultural Activities (Profits) (monthly) | Earnings in Self Employment : Agricultural Activities (Profits) (monthly) |
|                                  | coef/(se)                   | coef/(se)                             | coef/(se)                                       | coef/(se)   | coef/(se)   |
| Program Treatment (ITT)          | 0.78<br>(1.50)              | -68.05<br>(718.09)                    | 1,726.78<br>(1,777.12)                          | 351.97<br>(1,383.47)  | 1,386.09<br>(1,278.23)  |
| Department X (Urban/Rural)       | Yes                         | Yes                                   | Yes   | Yes   | Yes   |
| Mean in Control                  | 40.08                       | 3,057.36                              | 24,050.42                                       | 13,155.21   | 10,793.20   |
| Observations                     | 2,620                       | 2,615                                 | 2,620   | 2,620   | 2,620   |

Robust standard errors clustered at locality level. Earnings are in CFA franc and winsorized at 99%. Hours winsorized at 99%.

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

|   | (1)                         | (2)                                   | (3)   | (4)   | (5)   |
|---|-----------------------------|---------------------------------------|---|---|---|
| <b>Panel B. Treatment Arm Estimates</b> | Total Hours worked (weekly) | Earnings in Wage Employment (monthly) | Earnings in Self Employment (Profits) (monthly) | Earnings in Self Employment : Non Agricultural Activities (Profits) (monthly) | Earnings in Self Employment : Agricultural Activities (Profits) (monthly) |
|   | coef/(se)                   | coef/(se)                             | coef/(se)                                       | coef/(se)   | coef/(se)   |
| Semi Credit (T1) (ITT)                  | 0.09<br>(1.68)              | -200.52<br>(837.45)                   | 2,393.22<br>(2,217.70)                          | 182.68<br>(1,468.91)  | 2,242.47<br>(1,766.89)  |
| VSLA (T2) (ITT)                         | 2.35<br>(1.88)              | 458.48<br>(928.10)                    | 859.10<br>(2,372.50)                            | -14.67<br>(2,070.74)  | 819.54<br>(1,345.97)  |
| Cash Grant (T3) (ITT)                   | -0.89<br>(1.82)             | -852.09<br>(817.22)                   | 2,000.59<br>(3,098.32)                          | 1,497.98<br>(2,075.77)  | 602.27<br>(2,540.08)  |
| Department X (Urban/Rural)              | Yes                         | Yes                                   | Yes   | Yes   | Yes   |
| Mean in Control                         | 40.08                       | 3,057.36                              | 24,050.42                                       | 13,155.21   | 10,793.20   |
| p-value T1=T2                           | 0.20                        | 0.48                                  | 0.57  | 0.92  | 0.42  |
| p-value T1=T3                           | 0.56                        | 0.40                                  | 0.91  | 0.53  | 0.55  |
| p-value T2=T3                           | 0.09                        | 0.14                                  | 0.74  | 0.55  | 0.93  |
| p-value T1=T2=T3                        | 0.22                        | 0.32                                  | 0.85  | 0.79  | 0.70  |
| Observations                            | 2,620                       | 2,615                                 | 2,620   | 2,620   | 2,620   |

Robust standard errors clustered at locality level. Earnings are in CFA franc and winsorized at 99%. Hours winsorized at 99%.

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Table 10 : Main impacts on earnings

|                                  | (1)                        | (2)                                     | (3)                      | (4)                           | (5)  | (6)  | (7)  | (8)  |
|----------------------------------|----------------------------|---|--------------------------|-------------------------------|--|--|--|--|
| <b>Panel A. Pooled Estimates</b> | Has Saved<br>(last 6 mths) | Participate in<br>a VSLA<br>(currently) | Savings<br>stock         | Savings<br>stock in a<br>VSLA | Credits taken over<br>last 2 years<br>(cumulated amount) | Total start-up<br>capital for main<br>activity | Value of productive<br>assets<br>(main activity) | Investments in<br>main activity<br>(last 6 months) |
|                                  | coef/(se)                  | coef/(se)                               | coef/(se)                | coef/(se)                     | coef/(se)  | coef/(se)                                      | coef/(se)  | coef/(se)  |
| Program Treatment (ITT)          | 0.05**<br>(0.02)           | 0.19***<br>(0.03)                       | 15,171.35<br>(11,811.61) | 7,615.26**<br>(3,180.46)      | 8,655.91**<br>(3,730.38)                                 | 12,693.22***<br>(2,432.35)                     | 10,990.68***<br>(3,240.73)                       | 1,296.55<br>(1,042.82)                             |
| Department X (Urban/Rural)       | Yes                        | Yes                                     | Yes                      | Yes                           | Yes  | Yes  | Yes  | Yes  |
| Mean in Control                  | 81.8%                      | 16.8%                                   | 70,963.25                | 4,983.39                      | 27,226.28  | 15,260.21                                      | 39,538.50  | 5,094.23   |
| Observations                     | 2,620                      | 2,620                                   | 2,618                    | 2,620                         | 2,620  | 2,620  | 2,620  | 2,620  |

Robust standard errors clustered at locality level.

Savings, Credits, Capital, Assets and Investments are in CFA franc and winsorized at 99%.

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

|   | (1)                        | (2)                                     | (3)                         | (4)                           | (5)  | (6)  | (7)  | (8)  |
|---|----------------------------|---|-----------------------------|-------------------------------|--|--|--|--|
| <b>Panel B. Treatment Arm Estimates</b> | Has Saved<br>(last 6 mths) | Participate in<br>a VSLA<br>(currently) | Savings<br>stock            | Savings<br>stock in a<br>VSLA | Credits taken over<br>last 2 years<br>(cumulated amount) | Total start-up<br>capital for main<br>activity | Value of productive<br>assets<br>(main activity) | Investments in<br>main activity<br>(last 6 months) |
|   | coef/(se)                  | coef/(se)                               | coef/(se)                   | coef/(se)                     | coef/(se)  | coef/(se)                                      | coef/(se)  | coef/(se)  |
| Semi Credit (T1) (ITT)                  | 0.03<br>(0.03)             | 0.07**<br>(0.03)                        | 16,985.00<br>(15,525.15)    | 8,143.30<br>(5,257.53)        | 3,327.71<br>(3,920.20)                                   | 14,970.75***<br>(3,162.20)                     | 9,452.43**<br>(3,873.84)                         | 37.43<br>(911.81)                                  |
| VSLA (T2) (ITT)                         | 0.06**<br>(0.03)           | 0.38***<br>(0.04)                       | -201.69<br>(11,452.30)      | 9,504.65***<br>(2,601.07)     | 17,162.78***<br>(4,947.02)                               | 7,666.52**<br>(2,998.70)                       | 11,581.19***<br>(3,947.51)                       | 2,410.21<br>(1,614.32)                             |
| Cash Grant (T3) (ITT)                   | 0.07**<br>(0.03)           | 0.08<br>(0.05)                          | 42,848.36***<br>(16,341.20) | 2,496.31<br>(2,434.49)        | 3,216.50<br>(6,175.03)                                   | 17,897.50***<br>(5,215.74)                     | 13,283.04**<br>(6,282.30)                        | 1,867.79<br>(1,929.52)                             |
| Department X (Urban/Rural)              | Yes                        | Yes                                     | Yes                         | Yes                           | Yes  | Yes  | Yes  | Yes  |
| Mean in Control                         | 81.8%                      | 16.8%                                   | 70,963.25                   | 4,983.39                      | 27,226.28  | 15,260.21                                      | 39,538.50  | 5,094.23   |
| p-value T1=T2                           | 0.19                       | 0.00                                    | 0.18                        | 0.76                          | 0.00   | 0.05   | 0.61   | 0.11   |
| p-value T1=T3                           | 0.20                       | 0.91                                    | 0.15                        | 0.22                          | 0.99   | 0.60   | 0.56   | 0.33   |
| p-value T2=T3                           | 0.85                       | 0.00                                    | 0.00                        | 0.00                          | 0.04   | 0.07   | 0.79   | 0.80   |
| p-value T1=T2=T3                        | 0.30                       | 0.00                                    | 0.01                        | 0.01                          | 0.01   | 0.07   | 0.80   | 0.21   |
| Observations                            | 2,620                      | 2,620                                   | 2,618                       | 2,620                         | 2,620  | 2,620  | 2,620  | 2,620  |

Robust standard errors clustered at locality level.

Savings, Credits, Capital, Assets and Investments are in CFA franc and winsorized at 99%.

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Table 11 : Mechanisms - Impacts on Savings and Capital

| <b>Panel A. Pooled Estimates</b> | (1)   | (2)   |
|----------------------------------|---|---|
|                                  | Entrepreneurship<br>knowledge (quiz)<br>(z-score) | Index of Business<br>Practices implemented<br>(z-score) |
|                                  | coef/(se)   | coef/(se)   |
| Program Treatment (ITT)          | 0.20***<br>(0.06)                                 | 0.20***<br>(0.06)                                       |
| Department X (Urban/Rural)       | Yes   | Yes   |
| Mean in Control                  | -0.00   | -0.09   |
| Observations                     | 2,618   | 2,620   |

Robust standard errors clustered at locality level.

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

| <b>Panel B. Treatment Arm<br/>Estimates</b> | (1)  | (2)   |
|---|--|---|
|   | Score on<br>Entrepreneurship quiz<br>(z-score) | Index of Business<br>Practices implemented<br>(z-score) |
|   | coef/se  | coef/se   |
| Semi Credit (T1) (ITT)                      | 0.29***<br>(0.07)                              | 0.33***<br>(0.07)                                       |
| VSLA (T2) (ITT)                             | 0.04<br>(0.08)                                 | 0.11*<br>(0.06)   |
| Cash Grant (T3) (ITT)                       | 0.32***<br>(0.08)                              | 0.06<br>(0.08)  |
| Department X (Urban/Rural)                  | Yes  | Yes   |
| Mean in Control                             | -0.00  | -0.09   |
| p-value T1=T2                               | 0.00   | 0.00  |
| p-value T1=T3                               | 0.68   | 0.00  |
| p-value T2=T3                               | 0.00   | 0.52  |
| p-value T1=T2=T3                            | 0.00   | 0.00  |
| Observations                                | 2,618  | 2,620   |

Robust standard errors clustered at locality level.

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Table 12 : Mechanisms - Impacts of trainings on Entrepreneurship learning and practices



|                                  | (1)                                    | (2)  | (3)  | (4)   | (5)   | (6)                   | (7)  | (8)                                     |
|----------------------------------|--|--|--|---|---|-----------------------|--|---|
| <b>Panel A. Pooled Estimates</b> | Participation to groups / associations | Solidarity received : # times received financial support | Solidarity given : # times was financially supported | Take parts in community works (# times in last 12 mths) | Take parts in social activities (# times in last 12 mths) | Trust Index (z-score) | Conflict Index (being victim of) (z-score) | Insecurity Index (perception) (z-score) |
|                                  | coef/(se)                              | coef/(se)  | coef/(se)  | coef/(se)   | coef/(se)   | coef/(se)             | coef/se                                    | coef/(se)                               |
| Program Treatment (ITT)          | 0.18***<br>(0.05)                      | 0.16**<br>(0.08)   | 0.28**<br>(0.11)                                     | 0.04<br>(0.03)  | 0.18<br>(0.36)  | 0.03<br>(0.06)        | -0.04<br>(0.04)                            | 0.04<br>(0.06)                          |
| Department X (Urban/Rural)       | Yes                                    | Yes  | Yes  | Yes   | Yes   | Yes                   | Yes  | Yes                                     |
| Mean in Control                  | 1.19                                   | 0.84   | 1.28   | 0.61  | 6.59  | -0.06                 | -0.00                                      | 0.01                                    |
| Observations                     | 2,620                                  | 2,620  | 2,620  | 2,620   | 2,620   | 2,374                 | 2,614                                      | 2,617                                   |

Robust standard errors clustered at locality level.

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

|   | (1)                                | (2)  | (3)  | (4)   | (5)   | (6)                   | (7)  | (8)                                     |
|---|------------------------------------|--|--|---|---|-----------------------|--|---|
| <b>Panel B. Treatment Arm Estimates</b> | Participation to groups (# groups) | Solidarity received : # times received financial support | Solidarity given : # times was financially supported | Take parts in community works (# times in last 12 mths) | Take parts in social activities (# times in last 12 mths) | Trust Index (z-score) | Conflict Index (being victim of) (z-score) | Insecurity Index (perception) (z-score) |
|   | coef/(se)                          | coef/(se)  | coef/(se)  | coef/(se)   | coef/se   | coef/(se)             | coef/se                                    | coef/(se)                               |
| Semi Credit (T1) (ITT)                  | 0.16**<br>(0.07)                   | 0.10<br>(0.09)   | 0.31**<br>(0.13)                                     | 0.03<br>(0.03)  | -0.25<br>(0.40)   | 0.00<br>(0.07)        | -0.05<br>(0.05)                            | 0.03<br>(0.07)                          |
| VSLA (T2) (ITT)                         | 0.18***<br>(0.07)                  | 0.11<br>(0.10)   | 0.26**<br>(0.13)                                     | 0.05<br>(0.04)  | 0.33<br>(0.45)  | 0.05<br>(0.08)        | -0.01<br>(0.06)                            | 0.03<br>(0.07)                          |
| Cash Grant (T3) (ITT)                   | 0.20***<br>(0.08)                  | 0.40**<br>(0.16)   | 0.26<br>(0.18)                                       | 0.02<br>(0.04)  | 0.85<br>(0.52)  | 0.04<br>(0.11)        | -0.10*<br>(0.05)                           | 0.07<br>(0.11)                          |
| Department X (Urban/Rural)              | Yes                                | Yes  | Yes  | Yes   | Yes   | Yes                   | Yes  | Yes                                     |
| Mean in Control                         | 1.19                               | 0.84   | 1.28   | 0.61  | 6.59  | -0.06                 | -0.00                                      | 0.01                                    |
| p-value T1=T2                           | 0.75                               | 0.92   | 0.76   | 0.49  | 0.18  | 0.53                  | 0.58                                       | 0.99                                    |
| p-value T1=T3                           | 0.61                               | 0.09   | 0.81   | 0.69  | 0.03  | 0.72                  | 0.35                                       | 0.70                                    |
| p-value T2=T3                           | 0.82                               | 0.11   | 0.99   | 0.35  | 0.33  | 0.93                  | 0.17                                       | 0.71                                    |
| p-value T1=T2=T3                        | 0.87                               | 0.23   | 0.94   | 0.62  | 0.08  | 0.81                  | 0.37                                       | 0.92                                    |
| Observations                            | 2,620                              | 2,620  | 2,620  | 2,620   | 2,620   | 2,374                 | 2,614                                      | 2,617                                   |

Robust standard errors clustered at locality level.

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Table 13 : Main impacts on social cohesion