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Impacts of the Sustainable Livelihood Program's Microenterprise Development Assistance with Seed Capital Fund on poor households in the Philippines

Aniceto C. Orbeta, Jr., Marife M. Ballesteros, John Paul P. Corpus, Vicente B. Paqueo, and Celia M. Reyes

CONTACT US:

RESEARCH INFORMATION DEPARTMENT
Philippine Institute for Development Studies

18th Floor, Three Cyberpod Centris - North Tower
EDSA corner Quezon Avenue, Quezon City, Philippines

publications@mail.pids.gov.ph
(+632) 8877-4000

https://www.pids.gov.ph

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Aniceto C. Orbeta Jr.
Marife M. Ballesteros
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Celia M. Reyes

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Abstract

This study evaluates the impact of Microenterprise Development (MD) assistance on the labor supply, income, expenditure, savings, and capital investment of beneficiaries of *Pantawid Pamilya*, the Philippine government's conditional cash transfers (CCT) program. The assistance is provided by the Sustainable Livelihood Program (SLP) of the Department of Social Welfare and Development. MD assistance consists of capacity building, group formation, and grants. We focus on MD assistance where the grant component consisted of the Seed Capital Fund (SCF) – a grant worth a maximum of PhP10,000 per beneficiary household used as startup capital or as additional capital for microenterprise. The microenterprise may be run individually or as a group. The evaluation is implemented through a matching design: SCF-recipient CCT households from January 2018 to June 2018 were matched with non-recipient CCT households. We use data from a survey of 2,592 CCT households in 39 cities/municipalities. In our sample, 91 percent of SCF-recipient households were part of a group-managed business project. We find positive impacts on labor supply, but imprecisely estimated null impacts on household income, expenditure, savings, and capital expenditure. The lack of pre-intervention variables for matching, possible biases from self-selection and non-random selection of target areas, possible spillover effects, and insufficient power are some of the weaknesses of the study. Despite these limitations, qualitative data on business project implementation point to serious issues which support the null impacts found on household welfare. These include a substantial business closure rate, lack of participation among group members in business operation, lack of earning opportunities for group members, management issues, and low profitability. Moreover, cost-benefit analysis suggests that program costs outweigh program benefits. To improve SLP's effectiveness, the study recommends packaging the livelihood assistance with supporting interventions such as life skills coaching and savings promotion; recognizing the relative merits of group-based versus individual livelihood projects; improving project development and selection towards greater commercial viability; and strengthening existing supporting interventions such as capacity-building, business monitoring, and technical support.

Keywords: Sustainable Livelihood Program, social protection, microenterprise, livelihood

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Impacts of the Sustainable Livelihood Program's microenterprise development assistance with Seed Capital Fund on poor households in the Philippines[*]

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1. Introduction

Microenterprises and self-employment are major sources of employment and income for poor and low-income households in the Philippines. In 2017, 28 percent of employed members belonging to the bottom third of the income distribution were self-employed (Philippine Statistics Authority [PSA] 2018). Moreover, 56.6 percent of families in the said income group engage in entrepreneurial activities, which accounted for 25.2 percent of the group's total income (PSA 2018).

Several government agencies implement micro-entrepreneurship programs in order to create livelihood opportunities for poor and marginalized households. The largest such program is the Sustainable Livelihood Program (SLP) of the Department of Social Welfare and Development (DSWD). Launched in 2011, SLP aims to improve the socio-economic conditions of poor households through livelihood assistance. One of the program's two tracks[1] is the Microenterprise Development (MD) track, where participants are organized into community-based associations and are provided with financial and/or training assistance to engage in household- or group-managed microenterprise projects. The program operates nationwide and is reported to have provided over 1.8 million households with MD assistance by the end of 2019 (Department of Social Welfare and Development [DSWD] 2019c).

SLP has been subject to a number of process evaluations, but there has been no quantitative evaluation of its impact to date. Our research fills this gap. We evaluate the impact of SLP MD assistance on the labor supply, income, expenditure, income, savings, and capital investment of poor households. MD assistance consists of capacity building, group formation, and a grant or grants for microenterprise development. We focus on MD assistance where the grant component consists solely of the Seed Capital Fund (SCF) – a grant amounting to a maximum of PhP10,000[2] per beneficiary that can be used to start a microenterprise or as additional capital for an existing livelihood activity. The microenterprise project may be individually-managed or group-managed. The evaluation is implemented through a matching design: SCF recipient households from January 2018 to June 2018 were matched with non-recipient but similarly eligible poor households. Data for the analysis was collected through a survey of 2,592 households in 39 cities/municipalities from February 2020 to July 2020. Ninety-one percent of sample treated households implemented a group-managed business project.

The design and analysis implemented has several major weaknesses. First, the pre-intervention variables used for matching do not include our outcomes of interest because of

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[†] Senior Research Fellow, Vice President, Supervising Research Specialist, Visiting Research Fellow, and President, respectively, at the Philippine Institute for Development Studies. We acknowledge the research assistance provided by Jenica Ancheta, Arkin Arboneda, and Ana Rita Vargas.
[1] The other track is the Employment Facilitation (EF) track geared towards placing beneficiaries into wage employment.
[2] Current market exchange rate: USD1 ≈ PhP48.

the absence of such data. This may mean that treated and comparison households are imbalanced on pre-intervention outcomes. Second, there is possible bias from participant self-selection and from possible non-random selection target of barangays by the program, both of which we are not able to account for in the matching and analysis. Third, our decision to match households within the same city/municipality may have resulted in spillover effects to untreated households which we do not account for in the analysis. Fourth, we are not able to control for confounding from participation in similar livelihood programs in 2018. Fifth, the impact analysis does not take into account the effects of barangay- or neighborhood-level market size and the quality and timeliness of interventions received by treated households, which may have differential effects on entrepreneurial outcomes. Sixth, the study has insufficient power to detect significant impacts in income, expenditure and savings.

The SLP evaluation presented in this paper is a substantial change from the planned research questions and design when the study began in 2016. The original objective was to measure the impact of two modifications in the SLP implementation process on the welfare of beneficiary households. First is the use of a "sorting tool" for assigning individual participants to SLP's Microenterprise Development track or Employment Facilitation (EF) track at intake. This was to be compared to the practice of participants self-selecting into tracks. Second is providing job placement services to EF-track beneficiaries through the local public employment office rather than through SLP. These questions responded to interest among DSWD managers at the time for evidence on strategies to improve SLP implementation. The evaluation was designed as a cluster randomized control trial, which was implemented in 59 cities/municipalities in 2018. DSWD had at that point undergone changes in management since the study launched. In the same year, SLP adopted policies that caused a sharp decline in EF participants. This compromised the research questions, prompting a decision to pursue a new evaluation question and design that was implementable given the limited time remaining for the project.

The paper is organized as follows. Section 2 provides a review of related literature. Section 3 gives a description of the intervention, theory of change, and research questions. Section 4 discusses the evaluation design, sampling and data collection. It also gives further discussion of the original evaluation design. We present the qualitative and quantitative findings in Section 5 and discuss a cost-benefit analysis in Section 6. We provide a discussion of the findings and limitations in Section 7 and give our conclusions and recommendations in Section 8.

2. Related literature

There is a substantial body of literature assessing the impact of interventions that aim to promote self-employment or entrepreneurial activity in developing countries.

A large strand of the literature examines the impact of microcredit in promoting entrepreneurial activity and improving well-being among the poor. A review by Banerjee (2013) of recent studies on microcredit note that while there is some evidence that microcredit access leads to enterprise creation or expansion, there is no strong evidence that microcredit has a positive impact on income or total consumption. A review by Banerjee, Karlan and Zinman (2015) of a largely different set of studies echo the same patterns of impacts on intermediate and final household outcomes. Impacts on specific types of expenditure such as education and health are also absent. Though somewhat more encouraging, there is some evidence of negative effects on income from remittances and

government transfers, suggesting increased self-reliance. Systematic reviews of microfinance by Duvenback et al (2011) and Stewart et al (2010) also note mixed impacts.

Several experimental studies show the potential of grants to existing microentrepreneurs to generate increases in business profits, but suggest differential impacts in terms of gender, ability, mode of the grant, and initial firm size. For instance, in De Mel, McKenzie and Woodruff (2008a), cash or in-kind grants of USD 100 or USD 200 were randomized among small non-agricultural microenterprises in Sri Lanka. Treated firms saw a significant increase in profits of about 5 percent per month relative to a grant of USD 100, but returns were lower for female entrepreneurs and those with less ability (in terms of years of schooling and working memory).

In a similar study, Fafchamps et al (2014) randomized a cash or in-kind grant of about USD 120 to male- and female-owned microentrepreneurs in Ghana. They find that cash grants had less impact on profits compared to in-kind grants. This result suggests that giving capital in-kind helps microentrepreneurs overcome the temptation to consume or liquidate the grant. Moreover, the authors find that in-kind grants only increased profits of female-owned microenterprises with higher initial profits or higher initial capital stock. Owners of such firms tend to be more educated, had been in business somewhat longer, and are likelier to have had a formal loan relative to female microentrepreneurs with low initial profits. Their results suggest that cash or in-kinds grants would be less impactful on subsistence microentrepreneurs who may be less able to resist the pressure to consume the grant.

A related line of research provides evidence that livelihood programs combining an asset transfer with a package of supporting interventions, which have come to be known as "graduation" programs, can have transformative and durable effects on the poor. In Bangladesh, Bandiera et al (2013) randomize rural communities to evaluate the impact of a program that provided eligible poor rural women with a productive asset (livestock), classroom training, and regular visits by a livestock specialist and program officers. Both two and four years after the program, target women experienced an increase in labor force participation and total hours worked, and a substantial shift from seasonal wage employment to less seasonal self-employment both in the extensive and intensive margins. Target women also experienced an increase in income, and their households saw an increase in consumption expenditure and food security.

Positive results on income, consumption, and assets were also found in similar studies by Banerjee et al (2015b) and Blattman et al (2016). The former study implemented randomized trials in six countries to evaluate a program that provided poor households six interventions sequenced over two years: a productive asset transfer, temporary consumption support, skills training, high frequency home visits, access to savings, and health education and/or services. The latter study randomized war-afflicted villages in Uganda to evaluate a program that offered a five-day business skills training, a business grant of USD 150 in cash, one-on-one advising and supervision for four to five months over six months, and a three-day group-formation training that encouraged beneficiaries to form a savings group.

To review the effectiveness of entrepreneurship-promoting interventions, Cho and Honorati (2014) conduct a meta-regression analysis of 37 impact evaluation studies implemented between 1999 and 2011 in 25 developing countries. The analysis covers a wide range of interventions (training, grant/credit financing, counseling), target beneficiaries (e.g., youth, women, microentrepreneurs, social assistance beneficiaries), and outcomes (e.g., business activity, income, business performance, business practices). Their results suggest that labor

market activity outcomes (e.g., business setup or expansion, employment, hours of work) are likelier to be associated with positively significant outcomes compared to income-related outcomes (e.g., household income, profits, consumption). In terms of beneficiary groups, impacts estimated for youth and urban population are likelier to be positive and significant than the general population, while programs for microfinance clients are less likely to yield positive impacts. In terms of interventions, results suggest that a combination of training and financing is more effective for improving labor market activity and income for social assistance beneficiaries than providing them separately.

SLP has been subject to several process evaluations.[3] The most relevant to this study is the one conducted by Ballesteros et al (2015) on the MD track, which at the time of the evaluation (2014) was still widely referred to as "SEA-K" (Self-Employment Assistance *Kaunlaran*), the MD track's precursor program (see Section 3.1). The financial assistance at the time consisted of a PhP10,000 loan, and 99 percent of business projects that had been funded since 2011 consisted of individual business projects. Some of the assessment's notable findings are:

1) The livelihoods that beneficiaries used the loan on consisted predominantly of small-scale retail trading and mom-and-pop stores, backyard livestock raising, and small-scale farming.

2) Beneficiaries tend to choose livelihood activities based on their lifestyle (i.e., being mostly home-based), ease of entry, familiarity, and family livelihood history. There is less emphasis on market or growth potential.

3) Repayment performance (share of collections to total receivables) from 2011 to July 2014 was just 54.5 percent among associations with available data. Repayment rates are negatively associated with association membership size.

4) The cost to operate the program per peso disbursed in loans is twice that of a local non-government microfinance institution.

3. Intervention, theory of change, and research hypotheses

3.1. The Sustainable Livelihood Program

Prior to SLP, DSWD implemented various livelihood strategies which in 1996 were rationalized into a single program called Self-Employment Assistance *Kaunlaran*[4] (SEA-K). Under SEA-K, beneficiaries from poor households were organized into community-based associations and were provided with a seed capital loan with no collateral and zero interest. The business loan amounted to PhP5,000 per member, which was doubled to PhP10,000 in 2010. Members were expected to amortize the loan to the association and contribute savings to a group fund. In turn, associations were expected to return the funds to DSWD's SEA-K revolving fund within two years**.**

In 2011, DSWD launched SLP through Administrative Order 11 Series of 2011 which subsumed SEA-K as the program's Microenterprise Development (MD) track, while also starting a track for individuals seeking wage employment called the Employment Facilitation

[3] Ballesteros et al (2016) is a process evaluation of SLP's Employment Facilitation track. Ballesteros et al (2017) meanwhile is a process evaluation of SLP's track selection process and employment facilitation services which served as preliminary work for the original experimental SLP evaluation.
[4] "*Kaunlaran"* is Filipino for "development".

(EF) track. The program's objective is to improve the socio-economic capacity of the poor by enabling them to manage sustainable enterprises or linking them with job opportunities. MD assistance recipients comprise the majority of the program's beneficiaries. As of the end 2019, SLP reports having provided 1,810,725 households with MD assistance and 454,849 households with EF assistance (DSWD 2019c)**.**

To be eligible for SLP assistance, a person should meet minimum age requirements (at least 16 years for MD and at least 18 years for EF) and must belong to a household assessed as poor in the *Listahanan*, DSWD's poverty registry. Current guidelines limit the number of SLP participants in the same household to two members, and each one should be on a different SLP track than the other. SLP prioritizes assisting household beneficiaries of the *Pantawid Pamilya* program – DSWD's conditional cash transfers (CCT) program. [5] Indeed, one of the program's specific objectives is to "sustain and expand the benefits gained" by CCT beneficiaries through the program (DSWD 2011). CCT households clear the poverty requirement because they were identified as CCT beneficiaries using the same poverty registry. CCT households comprise 80.2 percent of all SLP beneficiaries as of end 2019 (DSWD 2019c)**.**

Enrolment to the program is voluntary, with program officers recruiting new participants annually. The program sets an annual target number of households to provide with assistance based on its approved annual budget. Each year, field offices identify target cities/municipalities from which to recruit participants. Within these, the program also identifies target *barangays* (villages)[6]. The program primarily selects sites that have a relatively large number of CCT households that remain unreached by SLP.

3.2. The Microenterprise Development track

MD-track assistance has three components: capacity building, group formation, and grant assistance. Capacity building consists of lecture sessions on the following: 1) a discussion of feasible livelihoods in the community based on initial analysis by SLP program officers; 2) lectures on micro-entrepreneurship, basic bookkeeping and accounting, and the requirements for business registration; and 3) guidance on microenterprise feasibility and grant application forms (DSWD 2019a). Attendance to these sessions is mandatory. Lectures are conducted by an SLP program officer and/or an external resource person and are to be completed within two days. The lectures are commonly done at the level of the *barangay*, where enough people will sign up to the MD track to form at least one SLP association.

Under group formation, MD-track participants form an SLP association (SLPA) composed of five to 30 members. SLPAs formulate their group goals, adopt a constitution and bylaws, and elect officers. SLP provides a template for the SLPA's constitution and organizational structure. The SLPA also opens a bank account, usually in Landbank[7] or a local rural bank, to which the grants will be deposited. For participants who are also CCT grantees, SLPA

[5] The CCT program provides beneficiary households with a monthly health grant of PhP500, and a monthly education grant for at most three children amounting to PhP300 per child in day care, kindergarten and elementary, and PhP500 per child in high school. The grants are released conditional on pregnant household members and children 0-5 years availing certain health services, on school-going children having a monthly class attendance rate of 85 percent, and the household grantee (usually the mother of the children benefiting from the grants) or both parents attending monthly Family Development Sessions (FDS). The program has 4.25 million active household beneficiaries as of the end of December 2019 (DSWD 2019b).

[6] *Barangays* are the smallest administrative unit in the Philippines. Based on the 2015 Census of the Philippine Statistical Authority, *barangays* have an average population of 2,402 and a median population of 1,363. As of December 2019, the mean and median number of *barangays* in a city/municipality is 25.73 and 21 *barangays*.

[7] Landbank (Land Bank of the Philippines) is a government-owned bank with a mandate to promote countryside development and financial inclusivity.

members may belong to the same neighborhood group of CCT household parents called *Pantawid* Parent Group, which consists of 25-30 members (DSWD n.d.).[8]

The livelihood grants constitute the main intervention. The following are the grants offered under the MD track, which participants may choose to avail separately or in combination, depending on the requirements of their chosen business project.

1) Seed Capital Fund (SCF). In 2015, DSWD transformed the seed capital from a loan into a grant and dropped the SEA-K label. SCF is designed to be used as startup capital for microenterprise or as additional capital for an existing microenterprise. The fund covers outlays for tools, raw materials, durable assets, and other operating or startup expenses. SCF can be used to fund a group business or businesses of individual members. In 2018, DSWD hiked the grant from PhP10,000 to PhP15,000 per beneficiary.

2) Skills Training Fund (STF). STF is a training grant amounting to a maximum of PhP 15,000 per beneficiary. It aims to facilitate the acquisition of technical and vocational skills necessary to perform a trade. The amount covers various training costs such as tuition, training supplies and materials, and participants' meal and transportation allowance. The STF was introduced in 2014.

3) Cash for Building Livelihood Assets Fund (CBLAF). The CBLAF is used to pay for participants' stipends while working on short-term labor-intensive projects that aim to develop or rebuild natural or physical assets necessary for microenterprise operation. The stipend amounts to 75 percent of the daily regional minimum wage. Some examples of projects supported by CBLA are the construction of common service facilities, desilting of irrigation canals, development of paddy dikes, and tree-planting. Participants work on the project for a maximum of 11 days. CBLAF was introduced in 2014.

The SCF may be availed by an eligible household only once. No such restriction is imposed on the other SLP grants (MD or EF).

The SCF grant is released to SLPAs by check or back transfer. SLPAs are required to submit proofs of purchase and a report on grant utilization to the SLP program officer. Program guidelines permit purchases that deviate from the approved project proposal. For such deviations, group projects are to submit a resolution signed by a majority of members, while individual project beneficiaries must submit a written justification. An SLP monitoring officer verifies the grant utilization report against the approved project proposal. The reports then undergo review at the provincial and regional levels. Per program guidelines, this grant utilization monitoring process must take place in a span of 30 days or less from the release of the SCF grant. Therefore, beneficiaries must spend the funds rather quickly.

After business project implementation, SLPA members are required to amortize the SCF grant to their association through mandatory contributions. The money becomes part of the SLPA's savings, which program guidelines say should be allocated for capital build-up (share

[8] CCT parent groups are organized to "strengthen the participation and support among household beneficiaries in complying with the program conditionalities." In particular, parent groups serve as a "venue for [Family Development Sessions] and other parent group activities … that capacitate them to become more responsive in their parental roles and responsibilities" (DSWD n.d.).

capital)[9], an operational fund, and an emergency fund. SLPAs mobilize savings through mandatory member contributions. The amount, frequency, and duration of contributions are agreed by members and specified in the SLPA's bylaws. The amortization term is usually one to two years. Because SLPAs are required to recover the grant internally, members treat it as a "loan" that needs to be repaid.[10] Under SLPA bylaws, under-payment or non-payment of mandatory contributions constitute breach of discipline and may be subject to fines or disciplinary action.[11]

The microenterprise project may be individually-managed or group-managed. Participants themselves decide whether the business project they wish to pursue is group-managed or individually-managed.[12] An individual project is owned and operated independently by a beneficiary or his/her household. The beneficiary has direct claim over the income generated by the business. The beneficiary pays off the grant through contributions to the SLPA. SLPAs with individual-project beneficiaries may decide to lend out the money to its members once the initial grant has been recovered in full.

Meanwhile, a group business project is owned and operated by members of the SLPA. There are two main ways through which a member can earn an income from a group project. First is by receiving compensation (e.g., wage or stipend) in exchange for rendering service for the business (e.g., manning the shop, purchasing supplies, or manufacturing products). Second is by receiving dividends from the profits of the group business. In practice, whether an SLPA can compensate its working members or pay out dividends depends on its financial standing. In terms of grant recovery, SLPAs in a group project may choose to draw on the group business's income to recoup to the initial grant rather than collect contributions from members. Thus, it may not be able to pay its members dividends until after having recovered the grant.

SLP implementation is decentralized to the 17 regional DSWD offices, while a national program management office sets program policies and standards. Participant recruitment starts with Implementing Project Development Officers (IPDOs) conducting SLP orientations in *barangays* to identify interested participants. The IPDO validates their eligibility through a name match with the CCT database or *Listahanan* database at the DSWD field office. Eligible individuals then undergo the capacity building session and organize into an SLP association. With the IPDO's guidance, participants decide on their business project/s. The IPDO assists participants in completing the project proposal and other required forms and documents. Applications are reviewed and approved at the regional DSWD office. SLPAs also apply for DSWD accreditation as a civil society organization to be eligible to receive government funds. After grant approval, the check is released to the SLPA which officers then deposit to the SLPA's savings account.

[9] The SLPA may use the share capital to fund business expenses or investments (especially if the business is a group project), or to extend credit to members.
[10] SLP's bylaws template uses the word "amortization" to refer to grant recovery. Program officers also describe
[11] We have no qualitative data on whether this is being enforced, and what other measures SLPAs take to deal with non-paying members. On paper, SLPAs are group liability organizations. In practice, based on focus group discussions with individual-project beneficiaries, members pay only for their own share of the grant and did not encounter beneficiaries shouldering liabilities of non-paying members.
[12] While the program allows beneficiaries to decide, there is some anecdotal evidence that field implementers prefer to offer group projects over individual projects for practical purposes. Providing program services to a group project covering multiple beneficiaries (e.g., preparing project proposal documents and monitoring) requires less time and effort compared to providing the same services to same number of beneficiaries each pursuing an individual project. Moreover, since program outputs are measured in terms of beneficiary headcount rather than project count, program officers may be able to reach their beneficiary headcount targets faster with group projects compared to individual projects. In urban areas, beneficiaries tend to prefer individual projects.

The time between recruitment to receipt of the grant and implementation of the business project can take anywhere from six to twelve months. The IPDO monitors the project's implementation within the first three months, including the grant's utilization in accordance with the business plan. After this period, the IPDO hands off beneficiaries to Monitoring Project Development Officers (MPDOs), who must monitor them quarterly for one year and three quarters. The period is considered the projects' "incubation period".

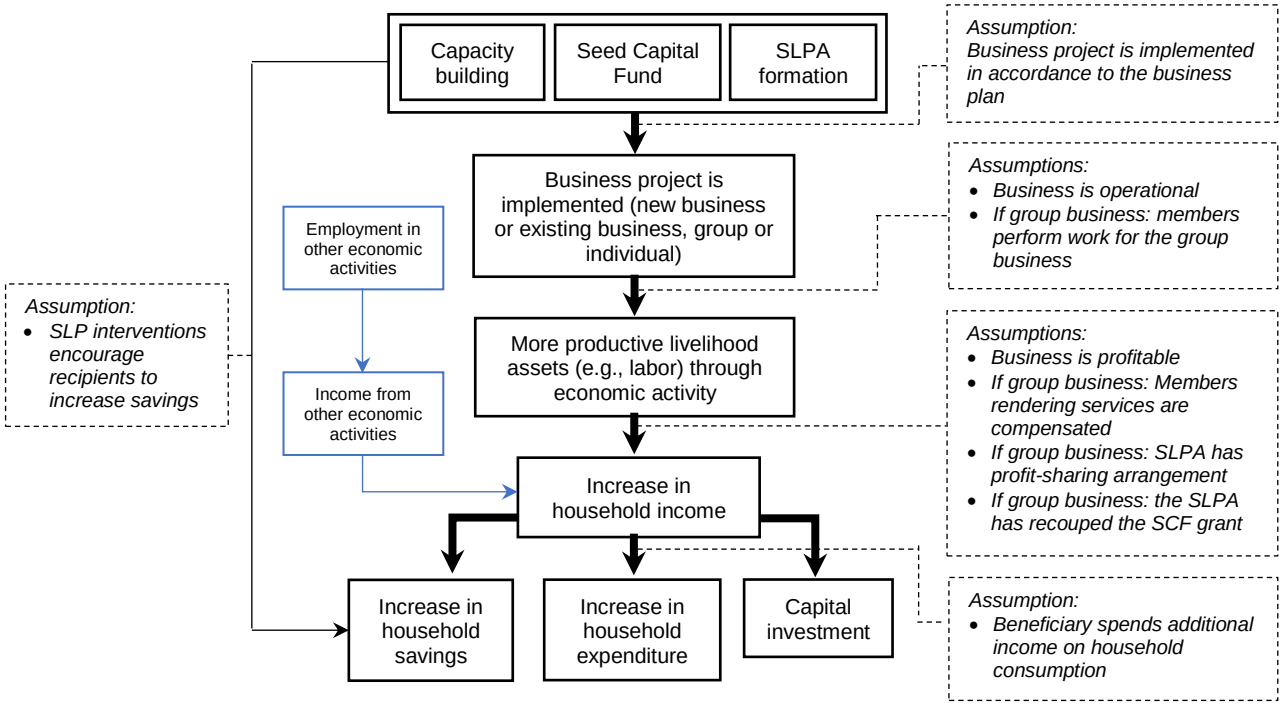
3.3. Theory of change

Figure 3.1 illustrates the causal link from the MD interventions (capacity building, group formation, and Seed Capital Fund) to the final outcomes of interest, which is household expenditure. The thick arrows represent the primary channels while the thin arrow represents the secondary channel.

The first step is for participants to implement the business project after undergoing capacity building, forming an SLPA, and receiving the SCF. This assumes that the funds are used in accordance to the project proposal.

The implementation of the business project leads to the productive utilization of the human capital and financial assets acquired through the program. Participants operate their chosen livelihoods and leads them to be employed. This would allow them to earn income from business. Apart from employment, the number of hours spent working is an indicator that beneficiaries are being economically productive. For low productivity livelihoods with low returns, working longer hours may be required to increase earnings, though this does not apply generally. Nevertheless, number of hours worked is an indication that beneficiaries are economically active, especially if they were not in the labor force prior. The assumption leading to this step is that the business is operational. For group businesses, another assumption is that members perform work to operate the group business.

Figure 3.1. Theory of change



Income earned from operating the business project is expected to result to higher household income. For individually-managed activities, the new business or additional capital for the new business allows the beneficiary to earn additional income from entrepreneurial or sustenance activities,[13] which leads to higher total household income. This assumes that the individual business is profitable. For group-managed businesses, the link from the last step is mediated by group business arrangements and performance. There are at least two channels that link group business performance with household income. The first one is the wage channel, which consists of members who render work for being paid for their services. The wage channel directly affects the household's wage income. One assumption is that the SLPA compensates its members who render work in the business. Another assumption is that the group business is profitable enough so that it can compensate its members' services. The second channel is the dividend channel, which consists of members receiving shares of the group business's profits via dividends. This channel directly affects the household's dividend income. This rests on several assumptions. First is that the SLPA has a profit-sharing arrangement. Second is that the group business is profitable and has profits to distribute. Third is that the SLPA has managed to recover the SCF grant, so that it can afford to distribute earnings rather than put them away as savings.

The blue boxes indicate that household members may be employed in, and earn income from, other economic activities not related to the SLP business project. Income from such activities also contribute to household income.

The increase in household income is expected to lead to an increase in household expenditure, an increase in savings, or to capital investment. An increased in household expenditure assumes that the household spends the additional income on consumption. We expect the poor to be more likely to spend additional income consumption than save it. The additional income may also lead to higher savings, but savings can also increase if the SLP interventions encourage participants to increase their savings. Alternatively, the household may use additional income to make further capital investments on its existing livelihoods or on new livelihood activities.

There are other factors that are likely to have an impact on the performance of SCF-financed projects which are not explicitly considered in the theory of change. First, the assumption that the business project is profitable is anchored on the presence of a market for its products and services.

Second is the quality and timeliness of interventions provided to beneficiaries. Earlier process evaluations take note of program officers' high caseloads which could adversely affect the quality of services participants are receiving (Ballesteros et al 2015, Ballesteros et al 2017). One of these studies (Ballesteros at al 2017) also observed cases of project review and approval taking long time (some taking as long as a year) which could leave participants feeling discouraged. This in turn may have an impact on business operation.

Third is beneficiaries' entrepreneurial orientation and ability. There is a large body of literature studying the personal characteristics that distinguish entrepreneurs from non-entrepreneurs, and successful entrepreneurs from unsuccessful ones (Klinger, Khwaja and del Carpio (2013) give a brief overview). Recently for instance, De Mel, McKenzie and Woodruff (2008a) find that ability (measured in terms of education and scores in cognitive

[13] Sustenance activities are defined by the Philippine Statistics Authority as household-operated activities where most of the products are used for household consumption. These consist of farming/gardening, animal raising, fishing, hunting, and logging. Entrepreneurial activities are household activities where products/services are sold for profit.

tests), motivation, and a competitive attitude distinguish small- and medium-size enterprise (SME) owners from own-account workers in Sri Lanka. In the same study, their discriminant analysis of a sample of Sri Lankan wage workers, own-account workers and SME owners showed that about 70 percent of the self-employed are classified as wage workers rather than SME owners using measures of ability, personality, and family background. This indicates that only a minority of microentepreneurs are likely to become larger business owners. Thus, differences entrepreneurial ability and personality could result in variations in entrepreneurial and household outcomes.

3.4. Research hypotheses and outcomes of interest

Accordingly, Table 3.1 shows our research hypotheses and outcomes of interest. As a shorthand, we refer to MD assistance with SCF only as the grant component as "MD-SCF assistance".

Table 3.1. Research hypotheses and outcomes of interest

Hypothesis	Outcomes
SLP's MD-SCF assistance results in greater hours of work among working-age members of CCT households	Number of hours worked in the reference week
SLP's MD-SCF assistance results in higher household income among CCT households	Household income per capita
SLP's MD-SCF assistance results in higher savings among CCT households	Household savings per capita
SLP's MD-SCF assistance results in higher household consumption among CCT households	Household expenditure per capita

For research hypothesis 1, we will look into two dimensions of number of hours worked. First is the number of hours worked per worker by household members 15 years and above. This measures the economic activity of all working-age household members. Second is the number of hours worked by the CCT grantee-spouse. The CCT grantee is the member of the CCT household who is authorized to withdraw grants on behalf of the household. The grantee is usually the mother of the children benefiting from the grant.[14] By "CCT grantee-spouse", we refer to the CCT grantee who is also the spouse of the household head. SLP MD participants are usually the members of the household who are the CCT grantee and at the same time the spouse of the household head. It is therefore of interest to look into the impact of the intervention on this member of the household. We also report impacts on the following outcomes which were not mentioned in the pre-analysis plan: share of household members in the labor force, share of employed members, whether the CCT grantee-spouse is in the labor force, and whether the CCT grantee-spouse is employed.

For research hypothesis 2, we also look into other dimensions of household income. These include net income from entrepreneurial activities (or entrepreneurial income), net receipts from sustenance activities (or sustenance income), wage income, and dividends income. We also look into the impact on the sum of incomes from entrepreneurial and sustenance activities, which was not mentioned in the pre-analysis plan.

[14] The CCT grantee may also be the father, grandparent, or guardian of the child/children if the mother is not available.

For research hypothesis 3, we do not look into other dimensions of savings. However, we also report impacts on household borrowings per capita in 2019, which was not included in the pre-analysis plan.

For research hypothesis 4, we look into other dimensions of household expenditure. These include food expenditure, health expenditure, and education expenditure. In addition, we also measure impacts on expenditure on clothing and on furnishings and durables, though these were not mentioned in the pre-analysis plan.

In addition, we also look into the impact of the intervention on capital investments along two dimensions: whether the household spent to repair, purchase, or rent physical capital for use in its entrepreneurial or livelihood activities, and the total amount spent on these. Capital investment is an addition to the outcomes listed in the pre-analysis plan.

Table 3.2 shows how we define or constructed each outcome variable and the references used. The reference period for hours worked is the seven days prior to the interview date, while the reference period for all other variables is 2019. Household size during the reference week was used to derive per capita terms for income, expenditure, and savings variables.

Because we test on multiple outcomes – 22 in total – we expect to see significant effects one some outcomes when none exist. We control for the False Discover Rate (FDR) and report q-values in our results alongside the "naïve" p-values using Anderson's (2008) implementation of the Benjamani, Krieger, and Yekutieli (2006) procedure for FDR control.

Table 3.2. Definition of outcome variables

Outcome	Definition/construction of variable	Reference
Number of hours worked per worker 15 years and above	Sum of number of hours worked in the reference week (seven days prior to interview) by all employed household members 15 years and above, divided by the number of employed members 15 years and above	Labor Force Survey of Philippine Statistics Authority (PSA)
Number of hours worked by the CCT grantee-spouse	Number of hours worked by the CCT grantee-spouse in the reference week (seven days prior to interview)	
Share of employed household members	Employed household members in the reference week divided by household members 15 years and above	
Share of household members in the labor force	Employed and unemployed household members in the reference week divided by household members 15 years and above	
CCT grantee-spouse is employed	CCT grantee-spouse either worked at least one hour during the reference week, or did not work but had a job or business in the reference week	
CCT grantee-spouse is in the labor force	CCT grantee-spouse is either employed or unemployed in the reference week	
Household income	Sum of 1) wage income from members 10 years and above; 2) net income from entrepreneurial activities; 3) net receipts from sustenance activities; 4) income from other sources; 5) gifts received; and 6) imputed rentals from housing. Income from other sources is the sum of: 1) cash receipts/assistance from sources abroad; 2) cash receipts/assistance from domestic sources; 3) rental income; 4) interest income; 5) dividend income; 6) pensions and social security benefits; and 7) wage income from members below 10 years and other sources of income not elsewhere classified.	Adapted from household income modules of Annual Poverty Indicators Survey (APIS) of PSA
Wage income	Sum of wage incomes earned by all members 10 years and above during the reference year from all occupations. Wage income includes salaries, wages, allowances, salaries, bonuses, and honorariums paid in cash or in kind.	
Net income from entrepreneurial activities per capita	Sum of net incomes from 12 entrepreneurial activities: crop farming and gardening; livestock and poultry raising; fishing; forestry and hunting; retail and wholesale trade; repair of motor vehicles; manufacturing; community, social, recreational and personal services; transport, storage and communication services; mining and quarrying; construction services; and unclassified entrepreneurial activities. Net income in each activity is constructed as the difference of gross income and total costs.	
Net receipts from sustenance activities per capita	Sum of net receipts from five activities: fishing and gathering sea products; logging and gathering of forest products; hunting and trapping; farming and gardening; and raising of livestock and poultry	
Entrepreneurial and sustenance income	Sum of entrepreneurial income and sustenance income	
Dividend income	Sum of 1) profits or dividends from SLP (if treated); and 2) dividends from non-SLP businesses or cooperatives.	
Household expenditure per capita	Household expenditure in 2019 divided by household size in reference week. Household expenditure is the sum of expenditure/consumption of the following groups: 1) food; 2) miscellaneous goods and	Adapted from household

	services; 3) housing (rent, water, electricity and other fuels); 4) restaurants and hotels, 5) transport; 6) communication; 7) clothing and footwear; 8) furniture, appliances, equipment, and routine household maintenance; 9) health; 10) recreation and culture; 11) education; 12) special occasions; and 13) other expenditure (e.g., taxes, gifts to others, other).	expenditure module of PSA APIS
Food expenditure	Sum of spending on food items bought in cash or on credit, and value of consumed food that was self-produced by the household or received as gifts.	
Education expenditure	Sum of tuition fees, education fees outside the formal school system, allowances for family members studying away from home, and other educational expenses (e.g., school uniform).	
Health expenditure	Health expenditure in 2019 divided by household size in reference week. Includes expenditure for medical products, outpatient medical services, and hospital services.	
Clothing expenditure	Sum of expenditure on clothing and expenditure.	
Furnishings and durables expenditure	Sum of expenditure on: 1) furniture, furnishings and carpets; 2) household textiles; 3) glassware, tableware and utensils; 4) appliances; 5) repair of appliances; 6) transport equipment for household use; 7) household and gardening equipment and tools; 8) audio-visual, electronic and communications equipment; and 9) musical instruments.	
Household savings	Sum of savings of the following: 1) savings (contributions) in SLP Association (if treated); 2) savings in bank; 3) savings in cooperative; 4) savings in savings and loan group; 5) savings kept at home; 6) other savings.	None
Capital investment	Sum of amount spent to repair, purchase or rent physical assets used for the household's entrepreneurial or sustenance activities	None
With capital investment	Household repaired, purchased, or rented physical assets used for the household's entrepreneurial or sustenance activities	None

3.5. Original evaluation questions and design

The evaluation questions and design discussed in this paper are different from the original approved evaluation questions and design when the study began in 2016. Here we discuss the original evaluation questions and design, its implementation, and the circumstances that necessitated that development of new evaluation questions and design. In this subsection, we refer to the original evaluation as Evaluation 1.

Evaluation 1's objective was to measure the impact of two modifications in the SLP implementation process on the welfare of SLP beneficiary households. The first modification involves beneficiaries' selection into the MD or EF track at the point of intake. The practice had been for participants to self-select into either track. We intended to test the impact of a track selection scheme whereby participants are assigned to the track they are more suitable for based on an assessment of their characteristics. The assumption was that characteristics of successful entrepreneurs are different from characteristics of successful wage workers. The alternative system involves administering a tool, called a "sorting tool", which collects data on participant characteristics and uses it to predict a person's probability of "succeeding" in either track.[15] Program officers were supposed to assign participants to the track in which the sorting tool predicts them to have a higher probability of succeeding. The hypothesis was that participants' characteristics would be better suited to the track they are in if they were assigned to it using the alternative scheme than if they chose it through self-selection. This difference in characteristics (i.e., characteristics being more "appropriate") was hypothesized to result in better business or wage employment outcomes for MD and EF participants in the treatment group compared to those in the control group.

The second modification involves SLP's job placement services for EF-track beneficiaries. SLP places EF-track participants into jobs by securing formal tie-ups with training schools, government agencies, and private firms.[16] Evaluation 1 intended to test an alternative system whereby EF-track participants receive job facilitation services entirely through Public Employment Service Offices (PESOs). PESOs are offices run by municipal/city governments whose mandate is to provide free employment facilitation services to the public. The hypothesis was that providing job facilitation services to EF-track beneficiaries through a government office that specializes in this function such as the PESO would result in better wage employment outcomes compared to providing these services through SLP.

SLP's managers at the time of Evaluation 1's development in 2014-2015 felt that the program was still evolving and not yet ripe for a straightforward impact evaluation. Evaluation 1's questions responded to their interest for evidence on strategies that can help SLP improve program implementation.

In terms of design, Evaluation 1 was a cluster randomized controlled trial (RCT) covering 59 municipalities/cities. Municipal/city clusters were cross-randomized to implement both, either one, or none of the treatments. The implementation protocols were implemented in trial

[15] Underlying the sorting tool are logit models that predict a person's probability of success in each of SLP's two tracks. Success is defined as having a job lasting for at least six months for the EF track, and having a business lasting for at least six months for the MD track. The models were estimated using data from a survey of 2015 SLP beneficiaries collected in October-November 2017. For a detailed discussion, see Reyes and Arboneda (2018).

[16] For instance, a training school that SLP contracts to provide technical-vocational training to EF-track participants may be required under agreement with SLP to place beneficiaries into jobs after completing the training. The training school itself may have partnerships with private firms wherein the former acts as a feeder school for training graduates.

areas from July 2018 to November 2018, while a baseline survey of 2,160 households was conducted from August 2018 to March 2019.

The following are the notable challenges we encountered in implementing Evaluation 1.

1) **Changes in DSWD and SLP management**. Between the time the study was conceived and the end of Evaluation 1's implementation, DSWD had four heads (secretary, acting secretary or officer-in-charge), while SLP's national office had five heads (director or OIC). The changes brought uncertainty about whether the support secured from the last agency head or program head still held. We had to secure support for the study to each new administration though they might have different priorities or research questions in mind than the managers whom the study was developed with. For instance, while the managers during the study's inception phase were interested in evaluating the impact of process modifications in search of strategies that can improve SLP, subsequent managers were more interested on the impact of the program itself.

2) **Reluctance among staff to adopt the experimental protocols.** We felt some reluctance among SLP staff especially those in the field to adopt new processes as part of an experiment. There were concerns that the experimental protocols we were introducing meant additional work for field implementers, or that they would impact the performance of program staff, especially those whose employment contracts are tied to output targets. The field implementation coincided with SLP's adoption of new program guidelines entailing the use of new forms. To minimize resistance among field officers, we had to be careful to not portray the study interventions as additional burden for program officers, given their sensitivity to new forms and process changes that are frequently introduced by the national office.

3) **Policy changes adopted during the evaluation.** Two policies adopted by SLP in 2018 compromised our sorting and employment facilitation experiments. The first policy is the absence of an explicit target proportion of EF beneficiaries to total beneficiaries. The target was 30 percent of total beneficiaries in 2015, and 55 percent in 2016 and 2017. The absence of such a target in 2018 removed the incentive among field implementers to recruit participants for the EF track. Second is the policy to discontinue offering the Skills Training Fund grant to EF participants. This grant was popular among jobseekers looking to acquire skills to find employment and helped drive EF uptake. The discontinuation of training support appeared to have diminished the attractiveness of the EF track to potential participants. [17] We believe these policies resulted in a significant decline in EF output in 2018 compared to previous years both in absolute and relative terms. EF uptake in 2018 stood at 12,184 individuals (6.4 percent of total participants), compared to 51,040 (26 percent) in 2017 and 218,422 (49 percent) in 2016. The decline in EF uptake affected both the sorting and EF trials. First, the number of EF-track participants sampled was too small (19 out of 2,160 respondents) for us carry out the analysis of the EF evaluation. Second, the sorting process was undermined because individuals who would have been inclined to choose

[17] In 2018, the sole grant offered under the EF track was the Employment Assistance Fund (EAF), a reimbursement scheme for securing pre-employment requirements and allowance for the first 15 days employment. EAF is offered only to those who already have a job offer and cannot be availed by those still looking for employment. The EAF covers actual expenses up to a maximum of PhP5,000 per person. Participants are required to present proof of employment and a list of documents required by their employer.

EF or be sorted into EF entered the program in significantly fewer numbers than in the past. The program attracted in much higher numbers individuals who were interested in the MD track who likely had very similar characteristics. We therefore lost the hypothesized source of difference in outcomes between the two groups, i.e. the difference in characteristics between participants who were assigned into tracks using the sorting tool and those who self-selected into their track.

Consequently, we proposed to pursue a new evaluation question around the MD track, which the program appeared to be giving more focus. It was initially hoped that the baseline data collected for Evaluation 1 could be salvaged since conducting another baseline would be impractical given time constraints. The first proposal was for an impact evaluation of the MD track through a matching design, with MD households interviewed in Evaluation 1 serving as the treated group. However, the result of SLP's validation of these households showed that only 122 of the 2,160 households in the sample had received SLP assistance by June 2019. The possible reasons for why these households had not received assistance were that: 1) some may have received assistance but field officers had not yet recorded them onto SLP's monitoring system; 2) some may still be in the program but are still waiting for fund release; 3) some may have been disapproved for funding; and 4) some may have decided to discontinue their participation. Because the Evaluation 1 sample turned out to be unusable as a treated group, we decided to identify entirely new subjects for matching. The pre-analysis plan for this study was developed in September to December 2019, prior to the start of data collection.

4. Evaluation

4.1. Design

The study uses a matching design to identify the impact of the MD intervention with SCF as the grant component (MD-SCF). Matching exploits the presence of SLP-eligible but untreated households in project areas and available data on pre-intervention characteristics for both treated and prospective comparison households from the poverty registry of DSWD collected prior to program intervention.

Matching was considered to be the most practical identification strategy given the circumstances of the current evaluation. Doing a randomized controlled trial (RCT) would have required identifying new trial areas, collecting baseline data, implementing the trial over an observation period, and collecting endline data. This was not possible given the remaining time and remaining budget of the study.

The first task was to construct a pool of treated and comparison households for matching. We define treated households as CCT households that: 1) received SCF assistance from January 2018 to June 2018; 2) did not receive any other form of SLP assistance during the same period; 3) have only one member who participated in the program; and 4) did not receive SLP assistance at any other time. Meanwhile, comparison households consist of CCT households that have not received any SLP assistance from 2011 to the present. We restrict our treated and comparison households to beneficiaries of the CCT program for two reasons. First, CCT beneficiaries constitute the bulk of the SLP beneficiaries (80.2 percent of all SLP beneficiaries as of end 2019). Second, DSWD has pre-intervention household data on CCT beneficiaries that can be used for matching treatment and comparison households.

To construct the pool of households for matching, we merged three DSWD datasets: the SLP beneficiary dataset, the CCT beneficiary dataset, and the DSWD poverty registry (*Listahanan 2*). The SLP dataset contains a record of SLP beneficiaries from 2011 to 2019. The CCT dataset contains a record of CCT beneficiary households. *Listahanan* 2 meanwhile contains socio-economic data of poor households in the Philippines collected in 2015.[18] *Listahanan* 2 is the most recent available data source for information on CCT beneficiaries' socio-economic characteristics prior to 2018. We first merged CCT with *Listahanan* data in order to identify CCT households with pre-intervention data that can be used for matching. We then merged SLP data with the merged CCT-*Listahanan* data to identify our comparison and treated households. CCT households that did not merge with SLP data comprise our comparison households. For CCT households that merged with SLP data, we applied the conditions enumerated above to identify treated households. Table 4.1 shows the geographic distribution of the pool of treated households identified from merging the DSWD datasets prior to matching them with comparison households.

Table 4.1. Geographic distribution of pool of treated households identified from merged DSWD datasets

Megaregion	Freq.	Percent
National Capital Region (NCR)	597	3.14
Luzon (minus NCR)	3,043	16.01
Visayas	9,235	48.59
Mindanao	6,132	32.26
Total	19,007	100.00

Source: Merged SLP, CCT and *Listahanan 2* data

Next, we matched treated and comparison households in the matching pool using a combination of coarsened exact matching (CEM) and Mahalanobis distance matching (MDM) using the *kmatch* routine (Jann 2017). We used the sex, age and education of the household and spouse as matching variables for the CEM, and household size and per capita household income[19] as matching variables for the MDM. Each treated household was matched with at most 10 comparison households within the same city/municipality without replacement. The objective was to match on observable characteristics. It should be straightforward to match households directly rather indirectly using a propensity score matching (PSM) approach. This is particularly true when there are few matching variables and PSM function need to be estimated and may not be correctly specified. There is no clear superiority of PSM over matching on covariates when matching characteristics. There are even arguments against PSM. Frolich (2007) discusses the inefficiency of propensity score matching compared to matching in covariates, while King and Nielsen (2019) point out occasions where PSM should not be used.

Impact analysis cannot be done using the resulting pool of matched households due to absence of data on outcomes of interest in the dataset used for matching. A follow-up survey of a sample of treated households and one matched comparison household per treated household was conducted to obtain data for the analysis. They were observed about 20-31 months after the treated group had received the SCF grant. The time between the interventions (January to June 2018) and the end of the reference period for income,

[18] *Listahanan* 2 contains data for 15.1 million households in the Philippines, of which 5.1 million were classified as poor by the proxy means test (PMT) model. *Listahanan* 1 was collected in 2010 and enumerated 10.9 million households, of which 5.2 million were classified as poor by the first PMT model.

[19] Per capita income is based on the household income predicted by the Proxy Means Test model.

expenditure and savings (December 2019) is 1.5 to 2 years. The sampling methods for the survey are discussed in Section 4.2.

4.1.1. Empirical analysis

Using data from survey, we estimate the impact of the intervention through an ordinary least squares regression of the following model:

$$y_{ij} = \alpha_0 + \alpha_1 Treat_{ij} + \mathbf{x}'_{ij}\boldsymbol{\beta} + \mathbf{site}'_j\boldsymbol{\delta} + \epsilon_{ij} \qquad (1)$$

where y_{ij} is the outcome of interest for household i in site j, $Treat_{ij}$ is the treatment dummy (1 if treated, 0 if comparison), $\mathbf{x}_{ij}$ is a vector of household-level covariates, $\mathbf{site}_j$ is a vector of city/municipal (site) dummies. City/municipal fixed effects are designed to capture city/municipal-level factors. Standard errors are clustered by city/municipality to capture the correlation of responses from the same municipality/city.

We use three sets of household-level covariates. The first set consists of household size, the household head's number of years in school, a dummy variable indicating whether the household experienced a difficult event in 2019,[20] a dummy variable indicating whether the household received social assistance in 2019,[21] and the household's predicted income or Proxy Means Test score in *Listahanan* 2.[22] The second set of variables consists of asset ownership dummies, which we include to control for initial household wealth.[23] These include dummies indicating ownership of a land motor vehicle, refrigerator, cellphone, air conditioner, television, washing machine, and personal computer. Finally, the third set of variables consists of measures of personality. These include 14 variables that summarize responses to sets of questions measuring personality, business orientation and risk tolerance.[24] We use these to control for differences in personality and entrepreneurial tendencies.

4.1.2. Limitations of the design

The design has several limitations.

1) **Lack of baseline data on outcomes.** Household variables available in the matching dataset (*Listahanan* 2) is limited. In particular, it lacks pre-intervention data on the

[20] Difficult events include death or grave illness of a household member or relative, loss of employment or business failure, property loss or damage due to disasters, low or failed harvest, and forced displacement.
[21] Social assistance includes scholarship, day care service, supplemental feeding, social pension, skills/livelihood training, self-employment/livelihood assistance, cash/food for work, other cash transfer programs, and disaster relief.
[22] The *Listahanan* 2 PMT model had the following specification: $\log(y) = a + bX_h + cZ_{hi} + d_hW_h + \epsilon_h$, where X_h are household-specific indicators, Z_{hi} are individual-specific indicators, and W_h are community-specific indicators. Two models -- one for NCR and one for rest the Philippines -- were estimated. For the list of control variables used and an in-depth discussion, see Velarde (2018).
[23] Assuming households' stock of assets have remained the same over the observation period.
[24] These fourteen variables include the following. First, a business personality score, which is the average score in 14 questions measuring business orientation on a five-point Likert scale. Second, a general risk score, which is the respondent's assessment of his/her willingness to take on risk in general on a 10-point scale (1 = least willing, 10 = most willing). Third, a financial risk score, which is the respondent's assessment of his/her willingness to take on risk in general on a 10-point scale (1 = least willing, 10 = most willing). Fourth, a business risk dummy, which is the respondent's choice in a hypothetical scenario where s/he chooses between keeping a current business earning a certain income or starting a new business with a 50-50 chance of income doubling or halving. Finally, ten personality variables that summarize responses to 28 questions measured on a five-point Likert scale. These ten variables measure work centrality, achievement, impulsiveness, locus of control, optimism, polychronicity, power motivation, passion for work, being organized, and tenacity. Questions for the first variable were adapted from Auguste and Bricker (2017), while questions for the latter variable measures were taken or adapted from those used in the surveys for the study De Mel, McKenzie and Woodruff (2008b).

outcomes of interest. We are unable to match households on pre-intervention outcomes, or check pre-intervention balance on these outcomes among matched households. Therefore, it is possible that treated and comparison households are imbalanced on these outcomes.

2) **Potential sources of bias.** There are at least two potential sources of bias. First is selection bias, i.e., if households that choose to enroll in SLP and those that opt out are systematically different on individual characteristics that have an influence on household outcomes. These characteristics could include ability (i.e. education and cognitive capacity) and personality. To account for differences in ability, we matched households on the education of the household and spouse (the household members who usually participate in SLP), and used the household head's years in school in the regression analysis. Meanwhile, we were unable match households on personality traits for lack of data, but we control for differences in entrepreneurial personality in our matched by using control variables that measure these traits in the regression analysis. However, it is possible that there are other household attributes influencing program participation that we were unable to take into account. From previous qualitative fieldwork, program officers cite various reasons for why eligible households who are offered the program choose not to participate. These include unwillingness to be part of an SLPA, unwillingness to make mandatory contributions, and lack of trust with other people in matters involving finances. There are also those who sign up for the program but start not showing up midway through the initial program activities. They drop out due to lack of time to participate in program activities (which takes time away from doing housework or attending to their livelihoods), or because they lose interest. A second potential source of bias is if SLP's selection of target *barangays* within cities/municipalities is influenced by *barangay*-level attributes that are correlated with household outcomes. This would arise if, for instance, the program selects barangays that are poorer than non-target *barangays*, or conversely, if those being selected are more conducive to commercial activity, or simply more accessible to program officers. While density of CCT households unreached by SLP is the main consideration for *barangay* selection, it is possible that are some systematic differences between target and non-target *barangays* on unmeasured attributes that we do not take into account both in the matching and analysis. A third potential source is confounding from receipt of similar livelihood support in 2018. While we control for receipt of social assistance in 2019, including livelihood assistance, we do not have such data for 2018.

3) **Spillover effects**. We matched treated with comparison households within the same city/municipality to reduce time for data collection as well as to ensure that matched households are balanced on city/municipal-level characteristics. This strategy may entail spillover effects especially if treated and comparison households live in close proximity – for instance, if they live in the same neighborhood. Our analysis does not account for such effects. At the city/municipal level however, given the size of cities/municipalities,[25] it is arguable that program impacts (in terms of income, expenditure, and business activity) would have to be fairly substantial to result in

[25] Using 2015 Population Census data and assuming a household size of five, the median number of households in municipalities and cities in the Philippines is 33,750 and 6,374, respectively. The median number of households in *barangays* is 829 households for *barangays* in cities and 305 households for *barangays* in municipalities.

externalities on untreated households or to general equilibrium effects on the local economy.

Hawthorne or John Henry effects (subjects altering their behavior due to knowledge of being observed in an experiment) are not present because no trial was involved. Subjects were observed only once – about 20 to 31 months after the treated group received the business grant. For the same reason, the evaluation did not affect the behavior of SLP program officers. Implementing PDOs that administered the program to our treated households in 2017-2018 were not aware at the time that the households they were assisting would be part of an evaluation in 2020. The current evaluation itself was designed only in 2019.

4.2. Sample size and sample selection

This subsection discusses how we selected our sample areas and households for the survey using the pool of matched treated and comparison households. Our initial proposal for the matching design adopts the sample size for the original experimental design of 2,160 households in 60 sites (municipalities and cities) spread nationally. In view of time constraints, we decided to reduce data collection time by concentrating sampling on fewer regions[26] while still reflecting SLP's national coverage. We selected these regions as follows. First, we divided the country into four "megaregions", namely the National Capital Region (NCR), the rest of Luzon, Visayas and Mindanao. Then, we selected from each one the region with the largest number of treated households (which, as mentioned earlier, were identified by merging the CCT and SLP beneficiary datasets). These regions were NCR, Region IV-B from the rest of Luzon, Region VI from Visayas, and Region X from Mindanao. We increased the household sample size from 2,160 to 3,300 (i.e., by about a factor of 1.5) to counteract higher correlated among households that would result from sampling from fewer regions.

In qualifying regions, we selected cities/municipalities (or sites) to draw sample households from. We imposed two requirements: first, each site must have at least 40 matched treated households; second, each one of these treated households must have been matched with at least two comparison households. We imposed this to ensure the availability of treated and comparison replacement samples. 56 sites satisfied these requirements. From these sites, we then sampled 50 sites using probability proportional to size (PPS) sampling. The number of qualified sites in NCR, rest of Luzon and Visayas was exactly the number required from each one to reflect their respective megaregion's share of the treated population from the merged DSWD datasets (as shown in Table 4.1). Region X sites fell short of the number of sites required for Mindanao. We therefore included additional sites from Region XII, the region with the next largest number treated households in Mindanao.

Within each of the 50 sites, thirty-three (33) treated households and seven replacements were randomly selected. More replacement households were drawn as required in the course of the data collection. For each sample treated household, only one comparison household was surveyed. The survey firm was advised to first interview the sample treated household, then select one of the ten matched comparison households. The survey team was given the flexibility to strategize their selection of comparison households to facilitate survey

[26] Regions are administrative divisions consisting of provinces. The Philippines has 17 regions.

completion. In practice, there were cases where matched households are 2-3 hours of travel time apart.

Due to delays in starting the survey and Covid-19-related quarantine measures that hampered in-person data collection, the enumerated sample reached only 2,592 households. These consist of households in the 39 sites where data collection had started or had been completed as the government began imposing travel restrictions. Moreover, data collection in sites where restrictions eventually eased were forced to picked up the slack in interviews in other sites where survey operations slowed down significantly (particularly Region VI). This resulted in a non-uniform distribution of sample households across sites. Table 4.2 shows the planned and actual distribution of the survey sites and sample households, while Figure 4.1 shows a map of actual survey sites.

Table 4.2: Planned and actual distribution of sample sites and households

	Sample sites		Sample households	
Region	Planned	Actual	Planned	Actual
NCR	2	2	132	108
Region IV-B	8	8	528	520
Region VI	24	13	1,584	758
Region X	9	9	594	682
Region XII	7	7	462	524
Total	50	39	3,300	2,592

4.3. Ex-post minimum detectable effect size calculations

It is of interest to determine whether we have sufficient power to detect meaningful differences in our outcomes of interest given the realized sample. Although a statistically insignificant estimate of the treatment effect on an outcome would itself indicate insufficient power on that outcome, it would be interesting to know the minimum effect size that the study would have detected on that outcome given sufficient power. It is also of interest to know how the minimum detectable effect sizes changed because of the sample size reduction. We follow McKenzie and Ozier's (2019) advice to report ex-post minimum detectable effect sizes using the realized sample.[27] Using survey data, we compute minimum effect sizes in our outcome variables at 80 percent power and 5 percent significant level given the actual and planned sample sizes of 2,592 and 3,300. We use the Stata routine for a paired means test (*power pairedmeans*).[28] The routine does not have an option for clustered data. Thus, the estimated minimum effect sizes are likely to be larger than the ones we compute.

Table 4.3, shows the estimated minimum detectable difference in treatment and comparison means across our outcomes. The estimated minimum effect sizes are 12-13 percent larger for the realized sample size compared to the planned sample size. The minimum effect sizes for hours worked of 1.81 additional hours per worker and 2.09 additional hours for the CCT grantee spouse are reasonable. For comparison, the mean number of hours worked in 2019 by self-employed females aged 40 years and above was 24.4 hours per week (PSA 2020). Meanwhile, the minimum effect sizes for income per capita (PhP1,379.4) and expenditure per

[27] McKenzie and Ozier (2019) warn that using estimated effect sizes to estimate ex-post power can give misleading results. They suggest instead to report minimum detectable effect sizes given the realized sample and acceptable power using control means and control standard deviations.

[28] Power calculations in the pre-analysis plan use data from the Third Wave of the CCT impact evaluation. The State routine for a clustered randomized design (*power twomeans, cluster)* was used to obtain alternate effect size estimates.

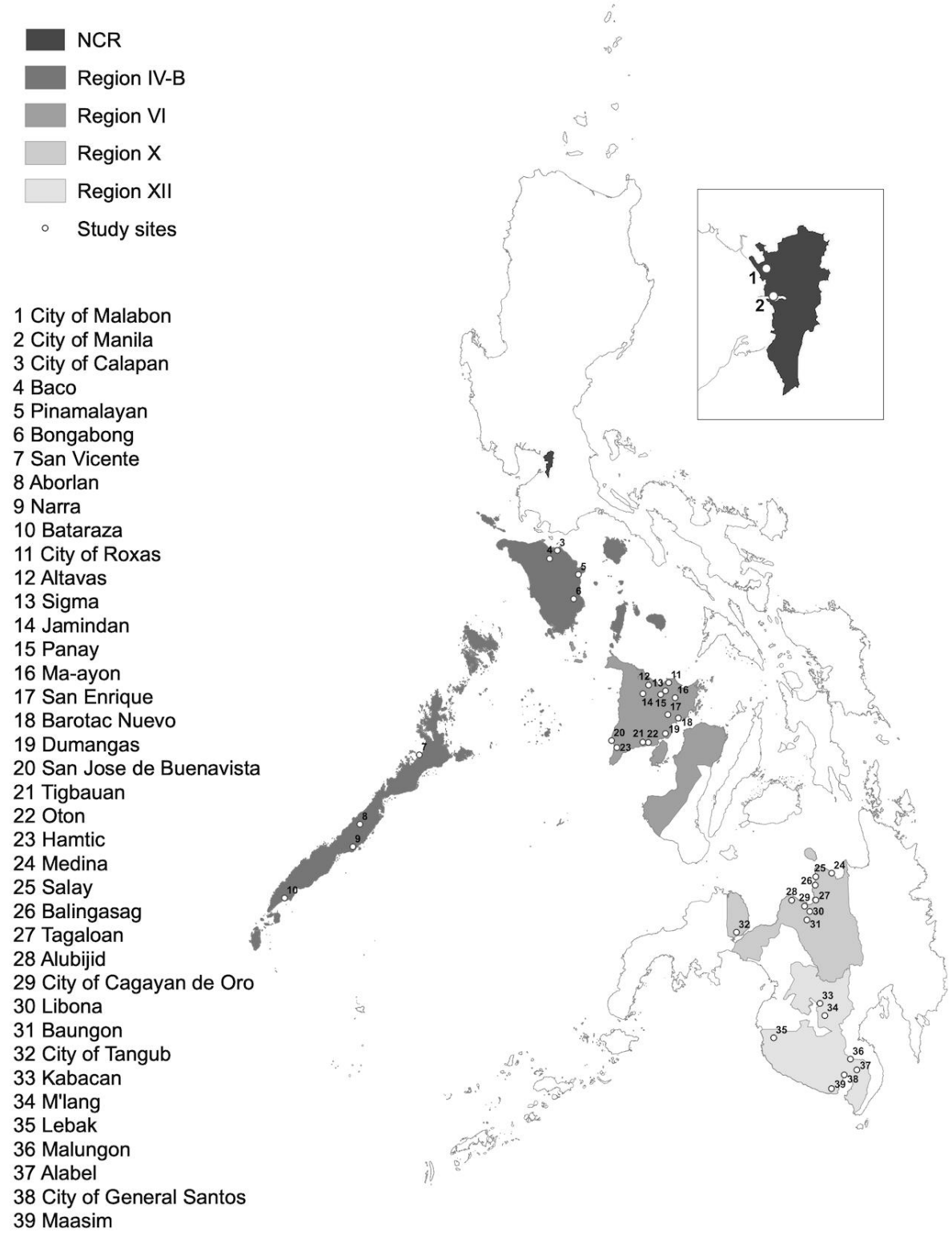
capita (PhP1,024) appear to be rather large. For a household with five members, these effect sizes, if positive, translate to an increase in annual income of PhP6,897.2 and an increase in annual expenditure of PhP5,212.2. For perspective, PhP6,897 is in the range of 3.1-6.1 percent of average annual income of families in the bottom five income deciles in 2018.[29] While these effect sizes are relatively small compared to total income, they imply large rates of return: a 69 percent return to income or 52 percent return to expenditure on a PhP10,000 grant. For comparison, De Mel, McKenzie and Woodruff (2008a) find a return of just 5 percent (in terms of business profits) on a grant of USD 100 (about PhP4,800 in current exchange rates) to microentrepreneurs. The size of the true effects on income and expenditure, if they exist, are likely to be smaller and thus the study will have lower than 80 percent power to detect them.

Table 4.3. Estimated minimum detectable effect size in outcomes of interest

Outcome variable	N=2,592	N=3,300
Hours worked per worker per week	1.81	1.60
Hours worked per week by CCT grantee spouse	2.09	1.85
Spouse in the labor force (%)	0.05	0.04
Spouse employed (%)	0.05	0.04
Share of employed HH members (%)	0.02	0.02
Share HH members in labor force (%)	0.02	0.02
Income per capita (PhP)	1,379.44	1,222.34
Wage income per capita (PhP)	1,306.28	1,157.51
Entrepreneurial income per capita (PhP)	304.55	269.87
Sustenance income per capita (PhP)	113.83	100.86
Entrepreneurial and sustenance income per capita (PhP)	359.68	318.72
Expenditure per capita (PhP)	1,042.44	923.72
Food expenditure per capita (PhP)	705.45	625.11
Health expenditure per capita (PhP)	18.14	16.07
Education expenditure per capita (PhP)	45.49	40.31
Clothing expenditure per capita (PhP)	26.58	23.55
Durables expenditure per capita (PhP)	13.67	12.11
Savings per capita (PhP)	110.09	97.55

Figure 4.1. Map of study sites

[29] The average annual family income for the bottom five deciles in 2018 are: first decile: PhP113,455; second decile: PhP144,336; third decile: PhP168,161; fourth decile: PhP197,297; fifth decile: PhP225,028 (PSA 2019). Fernandez and Olfindo (2011) estimate that 72 percent of CCT beneficiary households belong to the bottom two income deciles, while 23 percent belong to the bottom third, fourth, and fifth income deciles.



Note: The inset shows the National Capital Region (NCR).

4.4. Survey data collection

The study used four questionnaires:

1) **Household Questionnaire.** This form collects data on the demographic and socio-economic characteristics of the household and its members. It was administered to all sample households.

2) **SLP Participant Questionnaire.** This form was administered to the SLP participant in each treated sample household. For respondents with an individually-managed SLP business project, the form collects information about the participant's business; SCF amount, uses and amortization; and the status of the SLPA and the respondent's role in it. For those participating in a group-managed business, the form collects information on the respondent's role in the SLPA and group business, whether the respondent rendered work for the business and received compensation, and whether s/he received dividends.

3) **Group Business Questionnaire**. For treated households who are part of a group business, this form was administered to an officer of the SLPA or SLP participant itself if s/he claims to be knowledgeable about the group business. It collects information on the group business project and the SLPA; amount, uses and recovery of the SCF; and the net income of the group business.

4) **Municipal Profile Questionnaire.** This form collects information about each site such as main industries and notable shocks or events that occurred in the past three years (2016-2018). It was administered to any available officer in the municipal/city government's Planning and Development office.

The variables used for impact estimation comes from the Household Questionnaire. The two other questionnaires for treated households (which we call "supplemental questionnaires" as shorthand) give valuable qualitative information about the MD intervention received and the implementation of the business project.

A third-party firm conducted the survey from February 2020 to July 2020. Enumerators were equipped with a tablet-based data entry application to collect data. Many found that it saved time to use the paper forms first during the interviews and encode the responses later on the same tablets.[30] In-person interviews were suspended on March 16, 2020 following the government's announcement of community quarantine measures to contain Covid-19, as well as to ensure the safety of field survey personnel.

As the survey could not be suspended indefinitely, data collection resumed in the first week of June 2020 just as quarantine measures in some areas were starting to ease. The strategy adopted was to conduct face-to-face interviewing or phone interviewing, whichever was feasible given specific conditions in survey areas. For phone interviews, all responses were encoded on the tablet-based applications, though some enumerators may have used paper forms first during the interview itself. Phone numbers of possible respondents in the sampling frame were obtained from DSWD through coordination with regional offices that were in

[30] Paper-based interviewing reportedly cut down interview times to two hours from three to four hours with tablet-based interviewing. Enumerators were given the flexibility to do paper-based interviewing as they were under tight time pressure to complete the survey.

possession of the data. Phone interviews were pursued mostly in sites where restrictions remained tight. These include NCR, Visayas, and parts of Mindanao, where stay-at-home orders, suspension of public transportation, and entry restrictions for non-residents kept survey enumerators from travelling to survey sites. Phone interviewing, however, brought its own challenges. These include more unsuccessful interview attempts due to poor signal especially in rural areas, and respondents' phones not being attended. Phone interviews also reportedly lasted about two hours longer than in-person interviews, which may have affected the quality of responses. Some enumerators split their interviews into several sessions to make it more manageable. In sites where in-person interviews were possible, enumerators used protective equipment and followed health protocols.

Since the reference period for income, expenditure and savings is 2019, these could not have been affected by the pandemic in 2020. However, labor/employment variables, for which the reference period is the week prior to the interview, could have been affected.

Table 4.4 shows the final distribution of the household sample by region, while Table 4.5. shows the distribution of treated households into group-managed or individually-managed business. Among treated households, 1,186 or 91.5 percent reported to belong to a group-managed business project. In every region except NCR, group-managed businesses comprise either the large majority or all of treated households' SCF-financed projects. We did not know about the business type of treated households prior to them being interviewed because the data is not available in the 2018 SLP administrative data used to construct the pool of treated households.

Table 4.4. Distribution of sample households by region

	Comparison	Treated	Total	
	Freq.	Freq.	Freq.	Percent
NCR	54	54	108	4.2
Region IV-B	260	260	520	20.1
Region VI	379	379	758	29.2
Region X	341	341	682	26.3
Region XII	262	262	524	20.2
Total	1,296	1,296	2,592	100.0

Table 4.5: Distribution of treated households by region and SLP business management type

	Individual		Group		Total	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
NCR	54	49.1	0	0.0	54	4.2
Region IV-B	38	34.5	222	18.7	260	20.1
Region VI	18	16.4	361	30.4	379	29.2
Region X	0	0.0	341	28.8	341	26.3
Region XII	0	0.0	262	22.1	262	20.2
Total	110	100.0	1,186	100.0	1,296	100.0

Table 4.6 shows the distribution of MD beneficiary households into group- vs. individually managed business project by region in 2019 – the year when SLP started collecting the data.[31] It shows that nearly 80 percent of MD beneficiary households received MD assistance as part of a group business while 20 percent used the assistance for an individual business. In NCR, only 7.6 percent are group-project beneficiaries. In balance Luzon, this share is 60.6 percent. In Visayas and Mindanao (minus BARMM[32]), the share of group-project beneficiaries is even higher at 88.3 percent and 92.1 percent, respectively.

Table 4.6. Distribution of 2019 MD beneficiary households into business management type by megaregion/region

	Group		Individual		Total	
Megaregion/region	Freq.	Percent	Freq.	Percent	Freq.	Percent
NCR	455	7.6	5,515	92.4	5,970	100
Luzon (minus NCR)	40,440	60.6	26,316	39.4	66,756	100
Visayas	89,933	88.3	11,945	11.7	101,878	100
Mindanao (minus BARMM*)	89,589	92.1	7,715	7.9	97,304	100
BARMM*	1,314	22.5	4,516	77.5	5,830	100
Total	221,731	79.8	56,007	20.2	277,738	100
Survey regions (minus NCR)						
IV-B	7,544	60.5	4,918	39.5	12,462	100
VI	20,062	93.8	1,334	6.2	21,396	100
X	27,548	100.0	6	0.0	27,554	100
XII	16,948	100.0	4	0.0	16,952	100

Note: *BARMM refers to the *Bangsamoro* Autonomous Region in Muslim Mindanao. Source: SLP National Program Management Office.

Meanwhile, Table 4.7 shows the distribution of Household questionnaire respondents in terms of their relationship to the household head. 80 percent of the respondents were the household head's spouse, and 17 percent were the household head. In terms of interview method, the share of respondent interviews that were done in-person rather than by phone is 88.6 percent for the Household questionnaire, 92.7 percent for the SLP Participant questionnaire, 99.1 percent for the Group Business questionnaire, and 96.2 percent for the Municipal questionnaire. Because there the number of interviews done by phone is relatively small, any differences in data quality between in-person and phone interviews may be limited.

[31] The same data is not available for 2018 SLP MD beneficiaries.
[32] BARMM stands for *Bangsamoro* Autonomous Region in Muslim Mindanao, a region with an autonomous government. BARMM has its own Ministry of Social Services operating SLP in the region.

Table 4.7. Distribution of household respondents by relationship to household head

	Comparison		Treated		Total	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Head	225	17.4	215	16.6	440	17.0
Spouse	1,029	79.4	1,044	80.6	2,073	80.0
Son/daughter	30	2.3	28	2.2	58	2.2
Stepchild	1	0.1	0	0.0	1	0.0
Son/daughter-in-law	2	0.1	1	0.0	3	0.1
Father/mother	7	0.0	8	0.1	15	0.6
Nephew/niece	1	0.1	0	0.0	1	0.0
Other Relative	1	0.1	0	0.0	1	0.0
Total	1,296	100.0	1,296	100.0	2,592	100.0

4.5. Qualitative fieldwork

The quantitative survey is complemented with qualitative data from CCT households through focus group discussions (FGDs). Eight FGDs were conducted across three sites (one site each from NCR, Region VI and Region X) in February and March 2020. The FGD sites were selected to represent different economic conditions for entrepreneurial activity to capture the breadth of experience of respondents. The NCR site is a highly urbanized city and a major center of commerce. The Region VI site, while mostly rural, has a large and growing urban population due to its contiguity with a regional economic center. The Region X site, meanwhile, is almost entirely rural and agricultural.

FGD respondents consisted of treated households whose business projects were still operating, treated households whose business projects have stopped operating, and CCT households that are unexposed to SLP. The treated respondents were asked about the situation of their business projects, challenges they have encountered in business operations, and for those whose business projects have closed, the reasons for closure. We also asked them about issues that have had in amortizing or recovering the SCF grant and their perceptions of SLP's impact on their families' living standards as well as the non-economic aspects of their lives. Meanwhile, the comparison respondents were asked about their awareness of SLP and their interest in participating in the program.

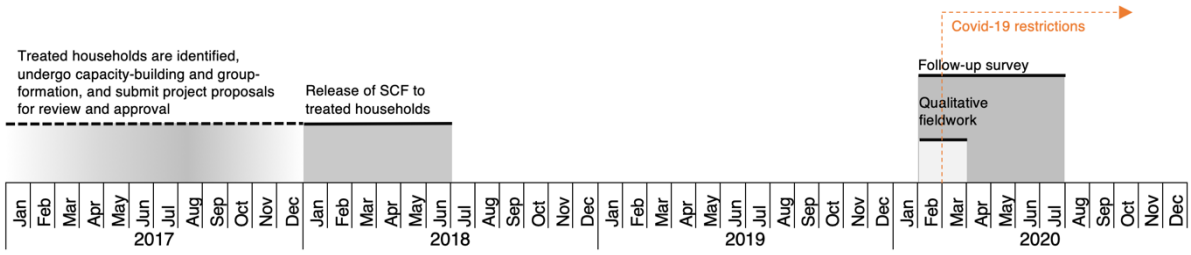
4.6. Timeline

The identification and finalization of a new evaluation question and design was done from April to September 2019. A proposal was submitted in May 2019 and underwent a review process. Efforts to secure full DSWD administrative datasets needed for matching (SLP data, CCT data and *Listahanan* data) started in July 2019. This entailed entering into a memorandum of agreement with the agency. We presented the new evaluation to senior DSWD officials in September 2019. Questionnaires were developed from October to November 2019, and were submitted to the Philippine Statistics Authority in November 2019 for survey clearance. The memorandum of agreement with DSWD for data sharing was signed in November 2019, and the data was transmitted to us over November 2019 to January 2020. Matching and sampling were done in December 2019 to early January 2020. A survey contractor was secured in December 2019, and their enumerators were trained in late January

2020. The survey started in February 2020. Focus group discussions were also held in February and March 2020. Survey operations were suspended from mid-March to end-May 2020 due to Covid-19-related lockdowns in survey sites. Preparation for a June resumption of data collection started in May 2020. This entailed requesting the SLP national office to communicate the resumption to concerned field offices and local chief executives of survey sites, and requesting the SLP and *Pantawid* offices for phone numbers of households in the sampling frame. The latter required direct coordination with regional offices who were in possession of the information. Data collection continued in June to July 2020.

Figure 4.2 illustrates the timeline of the evaluation. The SCF beneficiaries whom we identified as treated households entered the program and underwent the required program activities in 2017. We were unable to obtain administrative data required to determine their exact months of entry. Their SCF grants were released in January 2018 to October 2018. The observation period for income, expenditure and savings is January 2019 to December 2019. By the end of December 2019, 1.5 to 2 years had passed since the business grants were released.

Figure 4.2. Evaluation timeline



4.7. Ethics

The design is quasi-experimental and did not involve withholding assistance from human subjects. Consent was secured from survey respondents and focus group respondents prior to participation. Data used for analysis are de-identified. Data with personal identification are managed in accordance with Philippine data privacy law.

5. Findings

5.1. Profile of individual SLP participants

Table 5.1 reports descriptive statistics about SLP participants within treated households. By "SLP participant", we refer to the member of a treated household who was recruited as the program participant and is the member of an SLP Association. Program participants are very commonly female (92 percent), are mostly spouses (83 percent), and on average are 45 years of age. Most participants are unskilled, with only 35 percent having completed high school. About 57 percent are not in the labor force during the reference week, suggesting that many participants join the program for the opportunity to be economically active. About 41 percent were employed. SLP participants worked an average of 16 hours during the reference week. 24 percent of participants are wage/salary workers, and 13 percent are self-employed. A similar table cannot be made for comparison households because they have no SLP participant in the household.

Table 5.1. Characteristics of SLP participants in treated households

	N	Mean
Female (%)	1,294	92
Household head (%)	1,294	15.69
Spouse (%)	1,294	83.15
Age (years)	1,294	45.14
Years in school	1,289	8.68
Completed high school (%)	1,294	34.70
In the labor force (%)	1,294	42.74
Employed (%)	1,294	40.80
Unemployed (%)	1,294	1.93
Underemployed (%)	1,294	2.63
Hours worked in the past week	1,284	16.32
Wage/salary worker (%)	1,294	24.19
Self-employed (%)	1,294	13.45
Employer in own business (%)	1,294	0.85
Paid family worker (%)	1,294	1.00
Paid family worker (%)	1,294	1.31

5.2. Data on business project implementation

In this subsection, we report data collected from the SLP Participant Questionnaire and Group Business Questionnaire about the nature and status of business projects that treated households set up, as well as their use of the SCF grant. Table 5.2 shows the distribution of treated households with corresponding interviews in the two other questionnaires. Of 1,296 treated households, 1,278 (98.6 percent) have a corresponding SLP Participant Questionnaire record. Meanwhile, our Group Business Questionnaire data consists of interviews with 167 groups/SLPAs covering 1,111 out of 1,170 treated households in the SLP Participant Questionnaire that reported to be part of a group business project. Data from one SLPA with a group business project which has yet to start according to the respondent is not reported in this section, thus total groups reported is 166 covering 1,107 individual treated households. Each SLPA is engaged in one group project only.

Table 5.2. Distribution and correspondence of treated observations across survey instruments

	No. of treated households in Household Questionnaire	No. of treated households with corresponding SLP Questionnaire interviews			No. of treated households with corresponding Group Business Questionnaire interviews	
			Individual business	*Group business*		*No. of groups*
NCR	54	54	54	0	0	0
Region IV-B	260	260	38	222	220	20
Region VI	375	363	16	348	312	49
Region XI	341	339	0	339	318	64
Region XII	262	257	0	257	257	33
Total	1,292	1,278	108	1,170	1,107	166

5.2.1. Business management type, industry and initiation

Ninety-one percent of treated households in the sample are part of a group business project. Most individual business projects (58.3 percent) already existed prior to the beneficiary's participation in SLP, which means the SCF was used to support an existing household activity (see Table 5.3). In contrast, most group projects (83.7 percent) are new businesses, i.e., were initiated through SLP assistance. In terms of sector, retail trade-related business projects (e.g., general merchandise/*sari-sari* stores[33] and retail of food products such as rice, meat or fish) make up 49.1 percent of individual projects and 89.8 percent of group projects. Other popular individual projects are farming/gardening (23.1 percent), livestock/poultry raising (18.5 percent), and fishing/aquaculture (8.3 percent).

Table 5.3: Distribution of business projects by initiation and industry

	Individual		Group		Total	
	N	%	N	%	N	%
Business initiation						
Existing business	63	58.3	27	16.3	90	32.8
New business project	45	41.7	139	83.7	184	67.2
Total	108	100.0	166	100.0	274	100.0
Industry						
Computer rental and related services	0	0.0	1	0.6	1	0.4
Farming/gardening	25	23.1	0	0.0	25	9.1
Fishing/aquaculture	9	8.3	2	1.2	11	4.0
Food service	0	0.0	1	0.6	1	0.4
Livestock/poultry raising	20	18.5	9	5.4	29	10.6
Manufacturing (dressmaking)	0	0.0	1	0.6	1	0.4
Manufacturing (food products)	0	0.0	1	0.6	1	0.4
Metalworks	1	0.9	0	0.0	1	0.4
Retail (agricultural supplies)	0	0.0	14	8.4	14	5.1
Retail (food products)	31	28.7	55	33.1	86	31.4
Retail (garments)	1	0.9	0	0.0	1	0.4
Retail (gen. merchandise/sari-sari store)	18	16.7	74	44.6	92	33.6
Retail (motor vehicle parts)	0	0.0	1	0.6	1	0.4
Retail (online selling)	3	2.8	3	1.8	6	2.2
Retail (rice and agricultural supplies)	0	0.0	1	0.6	1	0.4
Retail (unclassified)	0	0.0	1	0.6	1	0.4
Transportation (tricycle)	0	0.0	1	0.6	1	0.4
Water refilling station	0	0.0	1	0.6	1	0.4
Total	108	100.0	166	100.0	274	100.0

5.2.2. SCF utilization and repayment

Sample treated households received an average of Php 9,685 in SCF assistance[34] (see Table 5.4). Table 5.5 gives a picture of how beneficiaries utilized the grant. For individual projects, an average of 64 percent of the grant was spent on business project outlays such as equipment, store construction or repair, and purchase of inventories; 2.4 percent was spent on businesses other than the SCF-financed business, 9.1 percent was spent on household

[33] *Sari-sari* stores are neighborhood mom-and-pop stores. *"Sari-sari"* is Filipino for "variety" or "sundry".
[34] The maximum amount per household beneficiary is PhP10,000. The actual amount may be lower, depending on the requirements of the business project as costed in the project proposal.

expenses, and 24.2 percent was spent on other unspecified items. For group projects, an average of 46.4 percent of the grant was spent on SLP business project outlays, 2.3 percent was spent on other businesses, 20.2 percent was used as working capital, and 27.7 percent are unspent funds.

In terms of SCF repayment (see Table 5.6), none of the beneficiaries with individual business projects have fully amortized the grant to their SLPA as of the interview date; 62 percent have partially amortized the grant, and 38 percent have not made any payments at all. The situation among beneficiaries with group projects is very similar: only 6.6 percent of groups have recouped the amount of the grant, while 57.2 percent have only partially recovered the amount, and 36.1 percent report not having recovered any amount.

Table 5.4. Seed Capital Fund received per household beneficiary

	N	Mean (PhP)	Median (PhP)
Business type			
Individual	108	9,958	10,000
Group	166	9,507	10,000
Total	274	9,685	10,000
Business initiation			
Existing business	90	9,433	10,000
New business project	184	9,808	10,000
Total	274	9,685	10,000

Note: SCF per beneficiary for group projects is obtained by dividing the total amount received by the number of group members at the start of the project.

Table 5.5: Utilization of SCF by expenditure item

	Individual (mean, %)	Group (mean, %)
Business expenses for SLP business project	64.2	46.4
Purchase of inventories, raw materials and supplies	*55.6*	*31.2*
Purchase of equipment, machines and tools	*7.0*	*8.8*
Construction of store or facility	*0.8*	*5.0*
Repair or renovation of store or facility	*0.7*	*1.3*
Business expenses for other businesses	2.4	2.3
Purchase of inventories, raw materials and supplies	*1.7*	*1.3*
Purchase of equipment, machines and tools	*0.5*	*0.5*
Construction or repair/renovation of store or facility	*0.3*	*0.5*
Household expenses	9.1	..
Purchase of household durable goods	*0.7*	..
Purchase of food for home consumption	*4.7*	..
Education expenditure	*1.0*	..
Health and medical expenditures	*0.2*	..
Repairs to the house	*1.3*	..
Repayment of loan	*0.6*	..
Savings	*0.6*	..
Other expenses	24.2	51.3
Working capital	..	*20.2*
Unspent funds	..	*27.7*
Other expenses	..	*3.4*
Total	100.0	100.0

Table 5.6: SCF repayment/recovery status

	N	Fully repaid/ recovered (%)	Partially repaid/ recovered (%)	None repaid/ recovered (%)
Business type				
Individual	108	0.0	62.0	38.0
Group	166	6.6	57.2	36.1
Total	274	4.0	59.1	36.9
Business initiation				
Existing business	90	3.3	64.4	32.2
New business project	184	4.3	56.5	39.1
Total	274	4.0	59.1	36.9
Industry				
Computer rental and related services	1	0.0	100.0	0.0
Farming/gardening	25	0.0	56.0	44.0
Fishing/aquaculture	11	0.0	63.6	36.4
Food service	1	0.0	100.0	0.0
Livestock/poultry raising	29	6.9	58.6	34.5
Manufacturing (dressmaking)	1	0.0	100.0	0.0
Manufacturing (food products)	1	0.0	0.0	100.0
Metalworks	1	0.0	100.0	0.0
Retail (agricultural supplies)	14	0.0	42.9	57.1
Retail (food products)	86	4.7	61.6	33.7
Retail (garments)	1	0.0	100.0	0.0
Retail (gen. merchandise/sari-sari store)	92	4.3	58.7	37.0
Retail (motor vehicle parts)	1	100.0	0.0	0.0
Retail (online selling)	6	0.0	83.3	16.7
Retail (rice and agricultural supplies)	1	0.0	0.0	100.0
Retail (unclassified)	1	0.0	0.0	100.0
Transportation (tricycle)	1	0.0	100.0	0.0
Water refilling station	1	0.0	0.0	100.0
Total	274	4.0	59.1	36.9

5.2.3. Business project survival and lifespan

Only 62.8 percent of the SLP-financed business projects were still operating at the time of the interview date (see Table 5.7). The survival rate (computed as the proportion of business projects that were still operating at the time of the interview among all business projects) is higher among group business projects (71.7 percent) compared to individual projects, among which just under half (49.1 percent) were still operational. Survival is also somewhat higher among existing businesses (65.6 percent) compared to new business projects (61.4 percent). In terms of sector, business projects with a lower survival rate than the average are livestock/poultry raising (48.3 percent), retail of agricultural supplies (57.1 percent), retail of food products (60.5 percent), and retail (online selling) (50 percent).[35] The average business lifespan is 24.7 months for surviving projects and just 11.1 months for projects that have shut down. About three out of five participants (61.8 percent) with closed individual projects cite the failure to earn money as the main reason for closure (see Table 5.8). For group

[35] Only one business project was sampled under food service, retail (rice/agricultural supplies), retail (unclassified), and water refilling station, and each of them have closed.

businesses, the top two main reasons for closure are the business not making money (29.8 percent) and the lack of participation from group members to operate the group business (27.7 percent).

Table 5.7. Business survival and lifespan

	N	Survival rate* (%)	Months since business started (mean)	Months since SCF released (mean)
Current status of business				
Still operating	172	100.0	24.7	23.2
Closed	102	0.0	11.1	13.1
Total	274	62.8	20.2	19.6
Business type				
Individual	108	49.1	21.4	16.9
Group	166	71.7	19.7	21.5
Total	274	62.8	20.2	19.6
Business initiation				
Existing business	90	65.6	23.7	18.3
New business project	184	61.4	18.7	20.3
Total	274	62.8	20.2	19.6
Industry				
Computer rental and related services	1	100.0	2.0	25.0
Farming/gardening	25	76.0	21.4	18.6
Fishing/aquaculture	11	90.9	19.4	21.5
Food service	1	0.0	12.0	14.0
Livestock/poultry raising	29	48.3	17.3	15.1
Manufacturing (dressmaking)	1	100.0	19.0	21.0
Manufacturing (food products)	1	100.0	9.0	22.0
Metalworks	1	100.0	20.0	20.0
Retail (agricultural supplies)	14	57.1	17.2	17.6
Retail (food products)	86	60.5	23.3	20.3
Retail (garments)	1	100.0	20.0	20.0
Retail (gen. merchandise/sari-sari store)	92	64.1	19.7	20.5
Retail (motor vehicle parts)	1	100.0	25.0	25.0
Retail (online selling)	6	50.0	20.0	21.3
Retail (rice and agricultural supplies)	1	0.0	5.0	14.0
Retail (unclassified)	1	0.0	No data	No data
Transportation (tricycle)	1	100.0	11.0	23.0
Water refilling station	1	0.0	No data	No data
Total	274	62.8	20.2	19.6

Note: Survival rate is computed as proportion of business projects that are still operating at the time of the interview among all business projects.

Table 5.8. Main reason for closing down the business project

	Individual		Group		Total	
	N	%	N	%	N	%
Business was not making money	34	61.8	14	29.8	48	47.1
Business was affected by natural disaster	4	7.3	4	8.5	8	7.8
No raw materials/inputs	1	1.8	4	8.5	5	4.9
Operator needed to devote time to household/family duties	2	3.6	0	0.0	2	2.0
Operator relocated	1	1.8	0	0.0	1	1.0
Fire/robbery	0	0.0	2	4.3	2	2.0
Group members not contributing to operate the business	0	0.0	13	27.7	13	12.7
Financial management issues	0	0.0	3	6.4	3	2.9
Relocation	0	0.0	1	2.1	1	1.0
Members not paying loans/debts	0	0.0	2	4.3	2	2.0
No one to attend to the business	0	0.0	1	2.1	1	1.0
No permit	0	0.0	1	2.1	1	1.0
Vegetables have been harvested	0	0.0	1	2.1	1	1.0
Members struggling to operate the business	0	0.0	1	2.1	1	1.0
Refused	13	23.6	0	0.0	13	12.7
Total	55	100.0	47	100.0	102	100.0

Table 5.9 shows the date when the non-surviving businesses closed. About 31 percent of these businesses closed within 2018, about 44 percent closed within 2019, and about 15 percent closed in 2020. The Covid-19 lockdowns in the country began in the second week of March 2020. We find that four individual business projects closed in March 2020. Of these four businesses, one cited not making money as the reason for closure while the other three refused to disclose the reason. These figures suggest that the disruptions brought by the Covid-19 lockdowns were not a big factor for the shutdown of non-surviving business projects.

Table 5.9. Date of closure of non-surviving business projects

	Individual		Group		Total	
Date of closure	N	%	N	%	N	%
Within 2018	20	35.1	12	25.5	32	30.8
Within 2019	19	33.3	27	57.4	46	44.2
February 2020	12	21.1	0	0.0	12	11.5
March 2020	4	7.0	0	0.0	4	3.8
No data	2	3.5	8	17.0	10	9.6
Total	57	100.0	47	100.0	104	100.0

5.2.4. SLP Association activity and current status

When asked about the current status of their SLP Association, respondents from 52 SLP Associations (26.1 percent) said their SLP Association has been dissolved, while respondents from 20 SLPAs (10.1 percent) said their SLPA is inactive (see Table 5.10). Among SLPAs with individual projects, a remarkably high share of associations (69.7 percent) has reportedly disbanded according to respondents. Lack of interest or time for the SLPA, conflict among members, and the lack of SLPA meetings or activities are commonly cited as the main reason for the SLPA's inactivity or disbandment (see Table 5.11). We take the reported figures on dissolution with caution. Dissolution requires members to sign a

resolution formally disbanding the SLPA. It is possible that at least some SLPAs that were reported to have been dissolved have not undergone a formal dissolution, but may have been practically abandoned by its members.

Table 5.10. Status of SLP Association

	N	%
Status of SLPA (members with individual business)		
Active	8	24.2
Inactive	2	6.1
Dissolved	23	69.7
Total	33	100.0
Status of SLPA (members with group business)		
Active	119	71.7
Inactive	18	10.8
Dissolved	29	17.5
Total	166	100.0

Note: Observations are SLP Associations rather than individual respondents.

Table 5.11. Main reason why SLP Association is inactive or dissolved

	Inactive		Dissolved		Total	
	N	%	N	%	N	%
Main reason SLPA is inactive or dissolved (individual)*						
Members' lack of interest in the SLPA	2	5.1	35	76.1	37	43.5
Members' lack of time for the SLPA	4	10.3	0	0.0	4	4.7
Conflict among members	0	0.0	11	23.9	11	12.9
No more SLPA meetings/activities	25	64.1	0	0.0	25	29.4
SLPA president died	1	2.6	0	0.0	1	1.2
Do not know	7	17.9	0	0.0	7	8.2
Total	39	100.0	46	100.0	85	100.0
Main reason SLPA is inactive or dissolved (group)**						
Members' lack of interest in the SLPA	8	44.4	5	17.2	13	27.7
Members' lack of time for the SLPA	2	11.1	9	31.0	11	23.4
Conflict among members	4	22.2	6	20.7	10	21.3
Members not paying loans/debts	1	5.6	0	0.0	1	2.1
Problems with profit/income	1	5.6	5	17.2	6	12.8
Robbery	1	5.6	0	0.0	1	2.1
Location transfer	1	5.6	0	0.0	1	2.1
Financial management	0	0.0	4	13.8	4	8.5
Total	18	100.0	29	100.0	47	100.0

Notes: * Observations are individual members. ** Observations are SLPAs.

5.2.5. Group members' work and income from the group business

In our theory of change, we posit that the two main ways through which group project members benefit directly from the group business are by rendering paid services for the business and by receiving dividends from the business's income. Data suggests that the large majority of program beneficiaries in group projects are not earning income from these two

channels (see Table 5.12). In our survey, only about a third (32.8 percent) of respondents who are part of a group project reported working for the business at any time during 2019, and just 3.4 percent worked and received compensation. The average full-year compensation was about PhP2,845. Similarly, only 5.9 percent of respondents belonging to group projects reported that their group distributed dividends in 2019, with the dividend they received amounting to about PhP1,805 on average. Among the majority of respondents who said their group did not distribute dividends to members in 2019, 43.5 percent said their SLPA did not do so because it was still trying to recoup the initial SCF grant, 17.8 percent said the group was struggling to be profitable, while about a third did not know the reason (see Table 5.13).

Table 5.12. Work, wage income and dividends from the group business

	N	Worked (%)	Worked with compensation (%)	Mean compensation (PhP)	Distributed dividends (%)	Mean dividends (PhP)
Computer rental and related services	3	33.3	0.0		0.0	
Fishing/aquaculture	12	41.7	0.0		8.3	
Food service	2	50.0	0.0		0.0	
Livestock/poultry raising	46	60.9	6.5	4,800.0	2.2	1,700.0
Manufacturing (dressmaking)	10	40.0	20.0	250.0	20.0	209.0
Manufacturing (food products)	10	20.0	0.0		0.0	
Retail (agricultural supplies)	102	36.3	2.9	10,000.0	2.0	4,000.0
Retail (food products)	264	51.1	5.3	932.3	6.8	1,926.1
Retail (gen. merchandise/sari-sari store)	618	22.7	2.6	3,135.9	6.1	1,716.6
Retail (motor vehicle parts)	5	20.0	0.0		0.0	
Retail (online selling)	12	66.7	0.0		16.7	700.0
Retail (rice and agricultural supplies)	7	0.0	0.0		0.0	
Retail (unclassified)	2	0.0	0.0		0.0	
Transportation (tricycle)	4	0.0	0.0		0.0	
Water refilling station	10	10.0	0.0		10.0	2,500.0
Total	1107	32.8	3.4	2,845.4	5.9	1,804.9

Table 5.13. Reason for group not distributing dividends to members

	N	%
SLPA still paying off principal	449	43.5
Group struggling to turn a profit	184	17.8
Profit to be distributed after 2-3 years	50	4.8
Losses due to calamities	12	1.2
Do not know	336	32.6
Total	1,031	100.0

5.2.6. Group business net income

Finally, we report the net income of group projects in 2019 using revenue and expenses information obtained from respondents (see Table 5.14). Reported net incomes vary widely, with many projects reporting negative net incomes. Average profits per member across the 166 group projects turn out to be modest: mean annual net income per member comes out to PhP2,748, while median net income per member is just PhP292. Retail trade-related projects appear to be the most profitable on average.

Table 5.14. Group business net income per member for 2019

	N	Mean (PhP)	Median (PhP)
Computer rental and related services	1	-235	-235
Fishing/aquaculture	2	-842	-842
Food service	1	No data	No data
Livestock/poultry raising	9	-106	1,719
Manufacturing (dressmaking)	1	-31,799	-31,799
Manufacturing (food products)	1	0	0
Retail (agricultural supplies)	14	-2,033	-6
Retail (food products)	55	625	400
Retail (gen. merchandise/sari-sari store)	74	6,349	356
Retail (motor vehicle parts)	1	967	967
Retail (online selling)	3	4,115	4,115
Retail (rice and agricultural supplies)	1	No data	No data
Retail (unclassified)	1	-395	-395
Transportation (tricycle)	1	-2,343	-2,343
Water refilling station	1	No data	No data
Total	166	2,748	292

5.3. Findings from the qualitative fieldwork

We turn to our findings from the qualitative fieldwork. Fifty-eight individuals belonging to CCT households participated in our FGDs. The focus groups had between three to nine participants, with the average size being 7.25 participants. Fifty-five of our respondents are female. Two-thirds of them were within 40 and 60 years of age, the average age being 45 years. Thirty-nine participants were SCF recipients representing 20 different SLPAs. Almost all of the treated respondents were officers in their respective SLP Associations, most of them (60 percent) being either the president or treasurer.[36] Among treated respondents, those from the NCR all had an individual project, while those from the Region VI and Region X site were all part of a group project.

Most of the respondents from the NCR site depend on retail trading as their household's primary source of income. In the Region VI site, many respondents said they depend on income from wage labor or tricycle/pedicab operation, while some depend on retail trade, farming and domestic cleaning. In the Region X site, half of the respondents depend on crop farming (particularly tobacco), with some relying on their husbands' income from construction or household repair.

5.3.1. Focus group discussions with SLP beneficiaries

The beneficiaries we encountered in the NCR site used the grant entirely to support individual projects. All of them invested the grant on retail trading activities, particularly in

[36] We asked SLP field officers to identify possible FGD participants among SCF beneficiaries in Jan-Jun 2018. Officers were free to nominate whoever was willing and available. We did request that participants be familiar with the group business project, which they will be asked about. Officers may also be easier to contact compared to non-officer members

food products such as rice, vegetables, and grocery items. Most of them used the grant as additional capital for activities they were already engaged in.

In Region VI site, every SLPA we came across used the grant exclusively as seed money for a group project. Most SLPAs pursued retail trading activities, but we also encountered one that tried to set up a rice mill, and another that established a vegetable farm. One SLPA consisted of two smaller groups that ran separate projects: a grain and poultry supplies retail store and a pedicab operation.

Most of the SLPAs we encountered in the Region X site apportioned the grant between a common group project and individual projects for every member. Some respondents used their share of the grant to purchase piglets to fatten, while others added capital or bought equipment for existing household activities (e.g. tire vulcanizing, charcoal selling, and carpentry). However, our discussion with them focused on the group projects they set up. Most SLPAs implemented retail-based group projects (e.g. community store and rice retail), but we also sampled a few that are agriculture-oriented. One group consisting of tobacco farmers used the grant to procure fertilizers for its members, which the latter are expected to repay upon harvest at a small markup. A few others groups went into hog or cattle fattening.

Issues in business operation

- ***Delayed cash inflow or unrealized revenue due to extension of in-kind credit to customers.*** All of our respondents that run a retail business, whether group- or individually-run, allow customers to purchase merchandise on credit. Customers are usually their neighbors or SLPA co-members who they may have a hard time turning down. Many customers take a long time settle their liabilities, if at all, which in turn constricts the cash flow needed to replenish stocks and maintain operations. Some group projects have closed after seeing their working capital dry up due to uncollected receivables.
- ***Lack of participation from members to operate the group business.*** A number of participants brought up the lack of participation among group members in operating the business and expressed frustration that others are free-riding on their efforts. Others complain that few members attend group meetings. Some reasons cited by FGD participants were that those members were busy with household duties or livelihoods or were simply not available.
- ***Disease and poor livestock yield.*** Beneficiaries who engage in livestock fattening projects ran into problems in raising their stock. Two hog raisers reported losing some of their pigs to disease (hog cholera) despite efforts to treat them. One of them decided to liquidate their remaining pig stock after running out of cash to buy feeds. Meanwhile, two cattle raisers reported selling their stock at a loss when the cows they raised failed to reach the desired weight due to the lack of grass to feed on.
- ***Small margins and low sales.*** Group retailers in the provinces sell their merchandise for thin margins in consideration of their market (usually their own cash-strapped group members or neighbors). One retailer cited poor sales due lack of demand in her neighborhood. Meanwhile, retail traders from NCR report absorbing the rising cost of merchandise just to keep sales up.
- ***Financial mismanagement.*** One group project (rice milling) never took off as one officer appeared to have pocketed the funds allotted to purchase the milling machine. Another group project (retail store) closed after an officer in charge of daily

operations took business funds for personal use. The business had already been struggling due to uncollected receivables from customers/SLPA members.

Issues in grant repayment/recovery

Nineteen of the 20 SLPAs represented in our focus groups have not managed to recover the grant they received from the program. SLPAs with individual projects grapple with members who fail to make contributions. For those with group projects, low revenues and cash flow issues keep them from recouping the grant. They prioritize using cash earnings for operating expenses rather than putting it away as savings.

Perceptions of economic impact

Most respondents think that their SCF-financed business projects have been helpful to them, though none said that they felt their standard of living has improved because of it. When asked how the intervention has helped them, a common response among individual project beneficiaries was that the business allows them to earn extra income to spend on food or their children's education. The extra income helps them to make ends meet but not much more. One respondent pointed out that her earnings are just keeping up with the rising cost of raising her children.

Beneficiaries with a group retail business all said that their projects have been helpful to members for allowing them to purchase goods on credit. Members can come to the store not worrying about having no cash to pay upfront especially for food items. Similarly, the tobacco farmers group said their project has helped their members who can now turn to the association to obtain fertilizer on credit. The two groups that ran into financial mismanagement issues both said their project did not have an impact on their lives.

Perceptions of non-economic impact

Some respondents said their participation in SLP helped them with their confidence and social skills, while others said that it helped them became more patient and understanding of others. The vegetable gardeners said the project allowed them to learn about farming. Other respondents did not feel that the program changed any aspect of their life. Some expressed dissatisfaction with having group members who do not participate in the affairs of the group.

5.3.2. Focus group discussions with non-SLP beneficiaries

Almost all of our non-SLP respondents were aware or had heard of SLP. Their impression of the program is that it provides credit to start a business to people who are in need. Among respondents who had known about SLP, reasons for non-participation are varied. Some were afraid to incur debt that they may not be able to repay with their meager incomes. Others said they would like to avail the assistance but refuse to be part of a group where some members end up free-riding. Some had actually undergone orientation or had submitted business proposals, but their process of joining the program stalled at some point.

When asked what assistance from the government they need in order to improve their standard of living, the most common responses were livelihood assistance and scholarship or financial support for their children's education. Those who said livelihood assistance wanted some capital to start a small business or add capital to an existing livelihood. The businesses

that respondents said they wanted to start or add capital to include hog raising, mat weaving, *sari-sari* store, and food stall.

5.4. Quantitative analysis

5.4.1. Baseline balance

We now turn to the quantitative analysis of the survey data. Table 5.15 shows results of the test for pre-treatment balance in matching variables between treatment and comparison groups. Difference in means is estimated through linear regression of each variable with the treatment variable. Standard errors are clustered at the city/municipal level. We find no statistically significant differences in the matching variables except on the PMT (predicted income) score. Matched comparison households on average have a higher PMT of about PhP195.5 per person than those of treated households at the 10 percent level. This may indicate imbalance in pre-intervention income and expenditure. Without actual income and expenditure data, we are unable to check.

Table 5.15. Balance on matching variables

	Treatment			Comparison			
	N	Mean	SD	N	Mean	SD	Diff
Sex of the household head (1 = Male, 2 = Female)	1,296	1	0	1,296	1	0	0.000
Sex of the spouse (1 = Male, 2 = Female)	1,296	1.99	0.09	1,296	1.99	0.09	0.000
Household head's age (years)	1,296	43.27	8.66	1,296	43.30	8.71	-0.025
Spouse's age (years)	1,296	41	8	1,296	41	8	-0.025
Education of household head†	1,296	7.66	3.17	1,296	7.62	3.25	0.035
Education of spouse†	1,296	8.60	3.10	1,296	8.58	3.11	0.017
Household size	1,296	6.01	1.81	1,296	6.06	1.83	-0.043
Per capita income (PhP) (Proxy Means Test Score)	1,296	14,057.35	3,524.1	1,296	14,252.82	3,999.4	-195.464*

Note: Regressions use clustered standard errors (clustered at city/municipal level). ***, **, and * indicate significance at the 1, 5, and 10 percent critical level from individual p-values. † Education is the highest grade/level completed and is coded into categories, where 0 = No grade completed; 1 = Kindergarten or day care; 2 = Grade 1; 3 = Grade 2; 4 = Grade 3; 5 = Grade 4; 6 = Grade 5; 7 = Grade 6; 8 = Grade 7 or first year high school; 9 = Grade 8 or second year high school; 10 = Grade 9 or third year high school; 11 = Grade 10 or fourth year high school; 12 = Grade 11; 13 = Grade 12; 14 = First year college; 15 = Second year college; 16 = Third year college; 17 = Fourth year college or higher; 18 = College graduate; 19 = Masters or Ph.D.

5.4.2. Findings

We present the results of the regression analysis of equation (1) (described in Section 4). We also report two other sets of results that consider how impacts may differ by type of business project management. The second set reports treatment effect estimates in a model that only includes group-project treated households and their matched comparison households,

comprising 91 percent of the sample. The treatment effect estimate is interpreted as the impact on group-project beneficiaries. The third set meanwhile reports results for a model that includes an interaction term of the treatment variable and a group dummy (Treat x Group). The estimate on the treatment term is interpreted as the impact on individual project beneficiaries, while the sum of the estimates on the treatment term and the treatment-interaction term is estimates as the impact on group-project beneficiaries. We take estimates for the third set of results with caution, however, because our sample is not powered to make multiple treatment comparisons (i.e., between treated-group, treated-individual, and untreated). In the regression tables that will follow, these three sets of results are reported under columns labeled (1), (2), and (3), respectively. We compute the q-value of each outcome over each model. The q-value of a test measures the fraction of false discoveries when that test is rejected.

Table 5.16 provides the descriptive statistics of household characteristics used as regression covariates (except the PMT score which was reported in the previous table). The descriptive statistics of the outcomes of interest for treatment and comparison households are presented but these do not consider differences in circumstances of the households. Only the impact estimation results provide an estimate of the differences controlling for household level characteristics and area fixed effects. Notably, a larger share of treated households received social assistance in 2019 (by 5.9 percentage points) and have a land-based motor vehicle (by 5 percentage points) compared to comparison households. Among the 14 personality measures, treated and comparison households are significantly different in only one (locus of control), with comparison households having a slightly higher score. This suggests that the two groups are not systematically different in their personality traits and entrepreneurial orientation.

Table 5.16: Household covariates by treatment status

	Treatment			Comparison			
	N	Mean	SD	N	Mean	SD	Diff
Household size	1,296	6	2	1,296	5	2	0.102
Years in school of household head	1,260	7.90	3.08	1,276	7.98	3.18	-0.088
Received social assistance during Jan-Dec 2019 (%)	1,296	0.32	0.47	1,296	0.26	0.44	0.059**
Experienced difficulties during Jan-Dec 2019 (%)	1,296	0	0	1,296	0	0	0.019
With car, jeep, van, motorcycle or tricycle (%)	1,296	0.35	0.48	1,296	0.31	0.46	0.049***
With refrigerators/freezer (%)	1,296	0.14	0.35	1,296	0.14	0.35	0.005
With cellphone (%)	1,296	0.83	0.38	1,296	0.81	0.39	0.015
With aircon (%)	1,296	0.00	0.03	1,296	0.00	0.05	-0.002
With TV (%)	1,296	0.74	0.44	1,296	0.74	0.44	0.008
With personal computer (%)	1,296	0.02	0.15	1,296	0.02	0.15	-0.002
With washing machine (%)	1,296	0.16	0.36	1,296	0.16	0.36	0.001
Business personality mean score‡	1,295	3.60	0.51	1,294	3.61	0.50	-0.013
General risk score†	1,295	7.02	1.87	1,294	7.02	1.92	0.004
Financial risk score†	1,295	6.83	1.88	1,294	6.82	1.93	0.006
Willing to take business risk‡	1,296	0.75	0.44	1,296	0.74	0.44	0.009
Work centrality score‡	1,295	3.84	0.65	1,294	3.84	0.63	-0.004
Achievement mean score‡	1,295	3.48	0.51	1,294	3.47	0.51	0.009
Impulsiveness mean score‡	1,295	2.57	0.46	1,294	2.56	0.48	0.016
Locus of control mean score‡	1,295	3.70	0.63	1,294	3.73	0.59	-0.036**

Optimism mean score‡	1,295	3.08	0.29	1,294	3.06	0.27	0.016
Polychronicity mean score‡	1,295	3.56	0.61	1,294	3.57	0.60	-0.005
Power motivation mean score‡	1,295	2.65	0.46	1,294	2.65	0.46	-0.002
Passion for work mean score‡	1,295	3.72	0.69	1,294	3.74	0.68	-0.021
Organized person mean score‡	1,295	3.61	0.68	1,294	3.59	0.67	0.023

Note: Regressions use clustered standard errors (clustered at city/municipal level). ***, **, and * indicate significance at the 1, 5, and 10 percent critical level from individual p-values. † Scale: 1 to 10. ‡ Scale: 1 to 5.

Impact on labor and employment

Table 5.17 reports summary statistics on labor and employment outcomes, giving focus on the spouse who is commonly the program participant within the treated household. Significant differences are found in number of hours worked but not in the labor force participation and employment rates. Among treated households, employed members worked 1.89 more hours per person during the reference week compared to employed members in comparison households. Meanwhile, among CCT grantees[37] who are also the spouse, those who belong to treated households worked 2.3 more hours than their comparison household counterparts during the reference week. In terms of the type of workers present in the household, the share of households that have members who are wage workers is higher among comparison households by 5 percentage points compared to treatment households (77 percent vs. 72 percent). On the other hand, the proportion of households with members who are self-employed or are unpaid family workers is higher among treated households (31 percent and 4 percent, respectively) compared to comparison households (25 percent and 2 percent, respectively).

Table 5.18 reports treatment effect estimates on number of hours worked, labor force participation and employment rate. We find that the number of hours worked per week of treated CCT grantee-spouses with individual projects is higher than their comparison household counterparts by about 9.9 hours ($p = 0.0$, $q=0.005$), but the impact on CCT grantee-spouses that are part of a group project is lower by 8.3 hours compared to individual-business counterparts (i.e., a difference of just 1.6 hours compared to comparison households) ($p = 0.001$, $q = 0.012$).

We see the same pattern in other labor outcomes. Treatment for CCT grantee-spouses in individual projects increases the probability of being in the labor force by about 23.1 percentage points ($p=0.001$, $q=0.012$), and the probability of being employed by 20.4 percentage points ($p=0.001$, $q=0.012$), compared to comparison households. However, receiving the treatment as part of a group business rather than an individual business reduces these probabilities by 22.6 percentage points ($p=0.001$, $q=0.012$) and 20.9 percentage points ($p=0.001$, $q=0.012$), respectively. In terms of effects on household employment, treatment increased the proportion of household members who are employed for households that benefited from using the treatment for an individual project by 6.1 percentage points compared to comparison households ($p=0.001$, $q=0.016$). For group business project beneficiary households, however, the share of employed household members is 5.7 percentage points lower than their individual project counterparts ($p=0.016$, $q=0.081$).

[37] The *Pantawid Pamilya* Program Operations Manual defines the "grantee" as the mother or most responsible adult member who is authorized to withdraw or receive the CCT grants in behalf of the household.

Table 5.17. Labor and employment characteristics by treatment status

	Treatment			Comparison			
	N	Mean	SD	N	Mean	SD	Diff
Hours worked per employed member per week	1,212	43	20	1,213	41	18	1.89**
Hours worked by CCT grantee (spouse) per week	1,296	11.52	20.82	1,296	9.21	18.22	2.30**
Labor force participation (%)	1,295	0.50	0.24	1,296	0.50	0.23	0.00
Employed working-age members	1,295	0.43	0.24	1,296	0.43	0.23	0.00
Share of children employed (%)	1,041	0.00	0.03	1,040	0.00	0.03	-0.00
Spouse is employed (%)	1,209	0.39	0.49	1,186	0.38	0.49	0.01
CCT grantee (spouse) is employed (%)	1,067	0.36	0.48	1,029	0.35	0.48	0.01
Spouse is in the labor force (%)	1,209	0.42	0.49	1,186	0.40	0.49	0.03
CCT grantee (spouse) is in the labor force (%)	1,067	0.39	0.49	1,029	0.36	0.48	0.02
With wage worker (%)	1,296	0.72	0.45	1,296	0.77	0.42	-0.05**
With self-employed worker (%)	1,296	0.31	0.46	1,296	0.25	0.44	0.06**
With employer (%)	1,296	0.03	0.17	1,296	0.02	0.16	0.01
With unpaid family worker (%)	1,296	0.04	0.19	1,296	0.02	0.14	0.02**

Note: Regressions use clustered standard errors (clustered at city/municipal level). ***, **, and * indicate significance at the 1, 5, and 10 percent critical level from individual p-values.

Table 5.18. Treatment effect estimates on hours worked, labor force participation and employment

Outcome	Model	Treatment	Estimate	Std. error	p-value	Sig.	q-value	Sig.	N
Hours worked per	(1)	Treat	1.882	0.782	0.021	**	0.131		2377
worker	(2)	Treat	1.872	0.780	0.022	**	0.299		2164
	(3)	Treat	1.992	2.046	0.336		1		2377
		Treat x Group	-0.120	2.011	0.953		1		2377
Hours worked by CCT	(1)	Treat	2.277	0.884	0.014	**	0.131		2534
grantee spouse	(2)	Treat	1.365	0.950	0.160		1		2316
	(3)	Treat	9.940	2.271	0.000	***	0.005	***	2534
		Treat x Group	-8.322	2.354	0.001	***	0.012	**	2534
Share of members in	(1)	Treat	0.007	0.009	0.433		1		2533
the labor force (%)	(2)	Treat	0.002	0.009	0.854		1		2315
	(3)	Treat	0.066	0.029	0.028	**	0.127		2533
		Treat x Group	-0.065	0.031	0.041	**	0.168		2533
Share of employed	(1)	Treat	0.009	0.008	0.290		1		2533
members (%)	(2)	Treat	0.005	0.009	0.597		1		2315
	(3)	Treat	0.061	0.019	0.003	***	0.016	**	2533
		Treat x Group	-0.057	0.023	0.016	**	0.081	*	2533
CCT grantee spouse	(1)	Treat	0.026	0.024	0.293		1		2042
is in the labor force	(2)	Treat	-0.002	0.023	0.948		1		1851
(%)	(3)	Treat	0.231	0.072	0.001	***	0.012	**	2042
		Treat x Group	-0.226	0.071	0.002	***	0.012	**	2042
CCT grantee spouse	(1)	Treat	0.015	0.023	0.515		1		2042
is employed (%)	(2)	Treat	-0.011	0.023	0.635		1		1851
	(3)	Treat	0.204	0.063	0.001	***	0.012	**	2042
		Treat x Group	-0.209	0.065	0.001	***	0.012	**	2042

Note: Model 1 = Regression of equation (1) using all observations. Model 2 = Regression of equation (1) with only treated household that are part of a group business project and their matched comparisons. Model 3 = Regression of equation (1) using all variables with a treatment-group membership interaction term. ***, **, and * indicate significance at the 1, 5, and 10 percent level. Estimates for last two outcomes (CCT grantee spouse is in the labor force and CCT grantee spouse is employed) are marginal effects from a logit regression.

Impact on household income

Descriptive statistics in Table 5.19 show no significant difference between treated and comparison households in household income and its major components (wage income, entrepreneurial income, sustenance income, and other sources of income). However, when entrepreneurial and sustenance incomes are combined, we find that treated households' income from this source is significantly higher than those of comparison households by PhP405 per person. We also do see a statistically significant but small difference in dividend income (PhP11.70 per person) in favor of treated households. Dividends add to the "other sources of income" component of household income.

In terms of sources of income, we find that the proportion of treated households that earn entrepreneurial income (23 percent) is 6 percentage points higher than that of comparison households (17 percent). However, net entrepreneurial income accounts for just 6 percent of total income for both treated and comparison households. About 39 percent of households engage in sustenance activities (agricultural activities that entail the production of goods mainly for home consumption), which accounts for just 4-5 percent of household income. The share of income from sustenance activities to total income among treated households is marginally higher than comparison households by 1 percentage point. On the other hand, 86-87 percent of sample households earn wage income, which comprises the largest share of household income at 61 percent. The next largest source of income is "other sources of income", of which the largest component is cash assistance from domestic sources, comprising about 22-23 percent of household income. Overall, the data shows that wage income is the primary source of income of sample households, which they supplement with income from entrepreneurial and sustenance activities.

Table 5.19. Household income by treatment status

	Treatment			Comparison			
	N	Mean	SD	N	Mean	SD	Diff
Household income per capita (PhP)	1,296	23,257	14,984	1,296	23,662	15,426	-405.06
Wage income per capita (PhP)	1,296	15,993.38	13,488.53	1,296	16,581.87	13,768.63	-588.49
Entrepreneurial income per capita (PhP)	1,296	1,358.26	3,558.83	1,296	1,103.36	3,281.10	254.90
Sustenance income per capita (PhP)	1,296	621	1,251	1,296	549	1,154	71.86
Entrepreneurial and sustenance income per capita (PhP)	1,296	2,267.59	4,214.92	1,296	1,862.61	3,894.41	404.98**
Net income from net share of crops, etc. per capita (PhP)	1,296	0.00	0.00	1,296	0.00	0.00	0.00
Income from other sources per capita (PhP)	1,296	3,404.15	2,158.33	1,296	3,432.08	2,191.86	-27.93
Cash assistance from domestic sources per capita (PhP)	1,296	3,467.27	2,863.29	1,296	3,490.56	2,885.44	-23.29
Dividends per capita (PhP)	1,296	11.70	108.43	1,296	0.00	0.00	11.70**
With wage income (%)	1,296	0.86	0.34	1,296	0.87	0.34	-0.00
With entrepreneurial income (%)	1,296	0.23	0.42	1,296	0.17	0.38	0.06***
With income from sustenance activities (%)	1,296	0.40	0.49	1,296	0.39	0.49	0.01
With other sources of income (%)	1,296	0.94	0.24	1,296	0.92	0.27	0.02**
Wage income share (%)	1,296	0.61	0.32	1,296	0.61	0.35	-0.00
Entrepreneurial income share (%)	1,296	0.06	0.29	1,296	0.07	0.27	-0.01
Sustenance income share (%)	1,296	0.05	0.14	1,296	0.04	0.12	0.01*
Other income sources share (%)	1,296	0.24	0.30	1,296	0.24	0.25	0.00
Cash assistance from domestic sources share (%)	1,296	0.22	0.23	1,296	0.23	0.24	-0.00

Note: Differences are the coefficients on the treatment dummy when regressed with each variable. Regressions use clustered standard errors (clustered at the city/municipal level). ***, **, and * indicate significance at the 1, 5, and 10 percent critical level using individual p-values.

Table 5.20 shows treatment effect estimates on household income variables. We find that the intervention has no significant effect on household income, wage income, or sustenance income. In terms of individual significance tests, we find positive impacts on entrepreneurial income, sustenance income, the sum of entrepreneurial and sustenance income, and dividend income. However, none of them are significant considering their q-values, i.e., the false discovery rate in their respective models would be higher than 10 percent if any one of them is considered significant. Thus, we have low confidence that the individually significant impacts actually represent true impacts.

Since 91 percent of treated households are part of a group business, the wage income and dividend income channels are expected to play a central role in mediating income generation by the SLP-financed group business with household income. As discussed in the previous subsection however, a very small proportion of beneficiaries earned income through these channels, with only 3.4 percent of treated households in group businesses earning wage income and 5.9 percent earning dividend income directly from the group business. We do find a statistically significant but small effect on dividend income of PhP6.06 (p=0.54, q=0.270) to PhP10.020 (p=0.018, q=0.131) per person. The absence of a significant and substantial effect on wage income, which accounts for about 60 percent of household income, coupled with the small effect on dividend income, may explain the lack of impact on household income.

The estimated increase in entrepreneurial income is PhP247.67 per person (p=0.061, q=0.282), while the estimated increase in the sum of entrepreneurial and sustenance income is PhP432.14 (p=0.008, q=0.213) to PhP444.05 per person (p=0.01, q=0.131). This is surprising since we do not hypothesize income generated from the group business to directly influence household entrepreneurial and sustenance income. By construction, entrepreneurial and sustenance income are incomes from livelihood activities owned and operated by the households themselves rather than by the SLP beneficiary group. These are incomes which households have direct claim over. Given that beneficiaries in group-run projects dominate our treated sample, we do not expect household entrepreneurial income to increase directly as a result of income generation from the SLP-financed group business. The opposite would have been the case had individual-project beneficiaries dominated our treated sample. Thus, we cannot confidently attribute these impacts directly to the intervention.

Table 5.20. Treatment effect estimates on household income

	Model	Treatment	Estimate	Std. error	p-value	Sig.	q-value	Sig.	N
Income per capita (PhP)	(1)	Treat	142.786	491.925	0.773		1		2534
	(2)	Treat	123.167	486.917	0.802		1		2316
	(3)	Treat	461.674	1803.206	0.799		1		2534
		Treat x Group	-346.289	1764.167	0.845		1		2534
Wage income per capita (PhP)	(1)	Treat	-191.184	600.882	0.752		1		2534
	(2)	Treat	-261.822	621.257	0.676		1		2316
	(3)	Treat	904.629	1609.577	0.577		1		2534
		Treat x Group	-1189.973	1624.506	0.468		1		2534
Entrepreneurial income per capita (PhP)	(1)	Treat	247.673	128.310	0.061	*	0.282		2534
	(2)	Treat	215.582	130.933	0.109		0.818		2316
	(3)	Treat	502.888	509.015	0.329		1		2534
		Treat x Group	-277.145	521.968	0.599		1		2534
Sustenance income per capita (PhP)	(1)	Treat	59.345	46.703	0.212		1		2534
	(2)	Treat	79.858	49.882	0.118		0.818		2316
	(3)	Treat	-228.767	162.264	0.167		0.586		2534
		Treat x Group	312.869	178.588	0.088	*	0.332		2534
Entrepreneurial & sustenance income p.c. (PhP)	(1)	Treat	432.135	159.288	0.010	***	0.131		2534
	(2)	Treat	444.046	157.778	0.008	***	0.213		2316
	(3)	Treat	39.783	626.717	0.950		1		2534
		Treat x Group	426.066	629.071	0.502		1		2534
Dividends income per capita (PhP)	(1)	Treat	10.020	4.051	0.018	**	0.131		2534
	(2)	Treat	6.066	3.037	0.054	*	0.556		2316
	(3)	Treat	63.985	34.158	0.069	*	0.270		2534
		Treat x Group	-58.603	34.816	0.101		0.357		2534

Notes: Data are winsorized at 90%, except dividends. Model 1 = Regression of equation (1) using all observations. Model 2 = Regression of equation (1) with only treated household that are part of a group business project and their matched controls. Model 3 = Regression of equation (1) using all variables with a treatment-group membership interaction term. “Sig” stands for statistical significance. ***, **, and * indicate statistical significance at the 1, 5, and 10 percent levels.

Impact on household expenditure

The descriptive statistics in Table 5.21 show that there are no significant differences between treated and comparison households with respect to household expenditure or its other important components such as food expenditure, education expenditure, and health expenditure. Household expenditure in 2019 was around PhP24,000 per person, and food expenditure around PhP17,000 per person. Treatment effect estimates in Table 5.22 also show no statistically significant impact on household expenditure or on its other components.

Table 5.21. Household expenditure by treatment status

	Treatment			Comparison			
	N	Mean	SD	N	Mean	SD	Diff
Household expenditure per capita (PhP)	1,296	24,026	11,437	1,296	24,173	11,647	-147.19
Food expenditure per capita (PhP)	1,296	16,922.38	7,544.34	1,296	17,078.88	7,565.84	-156.49
Education expenditure per capita (PhP)	1,296	375.92	496.68	1,296	367.77	497.68	8.15
Health expenditure per capita (PhP)	1,296	99	188	1,296	93	181	6.51
Clothing expenditure per capita (PhP)	1,296	360.26	315.27	1,296	363.62	310.01	-3.37
Furnishings and durables expenditures per capita (PhP)	1,296	69.37	146.99	1,296	64.83	140.52	4.53

Note: Differences are the coefficients on the treatment dummy when regressed with each variable. Regressions use clustered standard errors (clustered at the city/municipal level). ***, **, and * indicate significance at the 1, 5, and 10 percent critical level using individual p-values.

Table 5.22. Treatment effect estimates on household expenditure

Outcome	Model	Treatment	Estimate	Std. error	p-value	Sig.	q-value	Sig.	N
Expenditure per capita (PhP)	(1)	Treat	-230.544	499.901	0.647		1		2534
	(2)	Treat	-521.358	492.023	0.297		1		2316
	(3)	Treat	557.538	1835.333	0.763		1		2534
		Treat x Group	-855.800	2048.652	0.678		1		2534
Food expenditure per capita (PhP)	(1)	Treat	-183.355	343.231	0.596		1		2534
	(2)	Treat	-339.011	335.582	0.319		1		2316
	(3)	Treat	100.541	1135.463	0.930		1		2534
		Treat x Group	-308.291	1253.837	0.807		1		2534
Health expenditure per capita (PhP)	(1)	Treat	4.630	7.082	0.517		1		2534
	(2)	Treat	2.451	7.787	0.755		1		2316
	(3)	Treat	22.438	33.615	0.508		1		2534
		Treat x Group	-19.339	37.309	0.607		1		2534
Education expenditure per capita (PhP)	(1)	Treat	-9.743	16.691	0.563		1		2534
	(2)	Treat	-12.096	18.160	0.510		1		2316
	(3)	Treat	-39.318	54.427	0.474		1		2534
		Treat x Group	32.116	61.503	0.605		1		2534
Clothing expenditure per capita (PhP)	(1)	Treat	-6.217	12.470	0.621		1		2534
	(2)	Treat	-10.933	12.114	0.373		1		2316
	(3)	Treat	18.089	35.958	0.618		1		2534
		Treat x Group	-26.395	33.907	0.441		1		2534
Furnishings and durables expenditure p.c. (PhP)	(1)	Treat	1.394	5.913	0.815		1		2534
	(2)	Treat	0.567	6.188	0.927		1		2316
	(3)	Treat	-12.829	18.840	0.500		1		2534
		Treat x Group	15.445	19.501	0.433		1		2534

Notes: Data are winsorized at 90%. Model 1 = Regression of equation (1) using all observations. Model 2 = Regression of equation (1) with only treated household that are part of a group business project and their matched controls. odel 3 = Regression of equation (1) using all variables with a treatment-group membership interaction term. “Sig” stands for statistical significance. ***, **, and * indicate statistical significance at the 1, 5, and 10 percent levels.

Impact on savings and borrowing

Descriptive statistics in Table 5.23 show no significant difference between treated and comparison households across different measures of household saving and borrowing, except in the share of households that borrowed from a microfinance institution in 2019 (11 percent among treated households vs. 9 percent among comparison households). Mean savings per person in 2019 was just PhP167 among treated households and PhP136 among comparison households. Meanwhile, mean total borrowings was PhP636.27 per person among treated households and PhP637.14 among comparison households. Regression estimates in Table 5.24 also show no significant treatment effect of the intervention on household borrowing per capita and household savings per capita.

Table 5.23. Summary of household savings and borrowing

	Treatment			Comparison			
	N	Mean	SD	N	Mean	SD	Diff
Savings per capita (PhP)	1,292	167	1,079	1,296	136	1,030	31.14
With any savings from Jan-Dec 2019 (%)	1,292	0.12	0.33	1,296	0.10	0.30	0.02
With savings in bank (%)	1,271	0.02	0.14	1,269	0.03	0.17	-0.01
With savings in cooperative (%)	1,283	0	0	1,284	0	0	-0.00
With savings in savings and loan group (%)	1,287	0.02	0.13	1,287	0.01	0.10	0.01
With savings kept at home (%)	1,255	0.04	0.19	1,259	0.03	0.18	0.00
With other savings (%)	1,259	0.02	0.12	1,274	0.01	0.10	0.01
Total borrowings per capita (PhP)	1,295	636.27	1,703.43	1,296	637.14	2,306.52	-0.88
Borrowed from bank (%)	1,283	0.01	0.08	1,285	0.01	0.10	-0.00
Borrowed from SSS/GSIS/Pag-IBIG (%)	1,276	0.00	0.07	1,279	0.01	0.10	-0.01
Borrowed from microfinance (%)	1,287	0.11	0.31	1,287	0.09	0.28	0.02*
Borrowed from cooperative (%)	1,290	0.01	0.12	1,290	0.02	0.15	-0.01
Borrowed from savings and loan group (%)	1,289	0.00	0.06	1,291	0.00	0.06	-0.00
Borrowed from pawnshop (%)	1,285	0.00	0.06	1,285	0.00	0.03	0.00
Borrowed from lending company (%)	1,288	0.04	0.19	1,290	0.04	0.20	-0.00
Borrowed from employer (%)	1,281	0.01	0.07	1,277	0.01	0.10	-0.00
Borrowed from loan shark (%)	1,289	0.01	0.10	1,286	0.01	0.07	0.00
Borrowed from relatives (%)	1,288	0.07	0.26	1,280	0.07	0.25	0.01
Borrowed from friends or neighbors (%)	1,287	0.05	0.21	1,283	0.06	0.24	-0.01
Borrowed from other sources (%)	1,286	0.00	0.03	1,287	0.00	0.03	0.00
Borrowed from formal sources (%)	1,294	0.17	0.38	1,296	0.17	0.37	0.00

Note: Differences are the coefficients on the treatment dummy when regressed with each variable. Regressions use clustered standard errors (clustered at the city/municipal level). ***, **, and * indicate significance at the 1, 5, and 10 percent critical level using individual p-values.

Table 5.24: Treatment effect estimates on savings and borrowing

Outcome	Model	Treatment	Estimate	Std. error	p-value	Sig.	q-value	Sig.	N
Savings per capita (PhP)	(1)	Treat	53.454	54.557	0.333		1		2530
	(2)	Treat	54.792	58.219	0.353		1		2312
	(3)	Treat	130.674	98.008	0.190		0.627		2530
		Treat x Group	-83.871	112.820	0.462		1		2530
Borrowings per capita (PhP)	(1)	Treat	9.006	71.189	0.900		1		2533
	(2)	Treat	-26.633	68.240	0.699		1		2315
	(3)	Treat	424.932	340.117	0.219		0.666		2533
		Treat x Group	-451.679	345.427	0.199		0.627		2533

Note: Model 1 = Regression of equation (1) using all observations. Model 2 = Regression of equation (1) with only treated household that are part of a group business project and their matched comparisons. Model 3 = Regression of equation (1) using all variables with a treatment-group membership interaction term. ***, **, and * indicate significance at the 1, 5, and 10 percent level. Estimates for "with capital spending" are marginal effects from a logit regression.

Impact on capital investments

Finally, we report impacts on capital investments, which we define broadly as spending to repair, purchase, or rent physical assets for a household livelihood activity. Table 5.25 shows that a very small proportion of households in either group (nearly zero) repaired, purchased or rented capital assets for use in an entrepreneurial or livelihood activity. On average, both groups spent very little on capital investments: just PhP47 per person and PhP25.6 per person among treated and comparison households, respectively. Table 5.26 shows that the estimate effects of the intervention on capital investment is very small and not statistically significant.

Table 5.25: Summary of household capital investment

	Treatment			Comparison			
	N	Mean	SD	N	Mean	SD	Diff
Repaired or improved physical assets used in entrepreneurial or sustenance activity (%)	1,296	0	0	1,296	0	0	0.00
Purchased physical assets used in entrepreneurial or sustenance activity (%)	1,296	0.01	0.09	1,296	0.00	0.07	0.00
Rented physical assets used in entrepreneurial or sustenance activity (%)	1,296	0.00	0.04	1,296	0.00	0.03	0.00
Spent to repair, purchase or rent capital assets for used in entrepreneurial or sustenance activity (%)	1,296	0	0	1,296	0	0	0.00
Amount spent to repair/improve assets (PhP)	1,296	69.29	1,228.68	1,296	90.01	1,566.98	-20.72
Amount spend to purchase assets (PhP)	1,296	131.67	3,329.78	1,296	53.32	958.33	78.35
Amount spent to rent assets (PhP)	1,296	56.02	2,000.06	1,296	0.00	0.00	56.02
Capital investment per capita (PhP)	1,296	46.98	682.35	1,296	25.59	320.98	21.40

Note: Differences are the coefficients on the treatment dummy when regressed with each variable. Regressions use clustered standard errors (clustered at the city/municipal level). ***, **, and * indicate significance at the 1, 5, and 10 percent critical level using individual p-values.

Table 5.26: Treatment effects on capital investment

Outcome	Model	Treatment	Estimate	Std. error	p-value	Sig.	q-value	Sig.	N
Capital stock spending per capita (PhP)	(1)	Treat	9.844	14.696	0.507		1		2534
	(2)	Treat	12.840	16.098	0.430		1		2316
	(3)	Treat	5.597	30.450	0.855		1		2534
		Treat x Group	4.612	29.672	0.877		1		2534
With capital spending (%)	(1)	Treat	0.004	0.010	0.679		1		993
	(2)	Treat	0.007	0.013	0.582		1		896
	(3)	Treat	-0.000	0.039	0.990		1		993
		Treat x Group	0.005	0.046	0.906		1		993

Note: Model 1 = Regression of equation (1) using all observations. Model 2 = Regression of equation (1) with only treated household that are part of a group business project and their matched comparisons. Model 3 = Regression of equation (1) using all variables with a treatment-group membership interaction term. ***, **, and * indicate significance at the 1, 5, and 10 percent level. Estimates for “with capital spending” are marginal effects from a logit regression.

6. Cost analysis

This section estimates the relative costs and benefits of MD-SCF component of the SLP. This analysis can be one way to encourage policymakers to compare program impacts with costs to determine the efficacy of the intervention.

The base year for the cost estimates is 2018 corresponding to the year our treated sample received the SCF grant. However, we used the 2017 guidelines to estimate the grant component and community mobilization fund (CMF), which were still in effect for SCF recipients in the first semester of 2018.[38] The CMF, like the grant component, is also influenced by the number of participants or beneficiaries of the program. This fund is utilized for the mobilization, orientation, and training of potential SLP beneficiaries. It is estimated from the cost of meals and snacks for an eight-day activity or training.[39] The beneficiaries served in 2018 are mobilized in the previous year and usually receive the grants about six months to one year after mobilization since the proposed projects have to go through an approval process.

SLP administrative costs include the cost of services of Project Development Officers, travelling expenses, communication expenses, and staff seminars/trainings/workshops. On the other hand, personnel costs have fixed and variable components. The fixed costs include the salaries of regular and contractual staff whose numbers do not depend on the volume of program participants, while the variable cost consists of the wages and benefits of "contract of service" IPDO positions that vary in number based on the program's target number of beneficiaries.[40] We treat both administrative and personnel costs as fixed costs since data from SLP does not disaggregate personnel by type of service. We estimate administrative and personnel costs for the MD-SCF component of the program using the share of SCF-only beneficiaries to the total number of SLP beneficiaries (or "accomplishments").[41] Monitoring costs are subsumed under administrative and personnel costs. There are external fund sources for the grant component (e.g. congressional funds) but the administrative and personnel costs to disburse these grants are charged to the SLP annual budget.

The SLP is an intervention that is built on a previous program (SEA-K), thus we did not include capital assets in the cost (e.g. building, equipment). The developmental or start-up costs and recurring costs are assumed to be incurred once for an annual period since the program is a one-time participation and costs are incurred only at year zero. After the grant has been received, the IPDOs rarely engage or visit the beneficiaries.

Monitoring of projects funded by SLP is limited. The program is still in the process of developing its monitoring and evaluation strategy. By design , SLP projects have an "incubation period" of two years whereby the beneficiaries are observed and given guidance on business management as well as strengthening cooperation with associations and groups. The IPDOs are intended to monitor, up to a period of three months after receipt of grant, the

[38] The SCF's increase from PhP10,000 to its current value of PhP15,000 per beneficiary was implemented in the second half of 2018. Likewise, the CMF per beneficiary was also increased from P10,000 to P15,000.
[39] The fund may not be fully utilized since expenses for meals and snacks are minimal. Orientation and basic trainings may be conducted for half a day which does not require expenses for a full meal. In some cases, food is donated by the local government or other agencies. Savings from the CMF can be used for other purposes such as transport cost of participants and registration of associations.
[40] The program distributes its target beneficiary headcount among IPDOs. In 2017 and 2018 each IPDO had a caseload of 240 SLP beneficiaries.
[41] Accomplishments exclude referrals, defined as SLP participants referred by the program to other organizations or institutions that provide start-up capital for microenterprise.

utilization of the SCF and to ensure that all procedures, activities, materials, and equipment in starting up a business are met. After three months, the Monitoring PDOs (MPDOs) takes over from the IPDOs to check on the progress of the project/participants and the SLP associations for one year and three quarters. However, in practice, there is little monitoring done after the SCF has been given. Based on key informant interviews and FGDs, coaching is not commonly practiced and visits of IPDOs to beneficiaries only occur when there are organizational issues among groups members. The reason could be that for individual projects, more than half (61 percent) are existing businesses and the SLP grant is utilized for business expansion. In the case of group business, of which the majority (about 83 percent) are new businesses, technical support can be given by the Department of Agriculture for agriculture livelihood and the Department of Trade and Industry for development of agribusiness or non-agricultural enterprises. The technical support is provided from existing programs or projects of the respective agencies and are not necessarily targeted to support SLP. The budget for SLP project monitoring is part of the total implementation and monitoring cost of the field staff. This cost is already projected from the annual estimate of administrative and personnel costs.

Table 6.1 shows that the total cost to implement the MD track with Seed Capital Fund assistance amounts to about PhP1.74 Billion. About 70 percent of the cost comes from the SCF component and 14 percent from the CMF. On average, CMF, administrative and personnel costs amount to PhP4,228.93 per beneficiary. This means that to disburse one peso of grant money, SLP incurs an administrative cost of PhP0.42 centavos. This is 12 centavos higher than the cost to disburse funds estimated by Ballesteros et al (2015) for the previous SEA-K program. SLP also compares unfavorably to the local microfinance institution CARD-NGO and the BRAC program in terms of fund disbursement efficiency based on estimates from the same study.[42]

Table 6.1. Estimated cost of delivering Microenterprise Development assistance with Seed Capital Fund grant, 2018

Cost item	Amount (PhP)	Percent share
Grant (Seed Capital Fund)	1,226,210,000.00	70.28
Community Mobilization Fund (CMF)	245,242,000.00	14.06
Administration cost	161,134,027.69	9.24
Personnel cost	92,149,189.40	5.28
Share to central office administration cost	12,757,032.82	0.73
Share to central office personnel cost	7,273,633.23	0.42
Total	1,744,765,883.14	100.00
Cost per beneficiary (inclusive of grant)	14,228.93	
Cost per beneficiary (exclusive of grant)	4,228.93	
Total SLP budget	4,851,943,578.04	
% MD-SCF expenditure to SLP budget		36.0

Notes: Accomplishments and total SLP budget exclude those for the Autonomous Region in Muslim Mindanao (ARMM). Grant cost and CMF is based on 2017 cost. CMF is based on number of SCF beneficiaries. Administration, personnel, and central office (CO) fund utilization are weighted based on the share of SCF

[42] CARD NGO (Center for Agriculture and Rural Development) is a microfinance NGO that has been operating in the Philippines since 1986. BRAC (Bangladesh Rural Advancement Committee) operates a program for microenterprise development for the grassroots.

accomplishments to total SLP accomplishments by region in 2018. Monitoring costs are subsumed under administrative and personnel costs. Sources: SLP Work and Financial Plan 2017, 2018; SLP General Appropriations Act Utilization, Fund Obligated as of 2018.

Regarding program benefits, we estimate benefits of the MD-SCF component using the point estimate of the treatment effect on entrepreneurial and sustenance income per capita to project benefits from group projects (PhP432.14). Although this impact is not directly attributed to SLP as explained in the previous section, it is possible that the grant has provided opportunities to non-SLP businesses of the treated households. The transmission channel for some households could be through wage income and dividends while for others it could be through access to some form of credit (cash or in kind). An average of 27 percent of the grant given to group businesses in our sample are reportedly unspent, which SLPAs could have used as a revolving credit fund for members.

We assume that 91 percent of SCF beneficiaries participate in group-run projects, of which 72 percent will survive for at least five years.[43] The present value of the stream of incomes for a period of five years plus the deflated value of the SCF in five years result in program benefit of PhP932.00 million at a social discount rate of 10 percent (Table 6.2). This value is less than the total costs spent for the program.[44]

A comparison of the benefits and costs of the SLP MD-SCF component shows a benefit to cost ratio of 0.59, which means that the costs to operate the program outweigh its benefits.[45] In particular, the administrative and personnel costs to disburse the seed fund is high. DSWD may need to consider other mechanisms to disburse the grant such as using non-government organizations, microfinance institutions, social enterprises, or local government units as conduits for the funds.

Table 6.2. Benefit estimate

Year	Benefit per capita	Total benefit (PhP)
2019	432.14	173,593,401.97
2020	463.69	173,593,401.97
2021	497.54	173,593,401.97
2022	533.86	173,593,401.97
2023	572.83	173,593,401.97
Initial Capital (deflated to 2023)		320,196,369.91
10% Net present value		932,006,877.90
15% Net present value		798,656,116.27

Notes: Assumptions are as follows. Number of beneficiaries in group enterprises are 111,585, or 91 percent of the total number of MD-SCF beneficiaries in 2018 (122,621). 72 percent are operational over five years. Households have five members each. Benefits grow by 7.3 percent per year, using the average annual growth of gross value added for retail trade in 2016-2019. CPI base year 2012 was used to deflate the SCF to 2023. The social discount rate is 10 percent.

[43] Note that the SLP has preference for group enterprises since it tends to lower the mobilization and administrative costs per project and per beneficiary. Also, the individual grants can be pooled so that the association/group can have higher initial capital, which may allow them to engage in viable enterprises.

[44] It can be argued that the benefit estimate does not capture potential benefits of MD-SCF in the community in terms of jobs that are created from new businesses. It also assumes that there is no new infusion of capital into the business within the period of five years.

[45] Since the benefit was estimated from group enterprises only, the total program cost include only the expenditure for group enterprises amounting to PhP1,587.74 Million.

7. Discussion

7.1. Review of findings

We hypothesize that the MD-SCF grant would spur economic activity among treated households, which we measure with the number of hours worked, employment and labor force participation. We find that the intervention increased the numbers of hours worked, employment, and labor force participation among CCT grantee spouses, but the impacts among those who were part of a group business were either smaller or nil compared to their individual business counterparts. Among treated CCT grantee spouses that have an individual business, treatment increased the number of hours worked by 9.9 hours, increased the probability of being in the labor force by 23 percentage points, and increased the probability of being employed by 20 percentage points, compared to their comparison household counterparts. Meanwhile, among CCT grantee spouses that are part of a group business, treatment increased the number of hours worked by just 1.6 hours per week, increased the probability of being in the labor force by just 0.5 percentage points, and decreased the probability of being employed by 0.5 percentage points. The increase in the number of hours worked by individual- and group-project CCT grantee spouses represent 97.7 percent and 17.4 percent, respectively, of the mean number of hours worked by CCT grantee spouses in the comparison group. These are substantial increases.

The larger impact on labor supply among individual-project members compared to group-project beneficiaries is unsurprising since an individual project means the participant herself/himself operates her/his own business, possibly with the help of other household members. The more muted impact on labor supply among group-project beneficiaries is supported by our qualitative finding that a substantial majority (about two-thirds) of group-business beneficiaries in our sample did not perform work for their group business in 2019. A plausible reason is that these businesses are not big enough to require employing a large number of their members. For instance, a small grocery store may need only one or two people to operate. Those that do perform work appear to have added these hours to their "normal" activities without the SLP projects and cumulatively resulted into significant additional hours worked. It should be noted that hours worked includes all economic activities. While the apparent increase in economic activity is positive, the findings suggest that this has not translated into improvements in household welfare.

We hypothesize that the business activity would lead to higher household income. Beneficiaries with individual projects would earn additional entrepreneurial and/or sustenance income from their household-operated activities, while beneficiaries in group projects would earn wage income and dividend income from the group business. Since 91 percent of the sampled treated households are part of a group project, we expect that the main channels for increases in household income would be through wage income and dividends.

In individual tests, we find positive and significant impacts on the entrepreneurial income, on the sum of entrepreneurial and sustenance incomes, and on dividend income. However, the impacts are not significant when controlling for the false discovery rate, which reduces our confidence that these are true impacts. We discuss them here nevertheless. The estimated impact on entrepreneurial income of PhP274.7 per person represents 24.9 percent of the comparison average. Meanwhile, the estimated impact on entrepreneurial and sustenance incomes of PhP432.1 to PhP444.05 represents 23.2 to 23.8 percent of the comparison

average. There is a positive and significant estimate even in the model that uses data only of treated households from group projects (model 2). This is a surprising result since we do not expect group projects to directly affect income earned from entrepreneurial and sustenance activities run directly by households. It is possibly the result of the fact that a slightly larger share of treated households earns entrepreneurial income compared to comparison households (23 percent vs. 17 percent). This may be an indirect rather than a direct effect of the intervention, i.e. group projects may have opened further household livelihood opportunities. It may also be that a larger share of treated households was engaged in entrepreneurship to begin with, suggesting imbalance in the matched sample and possibly selection bias, implying balanced estimates. We discuss these in the next subsection.

Finally, we hypothesize that an increase in household income would translate to an increase in household expenditure and/or household saving. We find null impacts on household expenditure as well as on other dimensions of expenditure (i.e. food, education, health, clothing, and durables). We also find null impacts on household saving. The null impacts on income are consistent with these results.

The null impacts on income, expenditure and savings are imprecise estimates. Based on the ex-post MDES analysis in Section 4, the estimated impacts on income expenditure, and savings are each much smaller than the minimum effect sizes that we are sufficiently powered to detect given the sample size and variance of the data (see Table 4.4). This would be the case even if the planned sample size of 3,300 was realized. The study is underpowered to detect significant changes in income, expenditure, and savings using data from the realized sample.

Qualitative data on project implementation provide evidence for why impacts on income – and consequently, expenditure, savings, and capital investment – may not actually exist. In our theory of change, the SLP-financed business activity is assumed to be operational and profitable for it to translate to income improvements for the beneficiary household. For group projects, it is assumed that there are earning opportunities for members though wages and dividends. However, from the supplemental questionnaires, we find that few group project beneficiaries were earning wages and dividends from the business. While nearly one-third of beneficiaries reported performing work for the group business in 2019, only 3.4 percent received compensation. Furthermore, only 5.9 percent reported being part of a group that distributed dividends in 2019. Groups still working on grant recovery and struggles to be profitable are common reasons cited for the lack of profit-sharing to members. These could be the same reasons for why very few members who rendered service were compensated.

Data on profits and SCF repayment among group projects indicate why many of them may not be able to compensate members. Profits in 2019 appear to be rather small: average net income per member stood at PhP2,748, while median net income per member was just PhP292. In terms of grant recovery, only 4 percent of business projects report having fully recovered the grant, while over one-third (36.9 percent) report not having repaid/recovered any amount at all. Profits would have to be large enough for groups to be able to build up savings after operating expenses. If groups prioritize saving their modest profits for grant recovery, it may take time for them to be able to pay compensate working members, let alone pay out dividends. Working members thus have to be willing to go unpaid for some time. The lack of incentives may cause members to lose interest, leaving only the most committed to do the work.

Moreover, a worryingly high proportion of business projects – 30 percent of group businesses and about half of individual business projects – had already closed at the time of interview. Since treated households in individual projects comprise just 9 percent of the treated sample, the very high mortality rate observed may not be reliable. Businesses that shut down did so after an average of 13 months, or just over a year, after grant release. The main reasons cited for closure are failure to make money and, for group business projects, group members not contributing to the operation of the business. These business closures represent substantial losses for the program since these are investments on which there will be zero future return.

The same concerns about profitability and lack of participation among members are echoed in our focus group discussions with SCF beneficiaries. It appears that many beneficiaries are operating in small markets, usually their own neighborhoods where cash is short. They are also pursuing activities earning small margins. Treated FGD participants in general perceive that the program has been helpful but not in a way that transformed their lives. Individual project beneficiaries mention benefiting from the extra income that help with household expenses, while group project beneficiaries mention benefiting from being able to purchase goods from their store on credit. For the poor, every little bit helps, and this may cause them to perceive benefits from any effort to help them positively even if they are small.

Finally, we also find from the supplemental questionnaires that a considerable share of the SCF was expended on items other than the SLP business project or was unspent. For individual project beneficiaries, on average, 9.1 percent of the grant was spent on household expenses, and 24.2 percent were spent on other unspecified expenses. For group projects, an average of 27.7 percent of the grant was unspent. Unfortunately, the questionnaire did not follow up on why part of the funds was unspent, and this subject also did not come up in the focus group discussions. Based on previous fieldwork, a possible reason could be that some groups used part of the funds to as credit facility to members. Expenses on items other than the SLP business project may also indicate deviations from approved project proposals. Expenses on household items by individual project beneficiaries are clearly a deviation. However, for business-related expenses, the program permits deviations if justifications are provided. Knowing the extent of deviations requires a comparison with administrative data on planned expenditure from the approved project proposals.

7.2. Limitations

We qualify our quantitative results with an acknowledgement of the weaknesses of the design and analysis, as first discussed in Section 4. First is that we were unable to match on pre-intervention outcomes or check the balance of the matched sample on these outcomes due to the absence of such data from *Listahanan 2*, the matching dataset. Thus, treated and comparison households are possibly imbalanced on pre-intervention outcomes. The only variable available from the matching dataset that is closest to an outcome of interest is the proxy means test score, an estimate of household income. Indeed, the balance analysis finds sample treated households to have a slightly lower predicted per capita income (by PhP196 per person) than sample comparison households, indicating that the former may be poorer pre-intervention. This imbalance may explain the lack of impacts on income and expenditure. Including the PMT score as a control variable attempts to "clean up" this imbalance.

Unfortunately, without pre-intervention data, we remain uninformed about whether imbalances on actual income and expenditure do exist.

Second, the analysis does not control for possible spillover effects that could have arisen because treated and comparison households reside in the same city/municipality. However, if our quantitative and qualitative findings on the impacts of the intervention are any indication, these externalities or general equilibrium effects would be minimal, if not nil.

Third, while we control for receipt of livelihood assistance in 2019 in our regressions, we were unable to do so for receipt of livelihood assistance in 2018. This is a possible confounder that could bias our estimates.

Finally, the matching design implemented does not account for participant self-selection or possible endogenous program selection of target *barangays*. We do control for differences in personality traits and entrepreneurial orientation that may have arisen from self-selection by including these as regression control variables, using data collected from the follow-up survey. We assume that current personality traits are identical to pre-intervention personality traits on the argument that adult personality traits are durable. However, we do not find statistically significant differences between treated and control households across in almost all of our personality trait measures as shown in Table 5.15. This could mean that personality traits are not a strong predictor of selection into the SLP, or that our chosen measures do a poor job at discriminating personality differences.

Experience or actual engagement in entrepreneurial activities may be another predictor of program participation. The finding in Table 5.18 that a slightly larger proportion of treated households (by 6 percentage points) earn entrepreneurial income than comparison households could possibly hint that SLP MD participants tend to come from households that are already engaged in entrepreneurship. Selection on this characteristic would give an upward bias on our estimated treatment effects for entrepreneurial and sustenance income, which based on our theory of change could not have been directly affected by SLP group business activity.

As an additional robustness check, we rerun our regressions limiting the vector of controls to pre-intervention variables available in *Listahanan 2*. These include household size, binary variables on receipt of microcredit, livelihood training or self-employment assistance, binary variables on whether the household has a member employed as a certain class of worker (e.g. wage worker, self-employed, business operator etc.), binary variables indicating whether the head or spouse is employed and their class of worker, and asset variables indicating the number of each asset owned by the household.

Table A1 in Appendix A shows sample balance on these pre-intervention variables from *Listahanan 2*. We find statistically significant differences between our matched sample households on just a few variables, and they are rather small. Notably, compared to untreated households, the proportion of treated households that have a member who is a business operator, or whose household head is a business operator, is higher by 1.8 percentage points and 2.2 percentage points, respectively, while the proportion with a member who is a wage worker is lower by 3.9 percentage points. The magnitude of the differences seems to suggest that participant selection on current entrepreneurship or past entrepreneurial experience does occur, but its extent is not substantial.

The results of the regressions can be found in Table A2 in Appendix A. Notably, the direction, magnitude and significance of the estimates are similar to those reported in Section 5 across all of the outcomes. This applies to the estimated treatment effects on entrepreneurial income, and on the sum of entrepreneurial and sustenance income. These results help validate our estimates, despite not fixing the problems of possible pre-intervention imbalance and selection bias.

Furthermore, there are a number of factors that affect the success of SCF-financed business projects which we do not consider in our analysis. First is the size of the markets in which business projects operate. Evidence from focus group discussions suggests that beneficiaries are operating in small markets with limited potential for growth. For retail trade businesses especially mom-and-pop or grocery stores, customers appear to consist mostly of neighbors in low-income neighborhoods, and group members in the case of group projects. Moreover, the practice of extending credit in kind indicates that customers have limited income. While city/municipal market size may have been captured in city/municipal fixed effects, many SCF-funded businesses appear operate at a smaller scale, i.e. at level of the *barangay* or even the neighborhood. We lack data on population or income per capita at the *barangay* level which would have provided market size measures. Second is the quality and timeliness of the intervention received by program participants. A proxy for quality (using program officer caseload) and a measure for timeliness (define as the time spanning proposal submission and grant release) can be constructed using administrative data and included in the analysis to test whether these factors result in differential impacts.

Apart from weaknesses in design and analysis, we have noted that the study lacks power to detect impacts on income, expenditure and savings of the size observed in the data. The lack of impacts may also be due to the relatively short observation period. Our observation period ranges from 1.5 to 2 years spanning the release of the SCF grant to beneficiaries (January 2018 to June 2018) and the end of the reference period for income, expenditure, and savings (December 2019). It could be argued group business projects need a longer time horizon to thrive and show positive and significant effects on household welfare. For this to occur, however, business projects need to stay operational and be profitable. Our qualitative findings suggesting at best modest profitability and a substantial mortality rate among businesses indicate that there is no certainty in finding positive and significant impacts from the MD-SCF intervention even with a longer observation period.

Despite weaknesses in the quantitative analysis, our qualitative findings point to serious issues in project implementation that lend support to the null impacts found in household income and expenditure.

7.3. Relationship to existing evidence

Placing our findings within the literature reviewed in Section 2, our results (null impacts on final outcomes and positive impacts on an intermediate outcome, i.e. number of hours worked) seem to be more in line with those from the microcredit literature than with results from experimental studies on asset/cash transfers to microentrepreneurs, or from multi-intervention programs targeted at the poor. A comparison of the SLP with these interventions may provide some answers.

First, we compare the size of the SCF grant with capital/asset transfers in other studies. SLP's SCF grant in 2018 (maximum of PhP10,000 per beneficiary) is about 8.3 percent of estimated

average annual household expenditure for the bottom three deciles in 2018. Currently, the maximum SCF is higher at PhP15,000 per household. The SCF is comparable in size to the business grant offered by a similar public livelihood program by the Department of Labor and Employment,[46] which provides a maximum grant of PhP20,000 (about USD 417) for individual projects, and a maximum of PhP10,000 per member for group projects with at least 15 members each (DOLE, n.d.). Table 7.1 shows the size of asset transfers in the six graduation programs evaluated in Banerjee et al (2015b). Asset transfers in these programs, usually in the form of livestock, are in the range of 8.4 percent to 38.5 percent of beneficiaries' baseline annual consumption. SLP's SCF is at the low end of this range. Including the cost of the supporting livelihood interventions (e.g. consumption support, training, home visits), direct cost of these programs range from about 47 to 98 percent of baseline consumption. While the SCF grant is relatively small compared to the graduation asset transfers, it is comparable or even larger (in level terms) than the capital grants studied by De Mel, McKenzie and Woodruff (2008a) and Fafchamps et al. (2014) which resulted in positive effects to business profits (USD 100 – USD 200 translate to PhP4,800 – PhP9,600 in current exchange rates).

Table 7.1. Graduation program asset transfers vs SLP MD Seed Capital Fund

A. Graduation programs evaluated in Banerjee et al (2015b)

Country / evaluation	Estimated annual consumption at baseline (2014 USD PPP)	Asset transfer value (2014 USD PPP)	Size of asset transfer as % of mean baseline annual consumption
Ethiopia	3,185.6	1,227.9	38.5
Ghana	5,401.3	451.4	8.4
Honduras	3,264.8	538.9	16.5
India	1,895.1	437.3	23.1
Pakistan	10,004.9	1,043.3	10.4
Peru	6,206.3	854	13.8

B. SLP MD-SCF

	Estimated mean annual household expenditure for the bottom three income deciles* (2018 PhP)	2018 Seed Capital Fund value (PhP)	Size of asset transfer as % of 2018 household expenditure
MD-SCF (Philippines)	120,992.58	10,000	8.3

Note: * Derived from half-year estimate of average expenditure for the bottom 30 percent of households from the 2017 Annual Poverty and Indicators Survey, multiplied by 2 and inflated by the Consumer Price Index to 2018 prices. Source: Banerjee et al (2015b) and Philippine Statistics Authority (2018).

SLP also provides supporting interventions (capacity-building, group formation, and post-implementation monitoring) in addition to the cash grant that make it somewhat similar to "graduation" interventions. One of the reasons for the differing impacts may be that SLP's supporting interventions fall short in quality or intensity. Anecdotally for instance, SLP

[46] The program is called DOLE Integrated Livelihood Program or DILP. The program targets poor and vulnerable workers. CCT beneficiaries are not eligible for the program.

program officers conduct the capacity-building session within a day or a half-day. Program officers try to keep their sessions short and simple for participants who tend to find it difficult to sustain attention or who are hard to keep in a room away from their housework or economic activities. This contrasts with the training components of the interventions evaluated by Blattman et al. (2016) (five-day training) and Bandiera et al. (2013) (three to four-day training). In addition to classroom training, the latter programs continue the capacity building through regular visits to offer business management or technical advice. SLP offers similar monitoring services to beneficiaries. Anecdotally, the caseload of an SLP monitoring officer runs to the hundreds, and this may affect the quality of services they provide. Whether DSWD staff have the capacity to provide business and technical training and/or advisory support is another issue requiring further study.

If SLP's supporting interventions do not add much value, then MD-SCF is more akin to a capital transfer than a multi-faceted livelihood program. This may explain why the results are similar to the impact of microcredit, which simply provides financial access to the poor to promote entrepreneurship. Evaluations by De Mel, McKenzie and Woodruff (2008a) and Fafchamps et al. (2014) on the impact of a capital drop on existing microentrepreneurs find that returns tend to be lower for female entrepreneurs, those with less ability or education, and subsistence entrepreneurs. This is relevant for SLP as MD program participants are largely women from poor households who tend to have low education and ability. For these groups of people, a simple capital transfer may be less impactful. This lines up with Cho and Honorati's (2014) finding that providing financing and training together is more effective for improving labor market activity and income for social assistance beneficiaries than providing them separately.

The literature on credit cooperatives revealed substantial costs and profit inefficiencies (Manlagñit and Lamberte 2003). This is explained by external factors such as the market competition for cooperative products and the level of economic development in the locality. The other factor is internal such as agency problem which emerge when managers pursue objectives that are different from those of shareholders. This manager-ownership agency conflict is likely to emerge when ownership is widely diffused. Members of credit cooperatives will have to incur additional monitoring costs to keep the interest of managers in line with their interest. These inefficiencies are observed as well in multipurpose cooperatives and projects managed by farmers' organizations/associations. Thus, the long-term sustainability of cooperatives more so associations that are not operationally regulated is doubtful.

7.4. Challenges and lessons learned from implementation

We have noted the main challenges we faced in implementing the original evaluation in Section 3.5 These are the frequent turnover in DSWD and SLP management, the reluctance among staff to adopt the experimental protocols, and policy changes adopted during the evaluation – the last one causing serious problems in the evaluation leading to its abandonment. The following are our main learnings from that experience.

- Government programs undergoing evaluation need better commitment to the agreed evaluation design. An evaluation may be designed around specific policies which when changed midway can compromise an ongoing evaluation. At the same time, researchers need to better communicate to managers of client organizations the program assumptions on which their evaluations are hinged.

- When evaluating government programs, changes in leadership can change priorities, which can then affect existing evaluations. Patience is needed to engage new managers who may not have the appreciation for the evaluation that were agreed with previous managers. Research proponents and funders may also need to exercise flexibility to adapt research questions to the priorities of the client organization's new managers if the evaluation has not yet been implemented. Doing so may facilitate securing support.

- For trials that require the mobilization of field implementers, engaging field managers and implementers early in the evaluation process is necessary to foster awareness, address concerns, and secure buy-in early. This is particularly true for national-scale programs with decentralized operations such as SLP.

- For trials that require field implementers to adopt new processes, implementers may take time to feel comfortable with the new process. Having a pilot, having a longer trial period, or providing staff with extended technical support may be necessary.

- Field implementers may be reluctant to adopt new processes for fear that these could affect performance. Programs need to consider suspending or relaxing performance measures in trial areas to enable implementers to freely carry out the experimental processes being tested.

Implementation of the current evaluation design has been more straightforward compared to that of the original design since it does not involve changes in program implementation or mobilization of field staff. For the same reason, it has been more readily accepted by DSWD and SLP management. The main challenges have been:

- **Completing the evaluation within a short time period.** The original evaluation had a timetable of about three and a half years, including an extension. We had a little over a year to complete the current evaluation after getting approval for the new objectives and design.

- **Completing the survey amid Covid-19 and ensuing lockdowns**. The pandemic struck in the middle of the survey and forced the suspension of data collection for about two months. We were forced to drop 11 survey areas and conduct some of the remaining interviews by phone. Phone interviewing is challenging due to weak phone signal especially in rural areas.

8. Conclusions and recommendations

This study evaluates the impact of the Sustainable Livelihood Program's Microenterprise Development assistance with the Seed Capital Fund as the grant component on CCT households. We use matching to identify the causal impact of the intervention. Impact estimation was done through regression analysis of survey data from a sample of 2,592 SCF-recipients and matched comparison households in 39 cities/municipalities. Treated households are SCF recipients in January 2018 to June 2018. The time between release of SCF grants and end of the observation period is 1.5-2 years. 91 percent of the treated sample households were part of a group-managed business.

We find that the intervention had a positive impact on the labor supply of CCT grantee spouses, but the impacts are smaller for group-project beneficiaries. Among those that used the grant for an individually-managed business project, the intervention increased the number of hours worked by 9.9 hours per week, and increased the probabilities of being in the labor force and of being employed by 23.1 percentage points and 20.4 percentage points respectively. Among those that used the grant for a group-managed business, the estimated increase on the number of hours worked is just 1.6 hours per week. The impacts on their probabilities of being in the labor force (an increase of 0.5 percentage points) and of being employed (a reduction of 0.5 percentage points) are not practically important, though the direction of the impact on the latter outcome is concerning. The limited impacts on labor supply suggest that group businesses are not big enough to require employing a large number of their members.

We find imprecisely estimated null effects on household income and wage income. We find positive impacts on entrepreneurial income, on the sum of entrepreneurial and sustenance income, and on dividend income. Each are statistically significant in terms of individual significance tests but are insignificant after controlling for the false discovery rate. Thus, these observed changes may not represent true impacts. The estimated increase in dividend income (PhP6.1 to PhP10 per person) is too small to affect household income. Meanwhile, the estimated increases in entrepreneurial income (PhP247.7 per person) and on entrepreneurial and sustenance incomes (PhP432.14 to PhP444.05 per person) are practically significant, but not expected. We do not hypothesize group business projects to directly influence income that households earn from household-operated activities. The significant effects are possibly due to a larger share of treated households being engaged in entrepreneurial activities compared to comparison households, perhaps because of program exposure, or perhaps at intake – the latter implying imbalance and selection bias. We find imprecisely estimated null impacts on household expenditure and on important expenditure items such as food, education, health, and clothing. We also find imprecisely estimated null effects on savings and on capital investments. These are consistent with the lack of impacts found on household income.

The design and analysis implemented has several major weaknesses. First, the pre-intervention variables used for matching do not include our outcomes of interest because of the absence of such data. This may mean that treated and comparison households are imbalanced on pre-intervention outcomes. Second, there is possible bias from participant self-selection and from possible non-random selection target of *barangays* by the program, both of which we are not able to account for in the matching and analysis. Third, our decision to match households within the same city/municipality may have resulted in spillover effects to untreated households which we do not account for in the analysis. Fourth, we are not able to control for confounding from participation in similar livelihood programs in 2018. Fifth, the impact analysis does not take into account the effects of *barangay*- or neighborhood-level market size and the quality and timeliness of interventions received by treated households, which may have differential effects on entrepreneurial outcomes. Sixth, the study has insufficient power to detect significant impacts in income, expenditure and savings. Finally, our observation period of 1.5-2 years may be shorter than time needed for beneficiaries to profit from their group projects and show positive impacts. However, impacts may not necessarily be found over a longer period given that many projects have closed within a shorter period.

Despite these weaknesses, qualitative data on business project implementation point to serious issues which make the absence of positive impacts on household welfare a likelier outcome. Group-project beneficiaries lack opportunities to earn income from their group business. While nearly one-third of beneficiaries reported performing work for the group business in 2019, only 3.4 percent received compensation. Furthermore, only 5.9 percent belonged to a group that distributed dividends in 2019. Groups still working on grant recovery and struggles to be profitable are common reasons cited for the lack of dividend distribution to members. In terms of grant recovery, 31 percent of group projects and 38 percent of beneficiaries with individual projects report not having had repaid or recouped the grant they received even partially. Median net income per member in 2019 among group-run projects for which we have data stood at just PhP292. An average of 27.7 percent of funds received by group projects are reportedly unspent. Finally, a substantial share of SLP-financed projects had closed: about 28 percent of group business projects and 51 percent of individual business projects. Failing to make money and – for group business projects – group members not participating in the group business, are cited as common reasons for business closure. Problems with cash flow, low profitability, lack of member participation in running the group business, and financial management issues are echoed in our focus group discussions with SCF beneficiaries.

Keeping in mind its limitations, our study shows evidence that SLP's MD-SCF assistance may be falling short of delivering on its objective of improving the socio-economic condition of poor households, particularly of CCT beneficiaries. We offer the following recommendations:

1) **DSWD should re-examine the matching of its interventions vis-à-vis the opportunities and risks faced by poor households**. Our results (null impacts on final outcomes and positive impacts on an intermediate outcome, i.e. labor supply) seem to be more in line with those from the microcredit literature than with results from experimental studies on asset/cash transfers to microentrepreneurs, or from multi-intervention programs targeted at the poor. This may be because MD-SCF assistance is practically a financing/capital transfer program. While the MD track provides supporting interventions such as capacity building and monitoring after the grant, anecdotal evidence indicate that they fall short in quality. Literature suggests simple capital transfers do not work as well for females with low education and ability. The graduation literature (e.g., Banerjee et al 2015b) have shown that sustainably helping the very poor requires simultaneous interventions addressing multiple constraints. CCT beneficiaries already receive some of these interventions e.g., health information, health services, and rice subsidy. Special and sustained Family Development Sessions focused on coaching about running livelihood projects of their choice while the project is implemented can be conducted to implement life skills coaching. Encouraging access to savings is now part of many microfinance programs. Given that CCT beneficiaries have LandBank accounts for their cash grants, conversion of these account into regular accounts that will include savings should be encouraged. Organizing these different interventions and forming them into a coherent strategy may work better to move the poor out of poverty.

2) **DSWD should understand better the relative merits of group-based vs. individual livelihood projects.** In an individual business project, the beneficiary himself/herself employs his/own labor (or those of household members) to operate the

business. The beneficiary also has direct claim over the business's income. In a group business project, employment opportunities are more limited. The nature of the business or the small scale of operations may not a require a workforce beyond a few people. Members also earn income through wages and dividends. The group may not be able to pay wages or share dividends while still recouping the grant. Thus, compared to an individual business project, a group project's impact on employment is more limited, and its impact on household income is less direct and may take more time to realize. Lack of direct and immediate material benefits may cause beneficiaries to lose interest for the group project.

3) **DSWD should recognize the organizational issues that attend group-based livelihood interventions**. We find that lack of participation from members is one of the main causes of closure among group businesses. Lack of interest, lack of time, and conflict among members are also major reasons for why associations become inactive. Organizational problems, poor business performance, and lack of direct material benefits from the group project may be reinforcing each other. Aligning of nonmonetary incentives among participants in non-profit organizations is key for it to work efficiently (Besley and Ghatak 2005). It requires motivated participants who subscribe to the mission of the organization. Interventions that will improve commitment and teamwork are needed. Short of this, the group-based livelihood will be destined to failure for lack of cooperation among members even if the livelihood activity may be commercially viable. Studies have shown the low sustainability of group business especially those managed by farmers' association and cooperatives in the Philippines (Manlagñit and Lamberte 2003).

4) **Improve project development and selection to improve commercial viability**. SLP is by design an open program to all eligible households rather than a selective program that targets participants with entrepreneurial potential or identifies ex-ante profitable lines of business for funding. It is possible that participants pursue projects that match their skills or interest but are not commercially viable or have little growth potential. This gives a critical role to the development, review, and approval of business plans. The program may need to review the effectiveness of the guidance that Implementing PDOs give participants in developing business ideas, as well as the criteria that reviewers use in approving business plans. The program also needs to evaluate whether it can identify viable business opportunities in project areas.

5) **Review and strengthen supporting interventions pre- and post-implementation.** Pre-implementation**,** strong capacity-building on business literacy is key for building business skills especially for a program that targets participants with low education backgrounds and who may not view themselves as entrepreneurs. Post-implementation, frequent monitoring is necessary for the program to be aware of the issues with business projects, while close mentoring and technical support are critical to guide beneficiaries and help them address financial, technical, organizational and other enterprise-specific issues. The program needs to review its effectiveness in delivering these supporting interventions. In terms of post-implementation support for instance, the program may review whether the monitoring and mentoring or technical support functions can both be fulfilled effectively by the Monitoring PDO.

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Appendix A: Additional household and regression tables

Table A1. Balance on pre-intervention household characteristics (*Listahanan* 2)

	Treatment			Comparison			
	N	Mean	SD	N	Mean	SD	Diff
Household size	1,296	6	2	1,296	6	2	-0.043
Received microcredit (%)	1,296	0.02	0.14	1,296	0.02	0.13	0.002
Received livelihood training (%)	1,296	0	0	1,296	0	0	0.002
Received self-employment assistance (%)	1,296	0.00	0.06	1,296	0.00	0.07	-0.001
With wage worker member (%)	1,296	0.67	0.47	1,296	0.71	0.45	-0.039*
With self-employed member (%)	1,296	0.34	0.47	1,296	0.30	0.46	0.038
With operator member (%)	1,296	0.06	0.24	1,296	0.04	0.20	0.018*
With paid family worker member (%)	1,296	0.04	0.19	1,296	0.04	0.19	-0.001
With unpaid family worker member (%)	1,296	0.07	0.26	1,296	0.07	0.26	-0.001
Head is employed (%)	1,296	0.96	0.21	1,296	0.95	0.22	0.005
Spouse is employed (%)	1,296	0.31	0.46	1,296	0.30	0.46	0.011
Head is a wage worker (%)	1,296	0.55	0.50	1,296	0.58	0.49	-0.035
Spouse is a wage worker (%)	1,296	0.15	0.36	1,296	0.18	0.38	-0.025
Head is self-employed (%)	1,296	0.27	0.44	1,296	0.24	0.43	0.026
Spouse is self-employed (%)	1,296	0.11	0.31	1,296	0.09	0.28	0.025
Head is business operator (%)	1,296	0.06	0.23	1,296	0.03	0.18	0.022**
Spouse is business operator (%)	1,296	0.01	0.10	1,296	0.01	0.09	0.002
Number of radios	1,296	0.37	0.49	1,296	0.34	0.48	0.025
Number of TVs	1,296	0.57	0.50	1,296	0.60	0.50	-0.025
Number of video players	1,296	0.29	0.46	1,296	0.27	0.46	0.022
Number of stereos	1,296	0.13	0.36	1,296	0.12	0.36	0.008
Number of refrigerators	1,296	0.08	0.27	1,296	0.08	0.28	-0.002
Number of washing machines	1,296	0.06	0.24	1,296	0.07	0.27	-0.011
Number of air conditioners	1,296	0.00	0.06	1,296	0.01	0.11	-0.004
Number of sala sets	1,296	0.07	0.26	1,296	0.08	0.28	-0.006
Number of dining sets	1,296	0.04	0.28	1,296	0.04	0.21	-0.003
Number of cars/jeeps	1,296	0.01	0.11	1,296	0.02	0.17	-0.007
Number of phones	1,296	1.01	0.96	1,296	1.02	0.93	-0.012
Number of PCs	1,296	0.01	0.11	1,296	0.02	0.18	-0.012**
Number of microwaves	1,296	0.01	0.11	1,296	0.02	0.15	-0.003
Number of motorcycles	1,296	0.24	0.47	1,296	0.20	0.43	0.046**

Table A2. Impacts on outcomes (using Table A1 variables as control variables)

Outcome	Model	Treatment	Estimate	Std. error	p-value	Sig.	q-value	Sig.	N
Hours worked per worker	(1)	Treat	1.693	0.770	0.034	**	0.194		2425
	(2)	Treat	1.698	0.786	0.038	**	0.534		2210
	(3)	Treat	1.941	1.845	0.299		0.949		2425
		Treat x Group	-0.271	1.783	0.880		1		2425
Hours worked by CCT grantee spouse	(1)	Treat	2.490	0.879	0.007	***	0.137		2592
	(2)	Treat	1.665	0.932	0.083	*	0.648		2372
	(3)	Treat	10.959	2.363	0.000	***	0.001	***	2592
		Treat x Group	-9.196	2.360	0.000	***	0.003	***	2592
Share of members in the labor force (%)	(1)	Treat	0.008	0.009	0.342		0.633		2591
	(2)	Treat	0.002	0.008	0.854		1		2371
	(3)	Treat	0.088	0.037	0.024	**	0.105		2591
		Treat x Group	-0.086	0.037	0.026	**	0.105		2591
Share of employed members (%)	(1)	Treat	0.007	0.008	0.361		0.633		2591
	(2)	Treat	0.002	0.009	0.832		1		2371
	(3)	Treat	0.077	0.026	0.005	***	0.029	**	2591
		Treat x Group	-0.076	0.029	0.012	**	0.058	*	2591
CCT grantee spouse is in the labor force (%)	(1)	Treat	0.041	0.025	0.097	*	0.412		2096
	(2)	Treat	0.013	0.024	0.588		1		1899
	(3)	Treat	0.265	0.062	0.000	***	0.001	***	2096
		Treat x Group	-0.246	0.061	0.000	***	0.001	***	2096
CCT grantee spouse is employed (%)	(1)	Treat	0.029	0.023	0.210		0.538		2096
	(2)	Treat	0.003	0.024	0.907		1		1899
	(3)	Treat	0.240	0.055	0.000	***	0.001	***	2096
		Treat x Group	-0.233	0.059	0.000	***	0.001	***	2096
Income per capita (PhP)	(1)	Treat	101.380	466.537	0.829		0.791		2592
	(2)	Treat	85.937	493.963	0.863		1		2372
	(3)	Treat	624.338	1827.368	0.734		1		2592
		Treat x Group	-567.873	1865.676	0.762		1		2592
Wage income per capita (PhP)	(1)	Treat	-132.404	577.976	0.820		0.791		2592
	(2)	Treat	-154.704	631.007	0.808		1		2372
	(3)	Treat	627.626	1112.282	0.576		1		2592
		Treat x Group	-825.306	1202.569	0.497		1		2592
Entrepreneurial income per capita (PhP)	(1)	Treat	251.416	139.522	0.079	*	0.401		2592
	(2)	Treat	220.992	143.543	0.133		0.763		2372
	(3)	Treat	665.454	523.138	0.211		0.731		2592
		Treat x Group	-449.598	532.656	0.404		1		2592
Sustenance income per capita (PhP)	(1)	Treat	65.811	47.352	0.173		0.538		2592
	(2)	Treat	77.947	52.319	0.145		0.763		2372
	(3)	Treat	-155.091	150.547	0.309		0.949		2592
		Treat x Group	239.875	170.174	0.167		0.627		2592
Entrepreneurial and sustenance income per capita (PhP)	(1)	Treat	433.432	169.415	0.015	**	0.137		2592
	(2)	Treat	431.632	170.177	0.016	**	0.534		2372
	(3)	Treat	323.458	617.318	0.603		1		2592
		Treat x Group	119.418	606.709	0.845		1		2592
Dividends income per capita (PhP)	(1)	Treat	9.665	3.847	0.016	**	0.137		2592
	(2)	Treat	6.071	2.985	0.050	**	0.534		2372
	(3)	Treat	63.898	34.282	0.070	*	0.277		2592
		Treat x Group	-58.891	35.465	0.105		0.407		2592
Expenditure per capita (PhP)	(1)	Treat	-287.040	538.260	0.597		0.791		2592
	(2)	Treat	-530.972	543.996	0.336		1		2372
	(3)	Treat	-198.067	2584.223	0.939		1		2592
		Treat x Group	-96.615	2759.341	0.972		1		2592
Food expenditure per capita (PhP)	(1)	Treat	-313.444	368.763	0.401		0.669		2592
	(2)	Treat	-427.664	384.674	0.274		0.931		2372
	(3)	Treat	-203.186	1425.682	0.887		1		2592
		Treat x Group	-119.727	1513.024	0.937		1		2592
	(1)	Treat	7.144	7.306	0.334		0.633		2592

Health expenditure per capita (PhP)	(2)	Treat	3.581	7.597	0.640	1	2372
	(3)	Treat	41.142	33.472	0.227	0.744	2592
		Treat x Group	-36.917	37.376	0.330	0.949	2592
Education expenditure per capita (PhP)	(1)	Treat	-0.390	18.500	0.983	0.968	2592
	(2)	Treat	-1.817	19.853	0.928	1	2372
	(3)	Treat	-29.244	54.580	0.595	1	2592
		Treat x Group	31.332	60.857	0.610	1	2592
Clothing expenditure per capita (PhP)	(1)	Treat	-9.451	12.916	0.469	0.766	2592
	(2)	Treat	-14.549	12.863	0.266	0.931	2372
	(3)	Treat	26.683	42.625	0.535	1	2592
		Treat x Group	-39.237	40.149	0.335	0.949	2592
Furnishings and durables expenditure per capita (PhP)	(1)	Treat	2.597	5.434	0.635	0.791	2592
	(2)	Treat	1.561	5.748	0.788	1	2372
	(3)	Treat	-6.134	19.740	0.758	1	2592
		Treat x Group	9.481	20.871	0.652	1	2592
Savings per capita (PhP)	(1)	Treat	63.010	50.609	0.221	0.538	2588
	(2)	Treat	58.982	55.435	0.295	0.931	2368
	(3)	Treat	117.138	112.384	0.304	0.949	2588
		Treat x Group	-58.787	127.060	0.646	1	2588
Borrowings per capita (PhP)	(1)	Treat	18.814	64.864	0.773	0.791	2591
	(2)	Treat	-17.284	62.457	0.784	1	2371
	(3)	Treat	472.119	344.160	0.178	0.627	2591
		Treat x Group	-492.242	350.113	0.168	0.627	2591
Capital stock spending per capita (PhP)	(1)	Treat	20.500	14.918	0.177	0.538	2592
	(2)	Treat	24.291	16.894	0.159	0.763	2372
	(3)	Treat	12.598	36.658	0.733	1	2592
		Treat x Group	8.580	39.339	0.829	1	2592
With capital spending (%)	(1)	Treat	0.019	0.013	0.123	0.464	999
	(2)	Treat	0.019	0.014	0.185	0.785	871
	(3)	Treat	0.021	0.047	0.656	1	999
		Treat x Group	-0.002	0.052	0.975	1	999

Appendix B: Full regression tables

Table B1. Treatment effect on hours worked per worker

	(1)	(2)	(3)

Treatment	1.88**	1.87**	1.99
	(0.78)	(0.78)	(2.05)
Household size	0.26	0.28	0.26
	(0.21)	(0.21)	(0.21)
Years in school of household head	0.24*	0.25*	0.24*
	(0.13)	(0.12)	(0.13)
Received social assistance during Jan-Dec 2019	-1.67*	-2.04**	-1.67*
	(0.89)	(0.90)	(0.89)
Experienced difficulties during Jan-Dec 2019	-2.97**	-2.64**	-2.97**
	(1.33)	(1.27)	(1.32)
[Listahanan] Per capita income (PMT score)	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
With car, jeep, van, motorcycle or tricycle in working condition	-0.64	-1.04	-0.64
	(0.84)	(0.85)	(0.85)
With TVs working	0.09	0.33	0.09
	(1.25)	(1.27)	(1.25)
With cellphones working	1.32	1.46	1.32
	(1.11)	(1.16)	(1.11)
With refrigerators/freezers working	0.91	0.77	0.90
	(0.75)	(0.79)	(0.75)
With aircons working	-2.66	-25.38***	-2.68
	(5.48)	(4.19)	(5.43)
With personal computers working	0.00	-1.49	0.01
	(2.74)	(2.73)	(2.77)
With washing machines working	-0.30	-0.56	-0.30
	(0.85)	(0.91)	(0.85)
Business personality mean score	-0.69	-0.67	-0.69
	(1.52)	(1.72)	(1.52)
Financial risk score	0.09	0.22	0.09
	(0.31)	(0.31)	(0.31)
General risk score	-0.04	-0.02	-0.04
	(0.30)	(0.32)	(0.30)
Willing to take business risk	0.03	0.14	0.03
	(1.18)	(1.29)	(1.18)
Work centrality score	1.63*	1.78	1.63
	(0.97)	(1.06)	(0.97)
Achievement mean score	-1.61	-1.68	-1.61
	(1.71)	(1.86)	(1.71)
Impulsiveness mean score	-0.06	0.16	-0.06
	(1.10)	(1.28)	(1.10)
Locus of control mean score	-0.06	-0.04	-0.06
	(0.96)	(1.11)	(0.96)
Optimism mean score	-0.49	0.15	-0.49
	(1.72)	(1.85)	(1.71)
Polychronicity mean score	0.75	0.82	0.75
	(0.62)	(0.68)	(0.63)
Power motivation mean score	1.16	1.30	1.16
	(0.91)	(0.97)	(0.91)
Tenacity mean score	1.05	1.09	1.05
	(1.14)	(1.21)	(1.14)
Passion for work score	-0.71	-0.64	-0.71
	(0.61)	(0.65)	(0.61)
Organized person score	-0.88	-1.23	-0.88
	(0.75)	(0.76)	(0.75)
Treatment x Group			-0.12
			(2.01)
R2_A	0.20	0.21	0.20
N	2,377	2,164	2,377

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B2. Treatment effect on hours worked by CCT grantee spouse

	(1)	(2)	(3)
Treatment	2.28**	1.37	9.94***
	(0.88)	(0.95)	(2.27)
Household size	0.17	0.18	0.18
	(0.22)	(0.22)	(0.22)
Years in school of household head	-0.31**	-0.28*	-0.31**

	(0.14)	(0.14)	(0.14)
Received social assistance during Jan-Dec 2019	-3.28**	-3.36**	-3.33**
	(1.54)	(1.64)	(1.54)
Experienced difficulties during Jan-Dec 2019	1.62	2.37	1.37
	(1.52)	(1.68)	(1.56)
[Listahanan] Per capita income (PMT score)	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
With car, jeep, van, motorcycle or tricycle in working condition	1.31	1.41	1.41
	(1.07)	(1.05)	(1.08)
With TVs working	0.21	-0.14	0.12
	(1.13)	(1.09)	(1.10)
With cellphones working	3.71***	3.50***	3.75***
	(1.05)	(1.13)	(1.06)
With refrigerators/freezers working	1.29	1.50	1.28
	(1.25)	(1.35)	(1.25)
With aircons working	9.38	-3.66	7.99
	(13.15)	(4.48)	(10.19)
With personal computers working	-4.92*	-3.29	-4.62
	(2.73)	(3.69)	(2.93)
With washing machines working	0.94	1.83	0.89
	(1.52)	(1.61)	(1.51)
Business personality mean score	-0.34	-1.44	-0.35
	(1.48)	(1.55)	(1.47)
Financial risk score	-0.32	-0.20	-0.30
	(0.33)	(0.35)	(0.34)
General risk score	0.75	0.79	0.74
	(0.50)	(0.53)	(0.50)
Willing to take business risk	-0.34	-0.14	-0.32
	(1.03)	(1.12)	(1.07)
Work centrality score	0.10	0.06	0.09
	(0.69)	(0.73)	(0.69)
Achievement mean score	2.56**	2.98**	2.50**
	(1.22)	(1.33)	(1.20)
Impulsiveness mean score	1.94*	2.58**	1.92*
	(1.04)	(1.03)	(1.05)
Locus of control mean score	0.57	0.40	0.64
	(1.19)	(1.15)	(1.20)
Optimism mean score	1.84	2.52	1.91
	(1.69)	(1.64)	(1.68)
Polychronicity mean score	-0.89	-1.03	-0.97
	(1.15)	(1.27)	(1.16)
Power motivation mean score	-2.01*	-1.44	-1.95*
	(1.06)	(1.20)	(1.07)
Tenacity mean score	0.13	0.32	-0.00
	(0.94)	(0.98)	(0.94)
Passion for work score	0.73	0.72	0.68
	(0.80)	(0.88)	(0.80)
Organized person score	0.58	0.53	0.56
	(0.79)	(0.83)	(0.78)
Treatment x Group			-8.32***
			(2.35)
R2_A	0.07	0.07	0.08
N	2,534	2,316	2,534

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B3. Treatment effect on household labor force participation rate

	(1)	(2)	(3)
Treatment	0.01	0.00	0.07**
	(0.01)	(0.01)	(0.03)
Household size	-0.02***	-0.02***	-0.02***
	(0.00)	(0.00)	(0.00)
Years in school of household head	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)
Received social assistance during Jan-Dec 2019	-0.00	-0.01	-0.00
	(0.01)	(0.01)	(0.01)
Experienced difficulties during Jan-Dec 2019	0.08***	0.08***	0.08***
	(0.02)	(0.02)	(0.02)
[Listahanan] Per capita income (PMT score)	0.00	-0.00	0.00
	(0.00)	(0.00)	(0.00)
With car, jeep, van, motorcycle or tricycle in working condition	0.00	0.00	0.00
	(0.01)	(0.01)	(0.01)
With TVs working	-0.02	-0.02	-0.02*
	(0.01)	(0.01)	(0.01)
With cellphones working	0.03*	0.03	0.03*
	(0.02)	(0.02)	(0.02)
With refrigerators/freezers working	-0.02	-0.02	-0.02
	(0.02)	(0.02)	(0.02)
With aircons working	-0.13***	-0.09**	-0.14***
	(0.03)	(0.04)	(0.04)
With personal computers working	0.00	0.01	0.00
	(0.04)	(0.04)	(0.04)
With washing machines working	0.02	0.02	0.02
	(0.02)	(0.02)	(0.02)
Business personality mean score	0.01	0.00	0.01
	(0.02)	(0.02)	(0.02)
Financial risk score	-0.01*	-0.01	-0.01*
	(0.01)	(0.01)	(0.01)
General risk score	0.01*	0.01	0.01*
	(0.01)	(0.01)	(0.01)
Willing to take business risk	-0.02	-0.02	-0.02
	(0.01)	(0.01)	(0.01)
Work centrality score	0.00	0.00	0.00
	(0.01)	(0.01)	(0.01)
Achievement mean score	0.07***	0.08***	0.07***
	(0.02)	(0.02)	(0.02)
Impulsiveness mean score	0.00	0.01	0.00
	(0.01)	(0.01)	(0.01)
Locus of control mean score	-0.01	-0.01	-0.01
	(0.01)	(0.01)	(0.01)
Optimism mean score	0.02	0.02	0.03
	(0.02)	(0.02)	(0.02)
Polychronicity mean score	0.01	0.01	0.00
	(0.01)	(0.02)	(0.01)
Power motivation mean score	-0.04***	-0.04***	-0.04***
	(0.01)	(0.02)	(0.01)
Tenacity mean score	0.02	0.02	0.01
	(0.01)	(0.01)	(0.01)
Passion for work score	0.02*	0.02**	0.02*
	(0.01)	(0.01)	(0.01)
Organized person score	0.00	-0.00	0.00
	(0.01)	(0.01)	(0.01)
Treatment x Group			-0.06**
			(0.03)
R2_A	0.11	0.11	0.11
N	2,533	2,315	2,533

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B4. Treatment effect on household employment rate

	(1)	(2)	(3)
Treatment	0.01	0.00	0.06***
	(0.01)	(0.01)	(0.02)
Household size	-0.03***	-0.03***	-0.03***
	(0.00)	(0.00)	(0.00)
Years in school of household head	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
Received social assistance during Jan-Dec 2019	-0.00	-0.00	-0.00
	(0.01)	(0.01)	(0.01)
Experienced difficulties during Jan-Dec 2019	0.06**	0.06***	0.05**
	(0.02)	(0.02)	(0.02)
[Listahanan] Per capita income (PMT score)	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)
With car, jeep, van, motorcycle or tricycle in working condition	0.02	0.02	0.02*
	(0.01)	(0.01)	(0.01)
With TVs working	-0.02**	-0.02*	-0.02**
	(0.01)	(0.01)	(0.01)
With cellphones working	0.05***	0.05***	0.05***
	(0.01)	(0.01)	(0.01)
With refrigerators/freezers working	-0.03*	-0.02	-0.03*
	(0.02)	(0.02)	(0.02)
With aircons working	0.01	-0.06	0.00
	(0.05)	(0.04)	(0.03)
With personal computers working	-0.03	0.02	-0.02
	(0.03)	(0.03)	(0.03)
With washing machines working	0.04**	0.04*	0.04**
	(0.02)	(0.02)	(0.02)
Business personality mean score	-0.02	-0.03	-0.02
	(0.02)	(0.02)	(0.02)
Financial risk score	-0.01	-0.01	-0.01
	(0.00)	(0.01)	(0.00)
General risk score	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
Willing to take business risk	-0.01	-0.00	-0.01
	(0.01)	(0.01)	(0.01)
Work centrality score	0.00	0.01	0.00
	(0.01)	(0.01)	(0.01)
Achievement mean score	0.06***	0.06***	0.05***
	(0.01)	(0.01)	(0.01)
Impulsiveness mean score	0.00	0.01	0.00
	(0.01)	(0.01)	(0.01)
Locus of control mean score	0.00	-0.00	0.00
	(0.01)	(0.02)	(0.01)
Optimism mean score	0.02	0.01	0.02
	(0.02)	(0.02)	(0.02)
Polychronicity mean score	-0.00	-0.00	-0.00
	(0.01)	(0.02)	(0.01)
Power motivation mean score	-0.03**	-0.04**	-0.03**
	(0.01)	(0.01)	(0.01)
Tenacity mean score	-0.00	-0.01	-0.01
	(0.01)	(0.01)	(0.01)
Passion for work score	0.02**	0.02**	0.02**
	(0.01)	(0.01)	(0.01)
Organized person score	0.01	0.01	0.01
	(0.01)	(0.01)	(0.01)
Treatment x Group			-0.06**
			(0.02)
R2_A	0.16	0.17	0.16
N	2,533	2,315	2,533

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B5. Treatment effect on CCT grantee spouse is in the labor force

	(1)	(2)	(3)
Treatment	0.03	-0.00	0.23***
	(0.02)	(0.02)	(0.07)
Household size	-0.01	-0.01	-0.00
	(0.01)	(0.01)	(0.01)
Years in school of household head	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)
Received social assistance during Jan-Dec 2019	-0.04	-0.03	-0.05
	(0.03)	(0.03)	(0.03)
Experienced difficulties during Jan-Dec 2019	0.11***	0.12**	0.11**
	(0.04)	(0.05)	(0.04)
[Listahanan] Per capita income (PMT score)	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)
With car, jeep, van, motorcycle or tricycle in working condition	0.05**	0.06**	0.06**
	(0.03)	(0.03)	(0.03)
With TVs working	-0.01	-0.03	-0.02
	(0.03)	(0.03)	(0.03)
With cellphones working	0.08***	0.08***	0.08***
	(0.03)	(0.03)	(0.03)
With refrigerators/freezers working	0.03	0.03	0.02
	(0.04)	(0.04)	(0.04)
With aircons working	-0.00		-0.05
	(0.21)		(0.17)
With personal computers working	-0.14**	-0.11	-0.13*
	(0.06)	(0.07)	(0.07)
With washing machines working	0.02	0.05	0.02
	(0.04)	(0.04)	(0.04)
Business personality mean score	0.01	-0.03	0.01
	(0.04)	(0.05)	(0.04)
Financial risk score	-0.02	-0.01	-0.02
	(0.01)	(0.01)	(0.01)
General risk score	0.04***	0.04***	0.04***
	(0.01)	(0.01)	(0.01)
Willing to take business risk	-0.01	-0.01	-0.01
	(0.03)	(0.03)	(0.03)
Work centrality score	0.01	0.02	0.01
	(0.02)	(0.02)	(0.02)
Achievement mean score	0.07*	0.09**	0.07*
	(0.03)	(0.04)	(0.03)
Impulsiveness mean score	0.06	0.07**	0.06
	(0.04)	(0.04)	(0.04)
Locus of control mean score	-0.03	-0.02	-0.03
	(0.03)	(0.03)	(0.03)
Optimism mean score	0.07	0.06	0.07*
	(0.04)	(0.04)	(0.04)
Polychronicity mean score	-0.02	-0.02	-0.02
	(0.03)	(0.04)	(0.03)
Power motivation mean score	-0.10***	-0.09***	-0.10***
	(0.03)	(0.03)	(0.03)
Tenacity mean score	0.01	0.01	0.01
	(0.03)	(0.04)	(0.03)
Passion for work score	0.04**	0.04**	0.03**
	(0.02)	(0.02)	(0.02)
Organized person score	0.03	0.04*	0.03
	(0.02)	(0.02)	(0.02)
Treatment x Group			-0.23***
			(0.07)
R2_A	.	.	.
N	2,042	1,851	2,042

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B6. Treatment effect on CCT grantee spouse is employed

	(1)	(2)	(3)
Treatment	0.01	-0.01	0.20***
	(0.02)	(0.02)	(0.06)
Household size	-0.00	-0.00	-0.00
	(0.01)	(0.01)	(0.01)
Years in school of household head	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)
Received social assistance during Jan-Dec 2019	-0.05	-0.04	-0.05
	(0.03)	(0.04)	(0.03)
Experienced difficulties during Jan-Dec 2019	0.10**	0.11**	0.09**
	(0.04)	(0.05)	(0.05)
[Listahanan] Per capita income (PMT score)	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)
With car, jeep, van, motorcycle or tricycle in working condition	0.06**	0.06**	0.06**
	(0.03)	(0.03)	(0.03)
With TVs working	-0.02	-0.03	-0.02
	(0.03)	(0.03)	(0.03)
With cellphones working	0.08***	0.08***	0.08***
	(0.03)	(0.03)	(0.03)
With refrigerators/freezers working	-0.01	0.00	-0.01
	(0.04)	(0.04)	(0.04)
With aircons working	0.05		0.00
	(0.23)		(0.19)
With personal computers working	-0.11*	-0.09	-0.10
	(0.06)	(0.08)	(0.07)
With washing machines working	0.04	0.06	0.04
	(0.04)	(0.04)	(0.04)
Business personality mean score	-0.02	-0.06	-0.02
	(0.04)	(0.04)	(0.04)
Financial risk score	-0.01	-0.01	-0.01
	(0.01)	(0.01)	(0.01)
General risk score	0.04***	0.04***	0.04***
	(0.01)	(0.01)	(0.01)
Willing to take business risk	-0.00	-0.00	-0.00
	(0.03)	(0.03)	(0.03)
Work centrality score	0.01	0.02	0.01
	(0.02)	(0.02)	(0.02)
Achievement mean score	0.05	0.07*	0.05
	(0.04)	(0.04)	(0.04)
Impulsiveness mean score	0.06*	0.08**	0.06
	(0.04)	(0.04)	(0.04)
Locus of control mean score	-0.02	-0.01	-0.02
	(0.03)	(0.03)	(0.03)
Optimism mean score	0.07*	0.07*	0.08*
	(0.04)	(0.04)	(0.04)
Polychronicity mean score	-0.01	-0.01	-0.01
	(0.03)	(0.04)	(0.03)
Power motivation mean score	-0.09***	-0.09***	-0.09***
	(0.03)	(0.03)	(0.03)
Tenacity mean score	0.02	0.02	0.02
	(0.03)	(0.03)	(0.03)
Passion for work score	0.04**	0.03*	0.03**
	(0.02)	(0.02)	(0.02)
Organized person score	0.04**	0.05**	0.04**
	(0.02)	(0.02)	(0.02)
Treatment x Group			-0.21***
			(0.07)
R2_A	.	.	.
N	2,042	1,851	2,042

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B7: Treatment effect on household income per capita

	(1)	(2)	(3)
Treatment	142.79	123.17	461.67
	(491.93)	(486.92)	(1,803.21)
Household size	-2,117.77***	-2,096.41***	-2,117.59***
	(201.96)	(229.00)	(202.09)
Years in school of household head	295.90**	319.95**	295.89**
	(120.01)	(128.93)	(120.06)
Received social assistance during Jan-Dec 2019	2,702.43***	2,636.03***	2,700.51***
	(737.78)	(766.89)	(736.29)
Experienced difficulties during Jan-Dec 2019	1,558.89	2,113.15	1,548.65
	(1,530.98)	(1,661.66)	(1,542.50)
[Listahanan] Per capita income (PMT score)	0.22	0.29	0.22
	(0.14)	(0.17)	(0.14)
With car, jeep, van, motorcycle or tricycle in working condition	2,339.03***	2,283.18***	2,342.84***
	(728.35)	(768.38)	(728.10)
With TVs working	376.50	280.45	373.01
	(748.22)	(805.58)	(750.77)
With cellphones working	1,386.64	1,323.05	1,388.37
	(942.77)	(981.62)	(943.34)
With refrigerators/freezers working	3,309.73***	3,690.07***	3,309.43***
	(1,076.11)	(1,146.81)	(1,076.13)
With aircons working	-11,446.31	-25,175.05***	-11,504.39
	(7,597.99)	(4,641.83)	(7,351.67)
With personal computers working	8,045.65***	8,550.63**	8,058.22***
	(2,754.47)	(3,554.33)	(2,725.41)
With washing machines working	4,282.01***	4,379.90***	4,280.21***
	(1,241.40)	(1,390.78)	(1,242.11)
Business personality mean score	714.75	-264.81	714.15
	(1,112.14)	(1,171.21)	(1,112.76)
Financial risk score	-846.79***	-741.33**	-846.06***
	(276.55)	(274.55)	(277.45)
General risk score	673.48**	654.15**	672.75**
	(284.84)	(298.67)	(285.07)
Willing to take business risk	215.50	401.40	216.17
	(1,084.80)	(1,119.82)	(1,083.73)
Work centrality score	838.50	1,139.45**	838.27
	(533.47)	(555.42)	(534.03)
Achievement mean score	1,486.18	1,323.44	1,483.63
	(1,014.13)	(1,057.46)	(1,019.79)
Impulsiveness mean score	1,666.90	2,510.26**	1,666.39
	(998.00)	(1,036.79)	(995.38)
Locus of control mean score	1,053.36	1,516.73	1,056.21
	(812.43)	(906.96)	(816.26)
Optimism mean score	529.54	164.87	532.29
	(1,345.02)	(1,432.41)	(1,345.36)
Polychronicity mean score	-2,446.91**	-2,511.95***	-2,450.16**
	(906.31)	(910.80)	(907.96)
Power motivation mean score	-2,081.77**	-1,440.52	-2,079.42**
	(984.80)	(1,019.45)	(986.56)
Tenacity mean score	331.35	362.12	325.92
	(627.71)	(659.56)	(630.87)
Passion for work score	1,037.12*	926.92	1,035.00*
	(527.42)	(555.07)	(525.47)
Organized person score	-36.38	-180.38	-37.05
	(538.14)	(608.60)	(538.63)
Treatment x Group			-346.29
			(1,764.17)
R2_A	0.27	0.26	0.27
N	2,534	2,316	2,534

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B8. Treatment effect on wage income per capita

	(1)	(2)	(3)
Treatment	-191.18	-261.82	904.63
	(600.88)	(621.26)	(1,609.58)
Household size	-1,170.34***	-1,168.82***	-1,169.69***
	(190.11)	(207.78)	(190.54)
Years in school of household head	249.74**	253.80**	249.69**
	(108.91)	(115.11)	(109.28)
Received social assistance during Jan-Dec 2019	1,705.17**	1,563.58**	1,698.59**
	(689.42)	(699.14)	(687.26)
Experienced difficulties during Jan-Dec 2019	1,387.41	2,041.18	1,352.22
	(1,254.52)	(1,367.48)	(1,275.25)
[Listahanan] Per capita income (PMT score)	0.22*	0.29*	0.22*
	(0.13)	(0.17)	(0.13)
With car, jeep, van, motorcycle or tricycle in working condition	2,423.12***	2,492.74***	2,436.21***
	(686.08)	(725.41)	(682.80)
With TVs working	49.37	-84.75	37.39
	(689.62)	(756.87)	(694.82)
With cellphones working	2,050.71***	1,926.10**	2,056.66***
	(743.47)	(746.75)	(745.19)
With refrigerators/freezers working	1,274.30	1,463.66	1,273.28
	(876.44)	(940.45)	(875.22)
With aircons working	-9,255.24	-22,138.82***	-9,454.80*
	(6,125.66)	(4,736.21)	(5,601.87)
With personal computers working	6,949.64***	9,132.12**	6,992.83***
	(2,507.25)	(3,434.06)	(2,499.54)
With washing machines working	4,089.61***	4,498.99***	4,083.44***
	(1,325.61)	(1,279.57)	(1,336.24)
Business personality mean score	1,562.54	1,349.80	1,560.48
	(1,075.11)	(1,198.04)	(1,076.70)
Financial risk score	-806.62***	-804.67***	-804.10***
	(280.08)	(283.50)	(279.90)
General risk score	851.95***	782.46***	849.45***
	(254.91)	(244.60)	(254.79)
Willing to take business risk	-263.98	89.31	-261.65
	(897.75)	(948.03)	(895.38)
Work centrality score	422.23	565.32	421.43
	(501.69)	(534.09)	(502.56)
Achievement mean score	383.04	79.52	374.27
	(927.53)	(927.83)	(937.70)
Impulsiveness mean score	1,981.76*	2,801.61**	1,980.03*
	(991.74)	(1,059.06)	(981.99)
Locus of control mean score	824.65	1,531.22**	834.43
	(706.02)	(742.76)	(709.52)
Optimism mean score	771.21	654.69	780.68
	(1,262.60)	(1,382.03)	(1,261.60)
Polychronicity mean score	-2,071.84**	-2,097.19**	-2,083.02**
	(880.46)	(878.26)	(885.54)
Power motivation mean score	-2,115.32**	-1,695.18*	-2,107.25**
	(825.47)	(900.37)	(830.17)
Tenacity mean score	38.02	199.35	19.36
	(587.82)	(567.48)	(587.72)
Passion for work score	956.07**	892.84*	948.80**
	(460.47)	(481.46)	(458.80)
Organized person score	-262.99	-419.17	-265.27
	(484.51)	(529.52)	(485.28)
Treatment x Group			-1,189.97
			(1,624.51)
R2_A	0.19	0.20	0.19
N	2,534	2,316	2,534

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B9. Treatment effect on net income per capita from entrepreneurial activities

	(1)	(2)	(3)
Treatment	247.67*	215.58	502.89
	(128.31)	(130.93)	(509.01)
Household size	-103.10***	-85.09**	-102.95**
	(37.73)	(34.04)	(37.97)
Years in school of household head	14.20	23.84*	14.19
	(14.99)	(12.94)	(14.89)
Received social assistance during Jan-Dec 2019	182.80	218.31	181.27
	(133.32)	(137.28)	(133.66)
Experienced difficulties during Jan-Dec 2019	314.80	225.14	306.60
	(275.75)	(263.28)	(280.97)
[Listahanan] Per capita income (PMT score)	0.02	0.03	0.02
	(0.03)	(0.02)	(0.03)
With car, jeep, van, motorcycle or tricycle in working condition	293.76*	242.75	296.81*
	(172.12)	(183.68)	(171.70)
With TVs working	-74.30	-104.91	-77.09
	(161.62)	(173.25)	(162.58)
With cellphones working	-379.05*	-369.51*	-377.66*
	(206.55)	(197.32)	(207.03)
With refrigerators/freezers working	349.08*	364.15**	348.84*
	(173.31)	(166.58)	(172.56)
With aircons working	-709.08*	-995.95*	-755.56**
	(378.25)	(553.38)	(282.90)
With personal computers working	4.23	-48.79	14.29
	(379.20)	(503.71)	(381.44)
With washing machines working	57.03	52.67	55.59
	(258.52)	(201.10)	(255.98)
Business personality mean score	-135.18	-350.78	-135.66
	(358.69)	(372.20)	(358.84)
Financial risk score	45.98	74.74	46.57
	(58.27)	(54.72)	(58.27)
General risk score	-107.53*	-85.15	-108.11*
	(58.65)	(60.89)	(58.71)
Willing to take business risk	187.81	168.76	188.35
	(198.52)	(188.73)	(200.35)
Work centrality score	74.80	63.36	74.62
	(93.92)	(98.86)	(93.86)
Achievement mean score	185.39	120.54	183.34
	(160.17)	(163.68)	(162.76)
Impulsiveness mean score	-163.26	-163.45	-163.66
	(225.16)	(200.38)	(224.33)
Locus of control mean score	146.65	41.41	148.92
	(153.08)	(159.88)	(153.57)
Optimism mean score	143.17	167.86	145.37
	(180.06)	(196.12)	(178.71)
Polychronicity mean score	-190.53	-242.42*	-193.14
	(128.69)	(127.95)	(128.11)
Power motivation mean score	81.59	112.43	83.46
	(162.26)	(150.24)	(160.03)
Tenacity mean score	72.80	100.31	68.46
	(107.98)	(115.66)	(108.37)
Passion for work score	-87.75	-92.39	-89.45
	(87.84)	(91.11)	(87.03)
Organized person score	-28.66	39.05	-29.19
	(104.26)	(97.72)	(103.42)
Treatment x Group			-277.15
			(521.97)
R2_A	0.31	0.33	0.31
N	2,534	2,316	2,534

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B10. Treatment effect on net receipts per capita from sustenance activities

	(1)	(2)	(3)
Treatment	59.34	79.86	-228.77
	(46.70)	(49.88)	(162.26)
Household size	-39.51**	-34.53*	-39.68**
	(16.49)	(17.29)	(16.60)
Years in school of household head	-8.86	-13.50	-8.85
	(10.97)	(11.53)	(10.98)
Received social assistance during Jan-Dec 2019	200.57**	205.01**	202.31**
	(91.02)	(95.58)	(91.00)
Experienced difficulties during Jan-Dec 2019	71.48	120.23	80.73
	(112.81)	(131.39)	(114.58)
[Listahanan] Per capita income (PMT score)	-0.02**	-0.02*	-0.02**
	(0.01)	(0.01)	(0.01)
With car, jeep, van, motorcycle or tricycle in working condition	-141.38**	-162.69***	-144.82**
	(56.42)	(58.41)	(56.52)
With TVs working	-22.80	5.21	-19.65
	(67.39)	(65.69)	(66.34)
With cellphones working	109.20*	105.33	107.63
	(64.64)	(67.72)	(64.66)
With refrigerators/freezers working	52.02	68.53	52.28
	(90.36)	(94.35)	(89.61)
With aircons working	-544.80	-821.05***	-492.33**
	(337.57)	(277.15)	(228.90)
With personal computers working	-151.04	-189.84	-162.40
	(127.28)	(189.78)	(129.27)
With washing machines working	-184.39**	-181.45**	-182.77**
	(82.80)	(83.09)	(80.88)
Business personality mean score	-308.10**	-341.65**	-307.56**
	(115.71)	(125.71)	(116.30)
Financial risk score	-51.78	-43.77	-52.44
	(32.33)	(33.14)	(32.20)
General risk score	67.44***	66.12**	68.10***
	(23.89)	(25.17)	(23.86)
Willing to take business risk	-187.33	-219.07*	-187.94
	(119.92)	(127.28)	(120.89)
Work centrality score	119.15**	135.00**	119.36**
	(52.16)	(58.25)	(52.26)
Achievement mean score	69.14	79.12	71.45
	(97.62)	(107.91)	(97.41)
Impulsiveness mean score	75.45	49.96	75.90
	(99.78)	(104.68)	(98.77)
Locus of control mean score	-166.43*	-177.66	-169.00*
	(95.45)	(109.66)	(95.89)
Optimism mean score	-9.77	-17.83	-12.26
	(122.80)	(132.68)	(123.56)
Polychronicity mean score	5.31	17.12	8.25
	(56.73)	(62.99)	(57.75)
Power motivation mean score	-57.13	-39.93	-59.25
	(86.23)	(96.52)	(85.71)
Tenacity mean score	78.54	83.10	83.45
	(68.56)	(77.17)	(69.16)
Passion for work score	59.35	49.73	61.26
	(49.70)	(53.53)	(49.50)
Organized person score	17.30	8.22	17.90
	(51.24)	(54.63)	(51.15)
Treatment x Group			312.87*
			(178.59)
R2_A	0.13	0.13	0.13
N	2,534	2,316	2,534

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B11. Treatment effect on entrepreneurial and sustenance incomes per capita

	(1)	(2)	(3)
Treatment	432.14***	444.05***	39.78
	(159.29)	(157.78)	(626.72)
Household size	-189.44***	-166.98***	-189.67***
	(45.07)	(41.84)	(45.06)
Years in school of household head	-3.87	0.90	-3.85
	(25.81)	(26.31)	(25.96)
Received social assistance during Jan-Dec 2019	437.03**	473.22**	439.39**
	(203.70)	(211.52)	(204.07)
Experienced difficulties during Jan-Dec 2019	234.09	187.48	246.69
	(380.69)	(399.66)	(383.74)
[Listahanan] Per capita income (PMT score)	-0.00	-0.00	-0.00
	(0.03)	(0.02)	(0.03)
With car, jeep, van, motorcycle or tricycle in working condition	128.28	28.07	123.60
	(233.83)	(245.79)	(233.88)
With TVs working	-14.21	-15.01	-9.93
	(189.80)	(204.17)	(189.34)
With cellphones working	-288.10	-257.16	-290.23
	(260.53)	(257.48)	(261.01)
With refrigerators/freezers working	694.20**	732.13***	694.57**
	(257.96)	(264.73)	(258.17)
With aircons working	-1,652.84***	-1,936.29**	-1,581.39***
	(439.40)	(809.75)	(368.96)
With personal computers working	-248.22	-446.17	-263.68
	(480.05)	(635.71)	(465.22)
With washing machines working	-361.83	-366.09	-359.62
	(312.50)	(261.02)	(316.14)
Business personality mean score	-651.65	-948.88*	-650.91
	(479.87)	(504.90)	(480.18)
Financial risk score	-18.95	15.63	-19.85
	(97.69)	(97.00)	(97.58)
General risk score	2.96	23.84	3.86
	(87.35)	(91.70)	(87.09)
Willing to take business risk	-89.04	-151.16	-89.87
	(273.80)	(266.99)	(273.51)
Work centrality score	290.89**	295.62*	291.17**
	(133.36)	(146.10)	(133.32)
Achievement mean score	262.95	242.45	266.09
	(200.45)	(211.60)	(199.38)
Impulsiveness mean score	-36.60	-33.80	-35.98
	(295.27)	(276.26)	(294.47)
Locus of control mean score	-119.53	-264.23	-123.03
	(267.52)	(295.47)	(267.65)
Optimism mean score	9.26	-37.84	5.87
	(324.59)	(348.32)	(323.76)
Polychronicity mean score	-127.43	-170.54	-123.42
	(178.87)	(182.20)	(178.96)
Power motivation mean score	51.11	107.21	48.22
	(228.73)	(234.33)	(228.36)
Tenacity mean score	166.14	216.84	172.83
	(172.14)	(191.90)	(174.01)
Passion for work score	29.31	34.90	31.92
	(136.67)	(143.08)	(135.86)
Organized person score	-18.54	29.03	-17.72
	(125.55)	(133.28)	(126.17)
Treatment x Group			426.07
			(629.07)
R2_A	0.24	0.25	0.24
N	2,534	2,316	2,534

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B12. Treatment effect on dividend income per capita

	(1)	(2)	(3)
Treatment	10.02**	6.07*	63.99*
	(4.05)	(3.04)	(34.16)
Household size	-0.74	-0.42	-0.70
	(0.45)	(0.25)	(0.46)
Years in school of household head	-0.03	0.42	-0.03
	(0.55)	(0.34)	(0.53)
Received social assistance during Jan-Dec 2019	5.55	1.40	5.23
	(4.01)	(1.93)	(3.76)
Experienced difficulties during Jan-Dec 2019	11.00	0.16	9.27
	(12.90)	(0.78)	(11.14)
[Listahanan] Per capita income (PMT score)	0.00	-0.00	0.00
	(0.00)	(0.00)	(0.00)
With car, jeep, van, motorcycle or tricycle in working condition	1.55	3.12	2.20
	(2.77)	(2.73)	(2.73)
With TVs working	2.40**	2.85***	1.81
	(1.14)	(0.99)	(1.54)
With cellphones working	3.59	1.89	3.88
	(2.41)	(1.70)	(2.71)
With refrigerators/freezers working	0.98	3.06	0.93
	(4.13)	(4.24)	(4.17)
With aircons working	-16.26	8.81**	-26.09
	(20.23)	(4.10)	(43.04)
With personal computers working	-3.32	-1.32	-1.19
	(3.39)	(1.43)	(3.57)
With washing machines working	-5.50	-3.58*	-5.80
	(3.27)	(2.04)	(4.04)
Business personality mean score	-6.70*	-4.70	-6.80*
	(3.93)	(3.82)	(3.71)
Financial risk score	0.47	0.65	0.60
	(0.93)	(0.79)	(0.94)
General risk score	-1.52	-0.22	-1.64
	(1.14)	(0.48)	(1.20)
Willing to take business risk	2.21	-0.86	2.32
	(3.56)	(1.17)	(3.76)
Work centrality score	-1.63	-2.94	-1.67
	(1.74)	(1.75)	(1.71)
Achievement mean score	1.84	2.48	1.41
	(1.86)	(1.58)	(2.26)
Impulsiveness mean score	-0.46	0.99	-0.54
	(7.88)	(0.96)	(7.10)
Locus of control mean score	4.87	-1.24	5.35
	(4.00)	(1.49)	(4.08)
Optimism mean score	5.43	0.56	5.89
	(7.36)	(2.18)	(7.57)
Polychronicity mean score	-1.34	-3.02	-1.89
	(2.41)	(1.98)	(2.15)
Power motivation mean score	6.11	0.65	6.51
	(4.36)	(1.90)	(4.36)
Tenacity mean score	-0.11	0.39	-1.03
	(1.61)	(0.68)	(2.25)
Passion for work score	1.08	0.56	0.72
	(1.02)	(0.70)	(1.20)
Organized person score	1.05	2.75	0.94
	(3.81)	(1.98)	(3.72)
Treatment x Group			-58.60
			(34.82)
R2_A	0.02	0.05	0.03
N	2,534	2,316	2,534

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B13. Treatment effect on household expenditure per capita

	(1)	(2)	(3)
Treatment	-230.54	-521.36	557.54
	(499.90)	(492.02)	(1,835.33)
Household size	-2,280.05***	-2,304.36***	-2,279.58***
	(138.30)	(141.92)	(137.47)
Years in school of household head	293.82***	316.51***	293.78***
	(85.69)	(87.97)	(85.86)
Received social assistance during Jan-Dec 2019	1,053.19**	1,098.55*	1,048.45**
	(486.98)	(561.59)	(484.69)
Experienced difficulties during Jan-Dec 2019	-1,404.05	-1,006.36	-1,429.36
	(1,182.45)	(1,216.49)	(1,173.25)
[Listahanan] Per capita income (PMT score)	0.27***	0.24***	0.27***
	(0.08)	(0.09)	(0.08)
With car, jeep, van, motorcycle or tricycle in working condition	1,650.57***	1,885.04***	1,659.98***
	(555.20)	(620.32)	(553.86)
With TVs working	742.02	855.85	733.41
	(530.54)	(563.56)	(538.19)
With cellphones working	2,056.89***	2,024.64***	2,061.17***
	(537.98)	(524.38)	(540.50)
With refrigerators/freezers working	3,943.69***	3,608.20***	3,942.95***
	(771.58)	(836.22)	(769.77)
With aircons working	-1,847.61	-16,880.04***	-1,991.14
	(4,726.10)	(2,286.19)	(4,786.11)
With personal computers working	7,867.32***	7,227.23***	7,898.38***
	(1,361.61)	(1,760.77)	(1,390.01)
With washing machines working	2,825.19***	2,741.72***	2,820.75***
	(858.87)	(956.81)	(855.81)
Business personality mean score	-1,760.74	-2,376.55*	-1,762.22
	(1,285.51)	(1,332.83)	(1,289.55)
Financial risk score	111.19	162.08	113.00
	(284.01)	(284.32)	(282.57)
General risk score	16.10	9.25	14.30
	(267.60)	(270.62)	(268.11)
Willing to take business risk	2,193.87*	2,255.55*	2,195.54*
	(1,142.07)	(1,232.12)	(1,139.58)
Work centrality score	-202.21	-166.15	-202.79
	(493.44)	(550.17)	(493.68)
Achievement mean score	-234.00	-268.93	-240.31
	(903.74)	(985.08)	(908.13)
Impulsiveness mean score	517.47	655.89	516.23
	(677.73)	(679.69)	(685.18)
Locus of control mean score	393.76	590.44	400.80
	(647.91)	(749.69)	(645.35)
Optimism mean score	579.99	660.62	586.79
	(893.44)	(921.79)	(890.93)
Polychronicity mean score	2,327.30***	2,580.05***	2,319.26***
	(444.31)	(533.98)	(446.09)
Power motivation mean score	458.63	964.07	464.43
	(1,143.04)	(1,131.89)	(1,151.57)
Tenacity mean score	365.29	386.40	351.87
	(409.49)	(444.70)	(410.20)
Passion for work score	-20.92	107.92	-26.14
	(413.19)	(432.75)	(413.21)
Organized person score	1,008.38**	940.50**	1,006.74**
	(391.36)	(406.44)	(392.11)
Treatment x Group			-855.80
			(2,048.65)
R2_A	0.33	0.33	0.33
N	2,534	2,316	2,534

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B14. Treatment effect on food expenditure per capita

	(1)	(2)	(3)
Treatment	-183.36	-339.01	100.54
	(343.23)	(335.58)	(1,135.46)
Household size	-1,544.84***	-1,576.61***	-1,544.68***
	(88.75)	(93.22)	(88.50)
Years in school of household head	185.54***	202.59***	185.52***
	(54.03)	(56.97)	(54.11)
Received social assistance during Jan-Dec 2019	800.35**	884.27**	798.64**
	(298.66)	(333.29)	(296.70)
Experienced difficulties during Jan-Dec 2019	-1,621.26***	-1,340.14**	-1,630.38***
	(549.61)	(555.08)	(546.40)
[Listahanan] Per capita income (PMT score)	0.16***	0.16**	0.16***
	(0.05)	(0.06)	(0.05)
With car, jeep, van, motorcycle or tricycle in working condition	339.52	551.59	342.91
	(329.41)	(357.01)	(327.37)
With TVs working	197.66	271.97	194.56
	(318.87)	(329.72)	(320.49)
With cellphones working	1,391.68***	1,346.17***	1,393.22***
	(444.86)	(433.47)	(446.69)
With refrigerators/freezers working	2,324.57***	2,139.21***	2,324.31***
	(509.32)	(541.49)	(509.28)
With aircons working	-3,443.94	-10,343.03***	-3,495.64
	(2,792.03)	(1,438.50)	(2,794.95)
With personal computers working	5,154.58***	4,251.87***	5,165.77***
	(1,097.48)	(1,244.39)	(1,117.95)
With washing machines working	1,268.89**	1,131.35*	1,267.29**
	(515.40)	(565.68)	(513.64)
Business personality mean score	-11.08	-232.55	-11.61
	(721.36)	(756.01)	(723.07)
Financial risk score	490.20***	517.75***	490.86***
	(159.12)	(157.93)	(158.45)
General risk score	-319.76**	-312.72**	-320.41**
	(142.60)	(144.62)	(143.25)
Willing to take business risk	868.32	853.29	868.92
	(600.10)	(620.74)	(599.64)
Work centrality score	-634.70**	-672.40*	-634.91**
	(292.37)	(335.14)	(292.63)
Achievement mean score	-779.02	-890.94	-781.30
	(681.10)	(722.10)	(684.52)
Impulsiveness mean score	9.70	-25.02	9.25
	(485.96)	(497.59)	(488.75)
Locus of control mean score	-109.69	1.36	-107.15
	(383.48)	(445.70)	(382.60)
Optimism mean score	-1,143.27*	-1,118.33*	-1,140.82*
	(616.70)	(597.56)	(615.16)
Polychronicity mean score	886.79***	1,015.06***	883.89***
	(310.58)	(360.23)	(312.17)
Power motivation mean score	777.88	1,051.70	779.97
	(677.35)	(630.08)	(682.86)
Tenacity mean score	433.08	455.17	428.25
	(342.05)	(365.82)	(340.81)
Passion for work score	77.71	121.46	75.82
	(241.99)	(260.25)	(241.46)
Organized person score	629.54**	670.54**	628.95**
	(250.17)	(253.81)	(251.03)
Treatment x Group			-308.29
			(1,253.84)
R2_A	0.33	0.35	0.33
N	2,534	2,316	2,534

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B15. Treatment effect on health expenditure per capita

	(1)	(2)	(3)
Treatment	4.63	2.45	22.44
	(7.08)	(7.79)	(33.62)
Household size	-9.04***	-9.05***	-9.03***
	(2.37)	(2.51)	(2.35)
Years in school of household head	0.45	0.77	0.45
	(1.64)	(1.75)	(1.64)
Received social assistance during Jan-Dec 2019	19.35	17.81	19.24
	(11.62)	(12.26)	(11.63)
Experienced difficulties during Jan-Dec 2019	99.60***	110.40***	99.03***
	(36.10)	(37.04)	(35.80)
[Listahanan] Per capita income (PMT score)	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
With car, jeep, van, motorcycle or tricycle in working condition	1.73	2.16	1.95
	(10.36)	(10.21)	(10.34)
With TVs working	-15.47	-14.82	-15.67
	(11.53)	(10.93)	(11.66)
With cellphones working	-9.52	-9.43	-9.43
	(14.08)	(14.81)	(14.11)
With refrigerators/freezers working	13.55	12.31	13.54
	(11.46)	(11.88)	(11.48)
With aircons working	-82.97**	-21.55	-86.21**
	(34.98)	(38.12)	(36.77)
With personal computers working	-26.44	-23.77	-25.74
	(21.19)	(29.80)	(21.46)
With washing machines working	19.47	17.41	19.37
	(11.63)	(12.32)	(11.53)
Business personality mean score	-20.75	-28.07	-20.78
	(16.53)	(18.05)	(16.52)
Financial risk score	5.00	5.10	5.05
	(3.98)	(4.13)	(3.96)
General risk score	2.16	1.68	2.12
	(3.35)	(3.40)	(3.32)
Willing to take business risk	-20.14	-21.57	-20.10
	(15.29)	(16.33)	(15.25)
Work centrality score	-5.37	-9.99	-5.38
	(10.68)	(11.82)	(10.70)
Achievement mean score	1.67	2.47	1.52
	(14.21)	(16.47)	(14.36)
Impulsiveness mean score	20.06*	23.22*	20.03*
	(10.46)	(12.09)	(10.42)
Locus of control mean score	-14.01	-11.90	-13.85
	(11.23)	(12.89)	(11.26)
Optimism mean score	9.86	11.75	10.01
	(16.30)	(18.71)	(16.28)
Polychronicity mean score	10.61	15.96*	10.43
	(9.56)	(8.53)	(9.49)
Power motivation mean score	1.78	4.42	1.91
	(18.09)	(20.22)	(18.15)
Tenacity mean score	25.32**	32.57***	25.02**
	(9.63)	(10.61)	(9.77)
Passion for work score	-13.10**	-8.62	-13.22**
	(6.40)	(6.99)	(6.39)
Organized person score	25.45***	27.67***	25.42***
	(8.38)	(8.88)	(8.37)
Treatment x Group			-19.34
			(37.31)
R2_A	0.10	0.10	0.10
N	2,534	2,316	2,534

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B16. Treatment effect on education expenditure per capita

	(1)	(2)	(3)
Treatment	-9.74	-12.10	-39.32
	(16.69)	(18.16)	(54.43)
Household size	1.14	3.19	1.12
	(6.72)	(6.83)	(6.72)
Years in school of household head	5.77	5.56	5.78
	(4.63)	(4.93)	(4.63)
Received social assistance during Jan-Dec 2019	34.90	39.72	35.08
	(30.12)	(32.75)	(30.22)
Experienced difficulties during Jan-Dec 2019	68.42*	91.82**	69.37*
	(39.08)	(41.29)	(39.62)
[Listahanan] Per capita income (PMT score)	0.00	0.01*	0.00
	(0.00)	(0.01)	(0.00)
With car, jeep, van, motorcycle or tricycle in working condition	53.03**	51.17**	52.67**
	(22.16)	(24.04)	(22.25)
With TVs working	-9.28	-13.85	-8.96
	(21.28)	(22.64)	(21.37)
With cellphones working	20.09	19.83	19.93
	(32.75)	(34.18)	(32.73)
With refrigerators/freezers working	101.75**	88.95**	101.78**
	(40.98)	(42.16)	(41.07)
With aircons working	-325.91***	-279.55**	-320.53**
	(114.64)	(115.40)	(126.09)
With personal computers working	196.80**	265.37**	195.64**
	(84.30)	(112.50)	(84.84)
With washing machines working	31.37	36.01	31.54
	(32.87)	(37.64)	(32.90)
Business personality mean score	-32.89	-55.55	-32.83
	(40.85)	(43.45)	(40.83)
Financial risk score	18.39	20.88*	18.33
	(11.88)	(12.12)	(11.85)
General risk score	8.25	8.96	8.32
	(9.81)	(10.32)	(9.83)
Willing to take business risk	-33.68	-33.18	-33.74
	(51.23)	(55.25)	(51.39)
Work centrality score	36.85*	43.25*	36.87*
	(21.45)	(22.83)	(21.39)
Achievement mean score	-36.62	-30.87	-36.38
	(46.45)	(50.45)	(46.50)
Impulsiveness mean score	18.26	20.76	18.30
	(34.20)	(32.40)	(34.03)
Locus of control mean score	-33.71	-36.66	-33.98
	(29.01)	(32.54)	(29.20)
Optimism mean score	83.30	94.85	83.05
	(55.49)	(57.75)	(55.65)
Polychronicity mean score	-58.13**	-54.14*	-57.83**
	(24.49)	(27.11)	(24.70)
Power motivation mean score	55.25	75.92**	55.03
	(35.22)	(37.00)	(35.17)
Tenacity mean score	42.36	34.31	42.86
	(26.57)	(30.33)	(27.21)
Passion for work score	-2.88	-4.93	-2.68
	(22.66)	(24.14)	(22.59)
Organized person score	24.06	19.96	24.12
	(20.39)	(21.87)	(20.32)
Treatment x Group			32.12
			(61.50)
R2_A	0.13	0.13	0.13
N	2,534	2,316	2,534

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B17. Treatment effect on clothing expenditure per capita

	(1)	(2)	(3)
Treatment	-6.22	-10.93	18.09
	(12.47)	(12.11)	(35.96)
Household size	-26.22***	-26.73***	-26.21***
	(3.74)	(3.94)	(3.72)
Years in school of household head	3.20	2.63	3.20
	(2.25)	(2.42)	(2.25)
Received social assistance during Jan-Dec 2019	35.69**	36.67*	35.54*
	(17.61)	(18.99)	(17.65)
Experienced difficulties during Jan-Dec 2019	-55.89**	-60.00**	-56.67**
	(24.68)	(26.90)	(24.69)
[Listahanan] Per capita income (PMT score)	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
With car, jeep, van, motorcycle or tricycle in working condition	18.72	13.58	19.01
	(20.64)	(21.63)	(20.63)
With TVs working	20.36	27.69*	20.10
	(15.93)	(15.46)	(15.88)
With cellphones working	-16.83	-18.37	-16.70
	(27.08)	(28.49)	(27.09)
With refrigerators/freezers working	61.56***	61.19***	61.54***
	(21.49)	(21.17)	(21.47)
With aircons working	-138.72*	-73.55	-143.14**
	(74.12)	(77.51)	(69.55)
With personal computers working	-11.34	24.18	-10.38
	(45.56)	(58.64)	(45.92)
With washing machines working	22.49	23.06	22.36
	(19.65)	(22.36)	(19.67)
Business personality mean score	28.90	8.28	28.85
	(33.96)	(35.72)	(33.91)
Financial risk score	4.71	6.30	4.76
	(8.04)	(8.28)	(8.02)
General risk score	-11.03	-12.89	-11.09
	(7.82)	(8.08)	(7.81)
Willing to take business risk	10.52	5.57	10.57
	(33.38)	(36.28)	(33.37)
Work centrality score	35.44*	30.48	35.42*
	(20.64)	(21.80)	(20.66)
Achievement mean score	6.05	1.46	5.85
	(33.34)	(36.44)	(33.47)
Impulsiveness mean score	43.10*	53.23*	43.07*
	(24.98)	(27.39)	(25.02)
Locus of control mean score	-42.47***	-54.32***	-42.25***
	(15.46)	(16.40)	(15.48)
Optimism mean score	27.44	30.88	27.65
	(30.75)	(32.08)	(30.81)
Polychronicity mean score	31.56*	27.03*	31.31*
	(15.82)	(15.20)	(15.79)
Power motivation mean score	0.50	26.04	0.68
	(27.36)	(27.64)	(27.37)
Tenacity mean score	39.08**	48.83***	38.66**
	(15.26)	(16.19)	(15.37)
Passion for work score	-3.71	-1.27	-3.87
	(15.25)	(16.33)	(15.28)
Organized person score	13.85	1.63	13.80
	(12.95)	(13.94)	(12.95)
Treatment x Group			-26.39
			(33.91)
R2_A	0.18	0.18	0.18
N	2,534	2,316	2,534

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B18. Treatment effect on furnishing and durables expenditure per capita

	(1)	(2)	(3)
Treatment	1.39	0.57	-12.83
	(5.91)	(6.19)	(18.84)
Household size	-5.80***	-5.67***	-5.81***
	(1.70)	(1.78)	(1.69)
Years in school of household head	1.75	1.84	1.75
	(1.20)	(1.26)	(1.20)
Received social assistance during Jan-Dec 2019	22.41**	24.01**	22.50**
	(9.16)	(10.75)	(9.21)
Experienced difficulties during Jan-Dec 2019	4.97	5.76	5.43
	(12.99)	(11.38)	(12.79)
[Listahanan] Per capita income (PMT score)	0.00	-0.00	0.00
	(0.00)	(0.00)	(0.00)
With car, jeep, van, motorcycle or tricycle in working condition	24.00***	22.85**	23.83***
	(8.53)	(9.15)	(8.51)
With TVs working	8.83	9.20	8.98
	(7.54)	(7.60)	(7.57)
With cellphones working	-0.19	0.62	-0.26
	(7.92)	(8.21)	(7.92)
With refrigerators/freezers working	39.09***	38.32**	39.10***
	(13.95)	(14.89)	(13.92)
With aircons working	24.51	-97.54***	27.10
	(70.94)	(35.35)	(77.37)
With personal computers working	31.19	60.02*	30.63
	(25.97)	(32.34)	(25.93)
With washing machines working	3.18	8.48	3.26
	(13.62)	(14.99)	(13.54)
Business personality mean score	-2.22	-9.46	-2.20
	(14.46)	(15.43)	(14.43)
Financial risk score	6.10	6.32	6.07
	(3.93)	(4.13)	(3.93)
General risk score	11.44***	11.06***	11.47***
	(3.50)	(3.64)	(3.50)
Willing to take business risk	11.44	13.72	11.41
	(13.41)	(14.11)	(13.48)
Work centrality score	9.99**	9.65*	10.00**
	(4.62)	(5.27)	(4.63)
Achievement mean score	-37.82*	-39.34*	-37.71*
	(18.81)	(19.70)	(18.73)
Impulsiveness mean score	-7.81	-6.47	-7.79
	(9.18)	(10.06)	(9.11)
Locus of control mean score	8.50	10.55	8.38
	(7.78)	(9.22)	(7.81)
Optimism mean score	-25.60*	-25.06*	-25.72*
	(14.02)	(14.69)	(13.99)
Polychronicity mean score	10.55	12.07	10.70
	(8.30)	(8.12)	(8.24)
Power motivation mean score	7.55	12.28	7.45
	(11.29)	(10.89)	(11.22)
Tenacity mean score	9.62	13.03	9.86
	(6.58)	(7.79)	(6.68)
Passion for work score	7.58	8.80	7.68
	(7.44)	(7.82)	(7.39)
Organized person score	8.26	9.63	8.29
	(5.51)	(6.01)	(5.52)
Treatment x Group			15.45
			(19.50)
R2_A	0.17	0.17	0.17
N	2,534	2,316	2,534

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B19. Treatment effect on savings per capita

	(1)	(2)	(3)
Treatment	53.45	54.79	130.67
	(54.56)	(58.22)	(98.01)
Household size	-29.33*	-29.33*	-29.29*
	(14.71)	(15.66)	(14.72)
Years in school of household head	14.91	16.93	14.91
	(11.66)	(12.26)	(11.64)
Received social assistance during Jan-Dec 2019	35.09	41.94	34.63
	(68.64)	(72.34)	(68.44)
Experienced difficulties during Jan-Dec 2019	31.95	12.68	29.47
	(45.22)	(38.70)	(43.53)
[Listahanan] Per capita income (PMT score)	0.00	0.00	0.00
	(0.01)	(0.01)	(0.01)
With car, jeep, van, motorcycle or tricycle in working condition	163.65***	140.27**	164.58***
	(58.65)	(62.15)	(58.59)
With TVs working	-111.28	-101.94	-112.13
	(85.16)	(92.09)	(84.73)
With cellphones working	73.41***	59.04***	73.84***
	(24.43)	(21.44)	(24.39)
With refrigerators/freezers working	-27.07	-27.72	-27.15
	(64.73)	(70.27)	(64.76)
With aircons working	-273.71	-438.38**	-287.75
	(307.48)	(165.65)	(288.33)
With personal computers working	530.74	69.67	533.79
	(503.53)	(165.68)	(504.41)
With washing machines working	232.23	341.53*	231.80
	(169.52)	(171.62)	(170.21)
Business personality mean score	37.85	7.52	37.71
	(72.40)	(74.95)	(72.82)
Financial risk score	-2.77	3.34	-2.60
	(14.20)	(14.17)	(14.26)
General risk score	-2.11	-4.02	-2.29
	(13.94)	(15.30)	(13.97)
Willing to take business risk	37.01	40.01	37.19
	(78.36)	(83.15)	(78.28)
Work centrality score	4.26	7.49	4.20
	(36.09)	(38.94)	(36.17)
Achievement mean score	-78.43*	-54.04	-79.05*
	(46.21)	(39.77)	(45.77)
Impulsiveness mean score	-31.04	7.62	-31.15
	(45.22)	(40.96)	(45.51)
Locus of control mean score	7.25	-5.36	7.94
	(90.81)	(99.34)	(91.05)
Optimism mean score	82.55	13.53	83.24
	(80.97)	(60.04)	(81.47)
Polychronicity mean score	39.04	37.69	38.24
	(37.03)	(40.50)	(37.26)
Power motivation mean score	49.99**	41.66	50.56**
	(24.33)	(25.05)	(24.13)
Tenacity mean score	-16.72	8.57	-18.03
	(45.58)	(45.51)	(45.71)
Passion for work score	-28.44	-10.80	-28.96
	(23.78)	(20.57)	(23.74)
Organized person score	4.39	-15.45	4.23
	(29.75)	(22.51)	(29.93)
Treatment x Group			-83.87
			(112.82)
R2_A	0.04	0.03	0.03
N	2,530	2,312	2,530

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B20. Treatment effect on borrowings per capita

	(1)	(2)	(3)
Treatment	9.01	-26.63	424.93
	(71.19)	(68.24)	(340.12)
Household size	-34.45*	-36.70*	-34.20*
	(18.71)	(18.99)	(18.72)
Years in school of household head	22.06	14.44	22.04
	(14.28)	(14.96)	(14.27)
Received social assistance during Jan-Dec 2019	106.59	103.26	104.09
	(91.47)	(98.81)	(91.34)
Experienced difficulties during Jan-Dec 2019	536.50***	571.15***	523.14***
	(155.17)	(151.38)	(152.92)
[Listahanan] Per capita income (PMT score)	0.01	0.01	0.02
	(0.01)	(0.01)	(0.01)
With car, jeep, van, motorcycle or tricycle in working condition	278.79***	250.23**	283.75***
	(97.04)	(97.66)	(98.00)
With TVs working	64.66	61.83	60.10
	(86.83)	(84.43)	(85.88)
With cellphones working	252.64***	249.67***	254.94***
	(67.26)	(70.07)	(66.66)
With refrigerators/freezers working	434.19**	546.50***	433.75**
	(172.96)	(183.15)	(173.57)
With aircons working	-829.84	-2,315.05*	-905.57**
	(500.37)	(1,164.36)	(425.89)
With personal computers working	720.86	1,405.16	737.28
	(709.51)	(1,098.53)	(712.14)
With washing machines working	283.77	370.68*	281.45
	(187.04)	(207.83)	(187.40)
Business personality mean score	101.61	-35.81	100.82
	(157.87)	(163.73)	(158.97)
Financial risk score	-3.06	10.33	-2.11
	(33.45)	(33.39)	(33.40)
General risk score	-23.27	-25.65	-24.21
	(27.04)	(25.68)	(27.33)
Willing to take business risk	43.98	69.48	44.86
	(87.88)	(84.92)	(88.31)
Work centrality score	-88.20	-80.05	-88.50
	(67.10)	(58.36)	(65.95)
Achievement mean score	46.06	50.36	42.72
	(89.91)	(97.93)	(92.58)
Impulsiveness mean score	88.92	105.05	88.26
	(64.14)	(70.09)	(64.44)
Locus of control mean score	42.05	39.12	45.79
	(123.24)	(142.09)	(123.66)
Optimism mean score	-188.28	-273.48**	-184.67
	(121.92)	(131.26)	(122.83)
Polychronicity mean score	63.06	78.25	58.81
	(76.31)	(80.35)	(76.50)
Power motivation mean score	-87.34	-38.50	-84.28
	(87.28)	(81.80)	(85.75)
Tenacity mean score	53.80	58.75	46.71
	(128.45)	(130.47)	(126.27)
Passion for work score	-111.28*	-96.30	-114.04*
	(60.41)	(66.14)	(60.59)
Organized person score	3.35	-12.70	2.48
	(60.59)	(72.23)	(60.36)
Treatment x Group			-451.68
			(345.43)
R2_A	0.10	0.11	0.10
N	2,533	2,315	2,533

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B21. Treatment effect on capital investment per capita

	(1)	(2)	(3)
Treatment	9.84	12.84	5.60
	(14.70)	(16.10)	(30.45)
Household size	-2.12	-3.66	-2.12
	(3.92)	(4.69)	(3.92)
Years in school of household head	2.90	2.60	2.90
	(2.81)	(3.03)	(2.82)
Received social assistance during Jan-Dec 2019	22.20	24.27	22.23
	(19.18)	(18.54)	(19.15)
Experienced difficulties during Jan-Dec 2019	70.85**	51.17*	70.99**
	(28.88)	(28.20)	(28.61)
[Listahanan] Per capita income (PMT score)	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)
With car, jeep, van, motorcycle or tricycle in working condition	7.45	9.14	7.40
	(26.65)	(28.41)	(26.73)
With TVs working	2.89	3.87	2.93
	(24.46)	(24.71)	(24.57)
With cellphones working	19.03	16.88	19.00
	(18.48)	(19.23)	(18.48)
With refrigerators/freezers working	59.43	68.81	59.44
	(64.79)	(69.21)	(64.81)
With aircons working	-78.81	-127.25	-78.04
	(72.98)	(178.74)	(73.53)
With personal computers working	84.82	144.08	84.66
	(136.34)	(192.71)	(136.60)
With washing machines working	-90.16	-99.45	-90.13
	(61.78)	(69.59)	(61.80)
Business personality mean score	7.05	6.96	7.06
	(36.86)	(40.01)	(36.87)
Financial risk score	13.06	14.60	13.05
	(13.31)	(14.02)	(13.30)
General risk score	-0.61	-1.34	-0.60
	(8.40)	(8.37)	(8.40)
Willing to take business risk	-4.63	-11.82	-4.64
	(20.69)	(22.17)	(20.69)
Work centrality score	0.92	2.94	0.92
	(9.63)	(10.61)	(9.63)
Achievement mean score	33.50	38.74	33.54
	(24.39)	(26.12)	(24.40)
Impulsiveness mean score	20.46	13.96	20.47
	(22.00)	(22.97)	(22.02)
Locus of control mean score	-52.44	-62.07	-52.48
	(46.76)	(52.61)	(46.74)
Optimism mean score	59.43*	57.76*	59.40*
	(31.33)	(34.10)	(31.40)
Polychronicity mean score	-42.64	-49.74	-42.60
	(32.88)	(35.65)	(32.79)
Power motivation mean score	40.31	45.13	40.28
	(25.16)	(27.39)	(25.15)
Tenacity mean score	-38.60	-49.36	-38.53
	(31.36)	(34.96)	(31.26)
Passion for work score	-32.65	-35.16	-32.63
	(22.85)	(26.16)	(22.84)
Organized person score	17.70	21.31	17.71
	(21.20)	(23.71)	(21.19)
Treatment x Group			4.61
			(29.67)
R2_A	0.02	0.02	0.02
N	2,534	2,316	2,534

Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.

Table B22. Treatment effect on with capital investment

	(1)	(2)	(3)
Treatment	0.00	0.01	-0.00
	(0.01)	(0.01)	(0.04)
Household size	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)
Years in school of household head	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
Received social assistance during Jan-Dec 2019	0.02	0.01	0.02
	(0.02)	(0.03)	(0.02)
Experienced difficulties during Jan-Dec 2019	0.08***	0.08***	0.08***
	(0.01)	(0.01)	(0.01)
[Listahanan] Per capita income (PMT score)	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
With car, jeep, van, motorcycle or tricycle in working condition	-0.00	0.00	-0.00
	(0.02)	(0.02)	(0.02)
With TVs working	-0.02	-0.02	-0.02
	(0.02)	(0.02)	(0.02)
With cellphones working	0.02	0.01	0.02
	(0.03)	(0.03)	(0.03)
With refrigerators/freezers working	-0.03	-0.03	-0.03
	(0.04)	(0.04)	(0.04)
With personal computers working	-0.01	-0.02	-0.01
	(0.06)	(0.06)	(0.07)
With washing machines working	0.01	0.02	0.01
	(0.03)	(0.03)	(0.03)
Business personality mean score	-0.03	-0.04	-0.03
	(0.02)	(0.02)	(0.02)
Financial risk score	-0.00	0.00	-0.00
	(0.01)	(0.01)	(0.01)
General risk score	0.01	0.01	0.01
	(0.01)	(0.01)	(0.01)
Willing to take business risk	0.01	-0.01	0.01
	(0.02)	(0.02)	(0.02)
Work centrality score	0.01	0.01	0.01
	(0.01)	(0.01)	(0.01)
Achievement mean score	0.01	0.01	0.01
	(0.01)	(0.02)	(0.01)
Impulsiveness mean score	0.02**	0.01	0.02**
	(0.01)	(0.01)	(0.01)
Locus of control mean score	-0.01	-0.01	-0.01
	(0.01)	(0.02)	(0.01)
Optimism mean score	0.04	0.04	0.04
	(0.03)	(0.03)	(0.03)
Polychronicity mean score	0.01	0.02	0.01
	(0.01)	(0.01)	(0.01)
Power motivation mean score	0.01	0.02	0.01
	(0.01)	(0.01)	(0.01)
Tenacity mean score	0.02	0.01	0.02*
	(0.01)	(0.01)	(0.01)
Passion for work score	-0.02**	-0.02**	-0.02**
	(0.01)	(0.01)	(0.01)
Organized person score	0.01*	0.02**	0.01*
	(0.01)	(0.01)	(0.01)
Treatment x Group			0.01
			(0.05)
R2_A	.	.	.
N	993	896	993

Note: Models are estimated using logit regression. Estimates shown are marginal effects. ***, **, and * indicate significance at the 1, 5, and 10 percent critical level. Cluster fixed effects are omitted.