

Revitalizing Directed Credit Approach: Lessons Learned from the Department of Agriculture's Sikat Saka Program

KAREN P. QUILLOY* and JAN DANICA S. ASMA

Abstract

This study is an assessment of the Sikat Saka Program, a direct lending program of the Department of Agriculture in collaboration with the Land Bank of the Philippines. The assessment was done from the farmers' point of view and focused on measures related to outreach and delivery of credit and other services to target farmer-beneficiaries and on the benefits and immediate impacts the program creates for them. Key results reveal that since its implementation in 2012, the Sikat Saka Program has been successful in terms of reaching its intended beneficiaries, delivering appropriate and useful credit and other services that satisfy small palay farmers' demand, and making an impact in terms of improving farmers' credit access, farm production, gross palay sales, and net farm income. Though its financial component is strong, the Sikat Saka Program showed weakness in its marketing and capacity-building components. Other issues identified are related to collateral requirements, marketing contract requirements, inadequacy of loan personnel in the field, geographical distance from the loan source, management takeover concerns, and transparency in loan releases. With these findings, there are suggested recommendations on the revisiting of some of the program requirements and implementation needs and on improving the non-financial components of the program.

Keywords: directed credit program, financial access, small farmers, quasi-experiment design

* Corresponding author. Email addresses: karenquilloy@gmail.com/kpquilloy@up.edu.ph

Introduction

Rationale

Agricultural credit has long been viewed as a critical support service for small farmers in the Philippines. Over the years the government has gone through a series of credit policy reforms and program developments in search of a credit policy design and delivery system that can effectively increase farmers' access to timely, adequate, and affordable credit, and improve financial inclusion in the country. It has been persistent in finding a balanced mix of lending features and practices that will allow farmers to optimize the use of credit services and that will enable the government to create huge positive impacts on farmers' production and income.

This study is an assessment of the Sikat Saka Program, a direct credit program (DCP) for small palay farmers launched in 2012 and implemented by the Department of Agriculture (DA) and the Land Bank of the Philippines (LBP). It focuses on assessing the program's success in terms of its outreach and delivery of credit and other services to target farmer-beneficiaries and of the benefits and immediate impacts the program creates for them. The interest in the program stems from the fact that, firstly, the Sikat Saka Program is in its early stage of implementation, having been in existence for only three years upon the conduct of this study; hence, it has not been rigorously evaluated yet except for a quick assessment in 2012. Secondly, being a direct and subsidized credit program amid the transition of Philippine credit programs from a directed to a market-oriented credit approach, the Sikat Saka Program is a case worth studying as it will shed light on how a modern DCP is being implemented.

A number of studies analyzing DCPs in the country were done in the 1990s, especially when DCPs were prevalent. But with the constant changes and expansions in our financing programs, there is a need to constantly update our knowledge on this topic. Thus, this study is a new contribution to the literature on Philippine DCPs, as it provides information that could be used as a basis for improving existing credit programs as well as implementing new ones.

Background on DCPs

In this paper we define DCPs as credit programs that are directed to a specific sector for a specific purpose, with funds coming from the financial resources of the government that are either budgetary allocations, internal agency funds, or grants or loan proceeds from donor organizations (Llanto, Geron, and Tang 1997).

Direct credit programs offer loans with subsidized interest rates, with an end goal of increasing economic activity and the incomes of the beneficiaries.

Going back to the history of our country's credit programs, various challenges and disadvantages have been associated with the earlier generation of DCPs. Over the decades, the outcomes of DCPs have served as accumulated learning experiences leading to the alteration and evolution of our country's DCPs and the implementation of market-based financial and credit policies that saw government non-financial agencies disengaging, government financial institutions (GFIs) coming in, and banks and the private sector increasingly participating in the credit market.

In the 1970s, private financial institutions like rural banks served as the key conduits or channels of credit services to the agriculture sector, with the Central Bank, which had the key development financing function, providing special time deposits and subsidized rates to them. According to the Bangko Sentral ng Pilipinas (2013), the supply-led approach of DCPs in the 1970s to the mid-1980s was unsustainable and had limited success due to poor loan repayment, failure to reach intended beneficiaries, and overdependence resulting in high cost to the government. Default problems led to disqualifications of borrowers and rural banks. These caused a decline in the flow of credit and the weak performance of the rural banks—which in turn led to the termination of many subsidized lending programs such as the Masagana 99, Masaganang Maisan, and Gulayan sa Kalusugan, to name a few—and to major policy reforms such as the enactment of the Agriculture and Fisheries Modernization Act (AFMA) of 1997 and the institution of the National Strategy for Microfinance. At some point, DCPs resurfaced in the early 1990s to once again cater to the agriculture sector, but since the Central Bank had terminated its role as fund administrator, government non-financial agencies and government-owned and controlled corporations implemented the subsidized agriculture credit program. The lack of financial expertise of these institutions led again to the failure of DCPs.

Under AFMA, the Agricultural Modernization Credit and Financing Program (AMCFP) was created to serve as the umbrella credit program of the DA to cater to the financial needs of small farmers and fisherfolk. AMCFP funds are channeled through GFIs, like the LBP, which act either as wholesalers of agricultural credit funds to private financial institutions (PFIs) or as direct retailers to smallholders. The Sikat Saka Program is one of the programs funded under the AMCFP. Other programs include the Agriculture and Fisheries Financing Program, the Coop Bank Agri-Lending Program, and the Agricultural Microfinance Program.

Framework of Analysis

The country's umbrella financing program for agriculture and fisheries, the AMCFP, under which the Sikat Saka Program is being implemented, has an overall goal of improving the credit access of the rural poor. This goal is directly interrelated with financial inclusion, a development goal aimed at having "access to useful and affordable financial products and services that meet their needs delivered in a responsible and sustainable way" (World Bank 2017). This access is determined by both the supply of and demand for the financial product or service. For the purpose of this study, the assessment is framed within the context of financial inclusion with particular focus on the demand side or from the standpoint of the end users.

Using the framework of financial inclusion, the success of the Sikat Saka Program is assessed in relation to the farmers' demand or ability and willingness to access and use the program products and services depending on the appropriateness of the program design for them, on their satisfaction with the products and services offered by the program and its delivery, and on the immediate impacts to them. With this approach being both process- and objective-driven, the selection of indicators is anchored to the underlying logical framework (logframe) of the program, linking the program development objectives with its outputs and its respective components or activities. As defined in the Performance Monitoring Indicators Handbook of the World Bank (Mosse and Sontheime 1996), development objective describes the real outcome and success of the program outputs on the beneficiary in terms of changed behavior or improved performance. Program outputs define the deliverables, the goods and services that the program will offer, while components are the clusters of activities that define how the goods and services will be delivered. The measures used therefore were those that reflect the effectiveness of the program in realizing its outputs and components and its development objective.

In addition, information on the effectiveness of the executing agency in reaching its target end users, which according to Llanto, Geron, and Tang (1997) is the ultimate indicator of success of a credit program, was gathered for the assessment. Implementation issues and related problems were also tackled to further assess the program's success in the delivery of its intended benefits and outcomes.

Sampling Design

Data used in the analysis were gathered from the reports of the implementing agencies, key informant interviews, and a farmer's survey. Since there is no available baseline data on the farmer-beneficiaries of the program, a quasi-experiment design patterned after the models used by Coleman (1999) and Kondo, et al. (2008) in their impact evaluation studies was employed in the study. This survey design was chosen as it controls for biases that may potentially arise from self-selection of target beneficiaries and endogenous or non-random placement of the program.

In the survey a treatment group and a comparison group with characteristics as similar as possible to the treatment group prior to program intervention were covered to capture what would have been the outcomes or changes in farmers' palay productivity and income if the Sikat Saka Program were not implemented. For the treatment group, three provinces where the program was piloted were selected—Nueva Ecija in Luzon, Iloilo in the Visayas, and North Cotabato in Mindanao. These pilot provinces were chosen to capture the areas where the program has been running the longest and has the most number of beneficiaries and the largest amount of total loan releases.

To match the treatment group, three provinces were drawn from the list of expansion areas of the Sikat Saka Program to represent the control group. These included Tarlac, Aklan, and Davao del Sur, areas which are adjacent or geographically proximate to the treatment provinces. Note that the control group also came from the implementation areas rather than from areas without program intervention. By choosing the expansion areas where the program is relatively new and still has limited farmers' reach or loan releases, a good and valid counterfactual can be achieved since farmers in these areas are likely to share similar unobservable characteristics with those in the treatment areas given the fact that they have also been targeted as potential program beneficiaries.

Using the stratified random sampling method, respondents from each province were randomly selected from program-eligible irrigators associations (IAs), with the most number of farmer-beneficiaries in the case of the treatment group and where a program orientation seminar was already conducted in the case of the control group. A total of 364 farmers were interviewed in the survey, but only 350 were included in the analysis after data cleaning.

In order to control for systematic differences between the control and the treatment groups, both borrowers, including former farmer-borrowers (beneficiaries) and non-borrowers (non-beneficiaries) were interviewed in the

study areas (table 1). For the interest of the quantitative impact evaluation, oversampling was done for the treatment group as well as for the beneficiaries group comprising 62 percent and 52 percent of the sample size, respectively. The sample size was determined using Cochran's correction formula, with alpha level a priori set at .05 or 95 percent level of confidence and margin of error at 5 percent.

Table 1. Distribution of farmer-respondents by implementation site, Philippines, 2015

Implementation Site	Farmer Beneficiaries		Non-Beneficiaries		All Farmers	
	Existing/New borrowers	Former/ Defaulting borrowers	Total		No.	%
Pilot Areas (Treatment Group)						
Nueva Ecija	62	13	75	27	104	30
Iloilo	28	13	41	18	59	17
North Cotabato	25	10	35	19	54	15
All Treatment	115	36	151	64	217	62
Expansion Areas (Control Group)						
Tarlac	15	0	15	27	42	12
Aklan	19	0	19	20	39	11
Davao del Sur	0	0	0	52	52	15
All Control	34	0	34	99	133	38
All Areas	149	36	185	165	350	100

Characteristics of Farmer-Beneficiaries and Non-Beneficiaries

The farmers in the treatment and control areas generally share common socio-demographic characteristics. Most of them are male, married, at least high school graduates, and have an average age of 54 and a household size of four (appendix table 1). In terms of economic characteristics, the beneficiaries are found to have higher gross household incomes, averaging PHP 511,750 per year, compared to non-beneficiaries at only PHP 312,892 on average. A large chunk of their incomes is earned from rice farming, making up no less than 67 percent of their total household incomes.

For farming characteristics and practices, the farmer-beneficiaries and non-beneficiaries have almost the same length of rice farming experience of about 27

years. The majority for both respondent groups are hybrid seed users and till a single parcel of land that is not greater than five hectares (ha) in size. However, the beneficiaries tend to harvest a larger area, averaging 2.07 ha, compared to that of the non-beneficiaries who harvest an area of only 1.31 ha per farmer, on average.

The farming characteristics indicate success in the targeting of the program. The farmer-beneficiaries meet the eligibility criteria of being small palay farmers planting hybrid and inbred seeds on less than 5 ha of land. Although a few large farmer beneficiaries were identified during the survey, the LBP and the IAs explained that some of these farmers once tilled less than 5 ha of land but were later able to expand their production area, thereby exceeding the maximum farm size requirement. Others, like the IA presidents interviewed, were purposely given loans despite their being large farmers so as to serve as models for other IA members who were hesitant to borrow and who first wanted to see proof that the program would work.

Another important point of comparison is the marketing of the palay of the farmer-beneficiaries and non-beneficiaries. For both groups, most farmers (91 to 99 percent) had a marketable surplus of palay during their last harvest season in 2015 and were able to sell it, usually in the form of fresh palay (appendix table 3). The majority (81 to 91 percent) sold their produce to traders. On the average, each farmer-beneficiary sold 8,037 kilograms (kg) of fresh palay at PHP 16.10 per kg compared to a non-beneficiary who only sold 5,666 kg but at the higher price of PHP 17.53 per kg. The farmer-beneficiaries are expected to sell their palay to the NFA, but given the required marketing contract or purchase order with that agency, most of them preferred to sell to traders due to convenience and price reasons.

At this point, we have established some degree of homogeneity in farmers' characteristics which would later be necessary in attributing the changes in farmers' productivity and income to the program. The higher income and volume of palay sold by farmer-beneficiaries can be an initial indication of the possible positive impact of the program on them.

The Sikat Saka Program and Its Implementation

Program Description

The Sikat Saka Program is the credit component of the Philippine government's Food Staples Sufficiency Program (FSSP). It is a commodity-specific, directed credit program which is aimed at providing timely, adequate, and affordable production credit for small palay farmers; improving the viability of their palay

production; establishing their credit worthiness with a financial institution; and strengthening them as organized groups. Besides credit, the program also has two other key components which include marketing and capacity building. Under the program, the credit services are complemented with irrigation services, extension and administrative services, crop insurance, and an assured market for the produce.

The implementation of DCPs typically involves a credit fund source, an executing agency, a fund administrator, a lending conduit, and target end-users or beneficiaries. It could be a direct or an indirect mode of implementation. In the direct mode, the executing agency, which also acts as the fund administrator, directly lends to the end-users (Llanto, Geron, and Tang 1997). In the indirect mode, credit funds are either channeled by the executing agency through lending conduits for relending to the end-users or, in cases where the fund administrator is not the executing agency, through the fund administrator who in turn provides the funds to the lending conduits for relending.

The Sikat Saka Program is implemented through a direct mode. The executing agencies, the DA and the LBP, with the latter acting also as the fund administrator, directly lend credit resources in retail to small palay farmers who are the end-users of the funds (figure 1). They implement the program with the facilitation of its conduit, the irrigators associations (IAs) and the following DA attached agencies and corporate arms: Agricultural Credit Policy Council (ACPC), National Food Authority (NFA), National Irrigation Administration (NIA), Agricultural Training Institute (ATI), and Philippine Crop Insurance Corporation (PCIC).

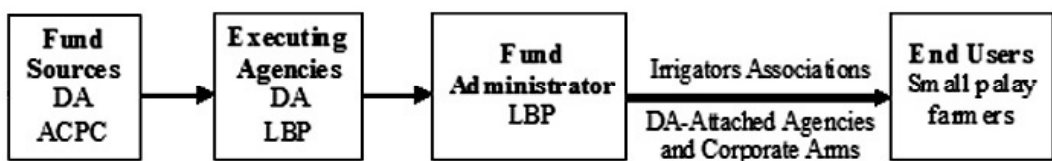


Figure 1. Direct mode of implementation of *Sikat Saka* Program

In March 2012 the Sikat Saka Program was first implemented in the top rice-producing provinces of Isabela, Nueva Ecija, Iloilo, and North Cotabato. The initial success of this implementation in these pilot provinces led to two consecutive program expansions in the following year—first covering an additional twenty-one rice producing provinces, and later including twenty more provinces nationwide. As of 2015 the program is already being implemented in forty-five rice-producing provinces (table 2).

Revitalizing Directed Credit Approach: Lessons Learned from
the Department of Agriculture's Sikat Saka Program

In the Sikat Saka Program, the LBP directly lends to farmer-members of an eligible IA identified and endorsed by the NIA. Under the implementing rules and regulations of the program, only small palay farmers with the following characteristics are eligible to borrow:

- a. A member of an eligible IA as certified by the NIA
- b. Has no loan with the LBP and its conduits for palay production at the time of loan application as certified by the endorsing IA
- c. A member of a cooperative
- d. Owns or tills at least 0.5 ha of irrigated rice land but not to exceed 5 ha
- e. If a tenant is tilling a land owned by the parent(s), must have a special power of attorney in favor of the tenant, with the consent of the siblings authorizing the tenant to deliver the land title to the LBP and declaring that the tenant is the regular tiller of the land.

A production loan amount of up to PHP 41,000.00 per ha can be borrowed by eligible rice farmers using inbred seeds and PHP 50,000.00 per ha by farmers planting hybrid rice. The interest rate on the loan starts at 15 percent per annum for the first two loan cycles of the borrower; after three consecutive loan cycles, this will start to diminish by 1 percent for every succeeding cycle. Depending on

Table 2. Sikat Saka Program loan portfolio, Philippines, March 2012 - July 2015

Indicators	Cumulative Budget Allocation 2012-2015			Available Budget 2015		
	Target	Actual	%	Target	Actual	%
Approved Loan (in PhP)		400.00M			662.02M	Loan
Released (in PhP)	1,786.85M	1,925.56M	107.76	1,786.85M	588.53M	32.94
O/S Balance (in PhP)				554.72M		
No. of Borrowers (in person)					6,729	
Availing Rate (in %)					88.90	
Collection Rate (in %)					90.38	
No. of Beneficiaries (in person)					8,108	
Past Due Loan (in PhP)					53.39M	
Past Due Rate (in %)					9.62	
No. of Past Due Accounts					577	

Note: M = million

Source: Agricultural Credit Policy Council 2015

the farmer's regularity of borrowing and credit track record, the interest rate can be as low as 9 percent per annum on the eighth loan cycle. In availing the loan, farmers are required to maintain a savings account at the LBP since the loans are deposited directly into their bank accounts and loan repayments are also done through the bank.

Outreach to Target Farmer Beneficiaries

The Sikat Saka Program has been allocated with a PHP 400 million budget by the DA for the 2012-2015 period, with a guarantee fund of PHP 600 million earmarked by ACPC for the farmer-beneficiaries. In the initial stage of implementation of the program in 2012 the reach of Sikat Saka was limited in terms of actual loans made. Out of the PHP 400 million fund, only 0.7 percent was utilized four months after the launch of the program, and only 22.6 percent was reached based on its PHP 12.2 million loan target (Agricultural Credit Policy Council 2012). The slow take off of the program led the Technical Working Group (through the ACPC) to do a quick assessment to identify the reasons behind the slow roll out and low loan usage. The assessment showed that farmers' most disliked the requirements of submitting clean land titles as collateral and conforming to the NFA marketing arrangement.

As a response, revisions on the loan and marketing requirements were made to make the Sikat Saka Program more conducive to the farmers. This led to the expansion of area coverage and the improvement of the loan portfolio. For the 2012-2015 period it surpassed the target loan releases by 8 percent (table 2). As of July 2015 the total loan releases amounted to PHP 588.53 million. In the same period the program reached 8,108 farmers, of which 6,729 availed of the loan. It is also interesting to note that, unlike in the past DCPs wherein delinquency was a problem, loan repayment in the Sikat Saka Program is not a major problem with a collection rate of 90 percent, or a past due rate of only 10 percent.

Farmers' Knowledge about the Sikat Saka Program

Awareness of the program also has an implication on the effectiveness of reach of the Sikat Saka Program. Whether the target beneficiaries or the farmers in the implementation areas know about the program or not suggests something about the extent of information about the program, which is an important factor for effectively reaching the farmers. Out of the 350 farmers interviewed, 303 were found to be aware of the program. The high awareness rate (87 percent) reflects effective information dissemination for the program, especially in the pilot

provinces (figure 2). Among the common sources of information are the IAs, the LBP, and the NIA. Awareness among the farmers in the control (expansion) areas was particularly lower compared to that in the treatment (pilot) areas, with Aklan reporting the lowest awareness rate of 18 percent, but this is expected since the program is relatively new in the expansion provinces.

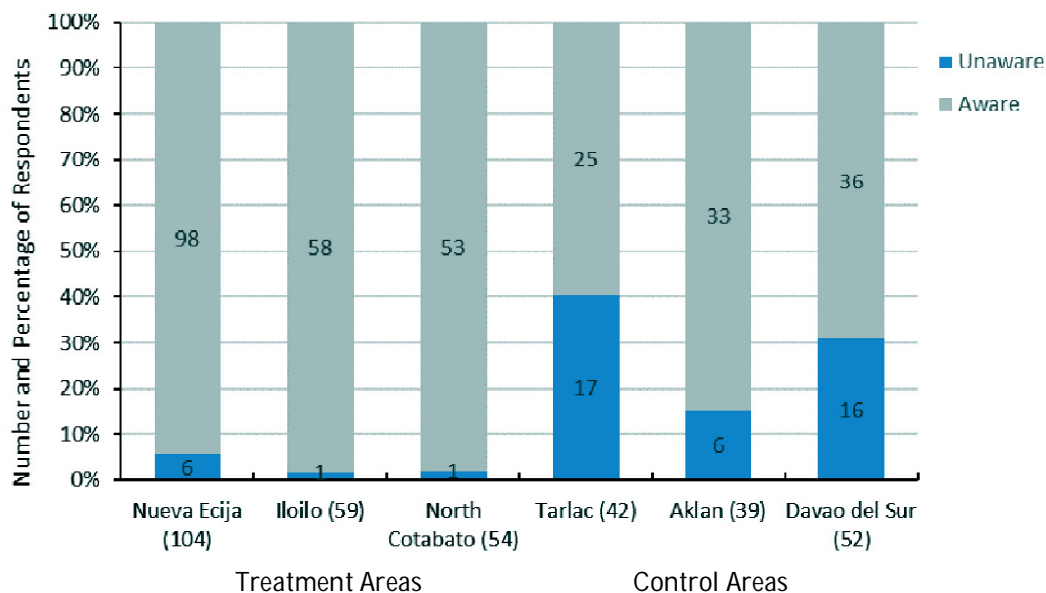


Figure 2. Farmers' awareness of *Sikat Saka* Program by implementation site, Philippines, 2015 (n=350 respondents)

Note: Data labels on bars indicate the number of responses while values in parentheses are the total number of farmer-respondents from the provinces.

However, in spite of the high awareness rate, the survey revealed that the aware farmers only have a superficial understanding of the program, with most of them describing the Sikat Saka Program as follows:

1. A lending program for farmers
2. A program that helps farmers
3. A financial assistance to farmers
4. A credit program offering loans at low interest rate

These responses show that the farmers perceive the program as a mere lending service. Almost all are not aware that it has other non-credit components that support palay production.

Farmers' Acceptability of Sikat Saka Program

An important factor to consider when implementing a program is the acceptability of its design—specifically its set requirements, product and service offered—and the mode of implementation or delivery of the product and service to the target users. Ensuring that the program is designed in a manner that is responsive, receptive, and conducive to the farmers is critical in successfully carrying out the program activities, meeting the demand of the target beneficiaries, and achieving its development objective. This section presents the survey results on the acceptability of the program to the small palay farmers (both beneficiaries and non-beneficiaries) in terms of eligibility criteria and requirements, and loan features and delivery process. The level of acceptance of farmers for each item was measured using a five-point Likert scale method (from 1=highly not acceptable to 5=highly acceptable). The acceptability criteria and method used were adopted from the program quick assessment done by the ACPC in 2012. Further analysis using an ordered probit model was done to test the likelihood of a farmer to fully accept the Sikat Saka Program's design on certain farmer's characteristics.

Acceptability of the Program Eligibility Criteria and Requirements

While the program reach has improved since the revision of loan requirements as recommended based on the ACPC quick assessment findings in 2012, it is worthwhile to have a follow up assessment of farmers' acceptance of the program, especially that the program scope as well as the number of beneficiaries has already expanded substantially over the last three years.

In the survey, fifteen items of eligibility criteria and requirements were asked, but these were aggregated into six groups based on their relatedness in the analysis. The farmers, especially those in the pilot areas where more beneficiaries were interviewed, are generally amenable to the set eligibility criteria and requirements. Most of them do not have any issues on the individual and farm requirements (e.g., IA membership, loan obligation, farm plan and budget, farm size, and seed type) as denoted by their high acceptance rates ranging from 80 to 94 percent (table 3).

Marginal effects from the Ordered Probit model estimation show that farmers who are males, hybrid seed users, and from the pilot areas are more likely to report high acceptability ratings (score rating = 5 points) of the individual requirements (table 4). The probability of accepting the individual requirements also raises with household income of the farmer. For the farm requirements or eligibility, male farmers and those from the pilot areas are also more likely to give a perfect acceptability score of 5.

Table 3. Farmers' acceptability of *Sikat Saka* Program eligibility criteria and requirements by implementation site, Philippines, 2015

Eligibility Criteria/ Requirements ^a	Treatment/Pilot Areas (number of respondents)			Control/Expansion Areas (number of respondents)		
	Not Acceptable (1-2 points)	Undecided/ Not Sure (3 points)	Acceptable (4-5 points)	Not Acceptable (1-2 points)	Undecided/ Not Sure (3 points)	Acceptable (4-5 points)
Individual requirements	3	11	203 (94)	2	10	121 (91)
Farm requirements	2	17	198 (91)	3	24	106 (80)
Collateral requirements	32	9	171 (81)	28	8	94 (72)
Marketing contract/ purchase order	26	37	140 (69)	19	25	75 (63)
Management Takeover Agreement	8	15	183 (89)	20	15	85 (71)
Other requirements	2	13	202 (93)	11	17	105 (79)

Note: Values in parentheses are acceptance rates computed as percentage of farmers with "acceptable" ratings to total number of farmer-respondents.

In terms of collateral requirement(s), the acceptance rates in the pilot and expansion areas are 81 percent and 72 percent, respectively. Farmer-beneficiaries and those in the pilot areas are 15 and 12 percentage points more likely to give the highest acceptability rating for the collateral requirement than their counterparts (table 4). Hybrid seed users and male farmers also have higher chances of giving a score of 5 for acceptability. The acceptance of vehicles and animals as collateral has been favorable to the farmers, but there were still respondents, 15 percent in the pilot areas and 22 percent in the expansion areas, who felt that the collateral required is difficult to provide (table 3).

A similar level of acceptance is observed for the required management takeover agreement between the IA and the farmer. Farmer-beneficiaries and those from the pilot areas are at least 21 percentage points more likely to fully accept this requirement. Among the variables of socioeconomic characteristics—sex, age, educational attainment, and household income were found to have significant

Table 4. Ordered probit model estimation results: likelihood of farmer-respondents to fully accept *Sikat Saka* Program eligibility criteria and requirements

Explanatory Variables	Marginal Effects for Predicted Outcome: Highly Acceptable = 5					
	Individual Requirements	Farm Requirements	Collateral Requirements	Marketing Contract/ PO	Management Takeover	Agreement Other Requirements
Sex (1=male)	0.1310**	0.1310**	0.1052**	0.1235**	0.0948*	0.0991*
Age	0.0011	-0.0021	0.0032	0.0012	-0.0078***	-0.0024
Years in schooling	-0.0182**	-0.0166**	-0.0133	-0.0055	-0.0190**	-0.0243***
Years in rice farming	-0.0009	0.0013	-0.0028	-0.0004	0.0036	-0.0008
Household income	0.0355*	0.0086	0.0361*	0.0668***	0.0632***	0.0474**
Seed used (1=hybrid)	0.2107***	0.0573	0.1968***	0.0803	0.0700	0.1087**
Tenure (1=own land)	-0.0074	0.0057	-0.0074	-0.0078	-0.0102	-0.0140
Loan (1=has loan)	-0.0024	0.0760	0.1456***	0.0245	0.2138***	0.0969*
Program area (1=pilot)	0.1840***	0.2164***	0.1198**	0.0662	0.2327***	0.2479***

Note: ***, **, * indicate significance at 1%, 5% and 10% probability levels

effects on the likelihood of farmers to fully accept the management takeover agreement requirement. On the other hand, non-acceptance was more common among farmers in North Cotabato and Davao del Sur. The survey revealed that IAs in North Cotabato do not implement the management takeover to avoid peace and order problems and conflicts in the area.

Other requirements, such as certificates of attendance in orientation seminar and crop insurance, were also acceptable to the farmers since meeting these requirements is often facilitated by their IAs and/or other program partner agencies. From the Ordered Probit model, marginal effect estimates indicate that most of the socioeconomic variables as well as the dummy variables for loan availing and implementation area have significant effects on the likelihood for these requirements to be highly acceptable to the farmers (table 4).

Although the majority of farmers (63-69 percent) expressed amenability to the required marketing contract or purchase order with the NFA and other reliable buyers, the acceptance rates of farmers for this requirement were lower compared

to those for the other requirements. This is regardless of the farmers' demographic and farming characteristics (i.e., only sex and household income were found significant in the model). The marketing contract requirement was reported to be least accepted in Iloilo, Davao del Sur, and North Cotabato. Some of the farmers from Davao del Sur suggested that the marketing contract or purchase order be removed from the list of requirements because such a condition would limit their marketing options and constrain them from selling to buyers other than the NFA and those accredited by the LBP.

The major reason why farmers, especially the farmer-borrowers, do not deal with the NFA is the low buying price. This was indicated by 176 out of 320 farmer-respondents (figure 2). Another common reason cited is the difficulty of meeting the quantity and quality (e.g., moisture content) requirement of the NFA for dried palay, as reported by 107 farmers. Seventy-four farmers said that they needed immediate cash and hence wanted to immediately sell their fresh palay to traders. Costly transportation due to the distance of the NFA from farms was also identified as a reason by forty-one farmers.

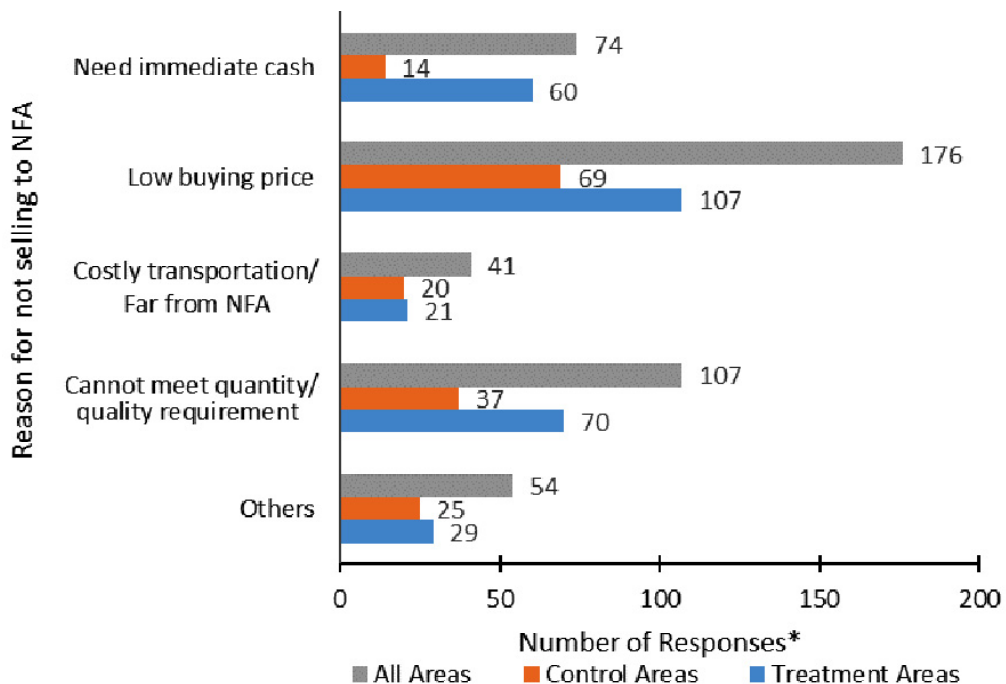


Figure 2. Reasons for not selling to NFA, by implementation site, Philippines, 2015 (n=320 respondents)

* multiple responses allowed (250 responses); 21 farmers had no answer

Despite farmers' low acceptability of the marketing requirement under the Sikat Saka Program, it was explained by the LBP lending center focal persons in the survey areas that the supposed requirement of selling the palay to the NFA was not being strictly implemented. This leniency stems from the fact that the LBP understands that the NFA offers a relatively low buying price (PHP 17 per kg) for dried palay, which is not attractive to the farmers. The NFA only steps in to help the farmer-beneficiaries in marketing when the prevailing price of dried palay in the market drops to a level lower than its buying price.

Acceptability of Sikat Saka Loan Features and Delivery Process

Farmers showed positive receptiveness to the loan features and delivery process of the Sikat Saka Program. Acceptance rates range between 91 and 97 percent in the pilot areas, and between 81 and 91 percent in the control areas (table 5). Specifically, the direct lending approach of the program, which is done through the facilitation of the IAs of which the farmers are members, was found to be acceptable to 97 percent of the farmer-respondents in the pilot provinces. The same rate was observed for the acceptability of the use of the formal banking system (e.g., savings deposit account and ATM) in releasing the loan.

Table 5. Farmers' acceptability of *Sikat Saka* loan features and delivery process by implementation site, Philippines, 2015

Loan Feature/ Delivery Process	Treatment/Pilot Areas (number of respondents)			Control/Expansion Areas (number of respondents)		
	Not Acceptable (1-2 points)	Undecided/ Not Sure (3 points)	Acceptable (4-5 points)	Not Acceptable (1-2 points)	Undecided/ Not Sure (3 points)	Acceptable (4-5 points)
Direct lending by LBP	0	6	211 (97)	8	7	117 (89)
Screening process	1	8	208 (96)	6	6	120 (91)
Use of formal banking	2	4	211 (97)	11	14	106 (81)
Basis of loan amount	1	7	209 (96)	6	10	117 (89)
Interest rate on loan	2	12	200 (94)	11	12	109 (83)
Conditions on past due loans	1	18	198 (91)	11	12	110 (83)

Note: Values in parentheses are acceptance rates computed as percentage of farmers with "acceptable" ratings to total number of farmer-respondents.

Table 6. Ordered probit model estimation results: likelihood of farmer-respondents to fully accept *Sikat Saka* Program loan features and delivery process

Explanatory Variables	Marginal Effects for Predicted Outcome: Highly Acceptable=5					
	Direct lending by LBP	Screening Process	Use of Formal Banking	Basis of Loan Amount	Interest Rate on Loan	Conditions on Past Due Loans
Sex (1=male)	0.0277	0.0273	0.0448	-0.0040	0.0119	0.1464***
Age	-0.0004	-0.0035*	-0.0028	0.0006	0.0010	-0.0006
Years in schooling	-0.0101*	-0.0042	-0.0182**	-0.0084	-0.0014	-0.0090
Years in rice farming	-0.0005	-0.0010	0.0010	0.0013	0.0001	-0.0002
Household income	0.0229	0.0150	0.0214	0.0297*	0.0278	0.0237
Seed used (1=hybrid)	0.1245**	0.1200***	0.0382	0.0757*	0.0520	0.0621
Tenure (1=own land)	0.0138	0.0017	-0.0064	-0.0090	-0.0057	0.0078
Loan (1=has loan)	0.0544	0.0591	0.1412***	-0.0296	-0.0414	0.0795
Program area (1=pilot)	0.1436**	0.0645	0.2158***	0.0669	0.1154***	0.1187**

Note: ***, **, * indicate significance at 1%, 5% and 10% probability level

The ordered probit model estimation further reveals that farmers from the pilot provinces are more likely to fully accept all the loan features of the program, except the “screening process” and “basis of loan amount (e.g., farm size, type of seed used and farm plan budget)” which did not appear significant in the analysis (table 6). But between program borrowers and non-borrowers, the coefficients indicate that—regardless of whether a farmer has already availed of a loan from the program or not—the chances of giving the highest acceptability rating for all the program features and delivery process are the same, except for the “use of formal banking in loan transaction” as its marginal effect coefficient denotes that borrowers are 14 percentage points more likely to give a perfect acceptability rating for the said item than the non-borrowers.

To dig deeper into the receptiveness of the farmers, those who were aware of the program were asked about their most disliked feature or features of the Sikat

Saka Program. The majority (60 percent) claimed that they liked all the loan features of the Sikat Saka Program (figure 3). However, other farmers identified some of the features that they did not like. The complexity of the requirements, especially the collateral requirement, appears to be the most disliked feature of the program as identified by 107 out of 303 farmers in the pilot and expansion areas. In Davao del Sur, a significant number of farmer-respondents said that they preferred borrowing from their IAs because loan application is relatively easier and processing of the loan is faster. Another requirement issue is related to the farm size of eligible farmers. In Davao del Sur again, it was specifically pointed out that the some of the small farmers failed to meet the 0.5 hectare minimum palay farm area requirement of the program because they were tilling less than half a hectare of land. Other disliked features of the program include untimely release of loans, inadequate loanable amounts, and the marketing contract or purchase order with the NFA and other reliable buyers.

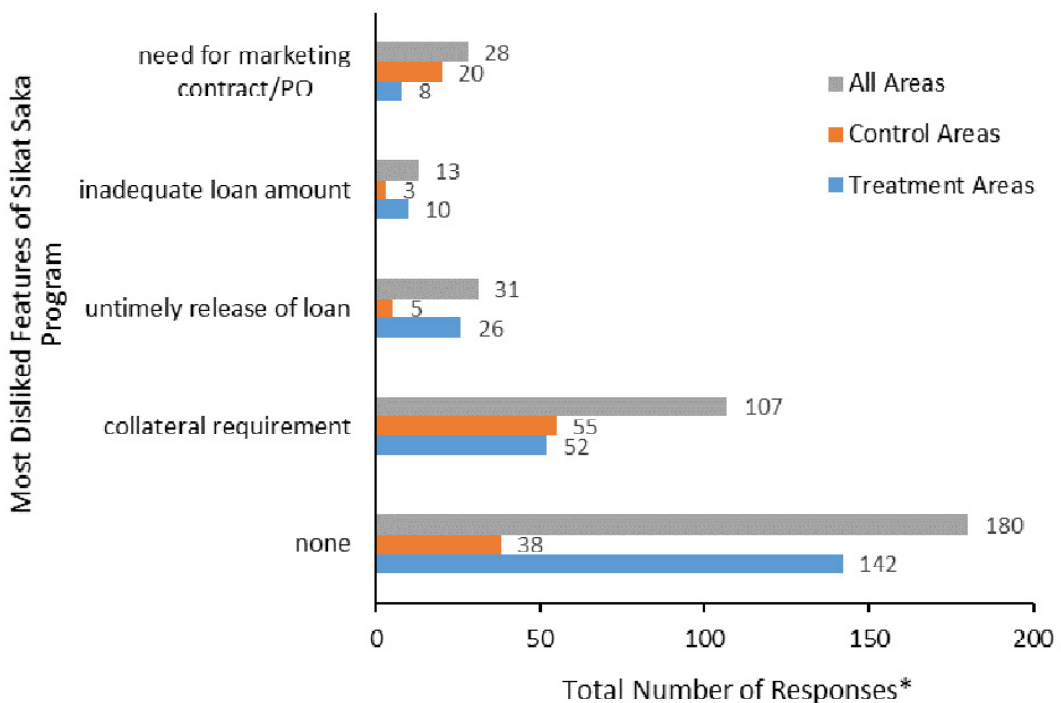


Figure 3. Most disliked features of *Sikat Saka* Program, Philippines, 2015 (n=303 respondents)

*multiple responses allowed

Conversely, when asked about their most liked features of the program, 80 percent of the farmers (244 out of 303 farmer-respondents) indicated the low and declining interest rate as their most liked feature (figure 4). The free crop insurance (provided by the PCIC with full premium subsidy) is the second most liked feature (145 responses), followed by the use of the ATM in loan transactions (58 responses).

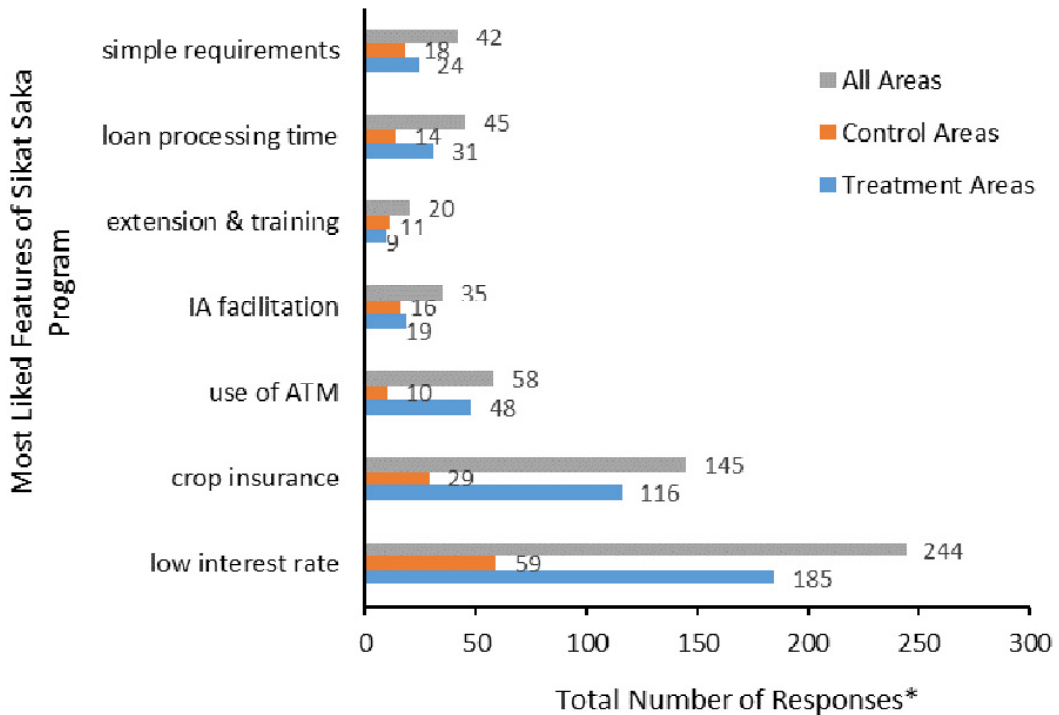


Figure 4. Most liked features of *Sikat Saka* Program, Philippines, 2015 (n=303 respondents)

*multiple responses allowed

Correspondingly, the main reason of farmer-beneficiaries choosing the LBP or the program as their source of a loan is the low interest rate charged, as denoted by 143 out of 185 respondents (figure 5). Other reasons cited include the simple loan requirements, fast loan processing, assisted loan application, and friendly payment terms. These are true for all provinces in the pilot and expansion provinces.

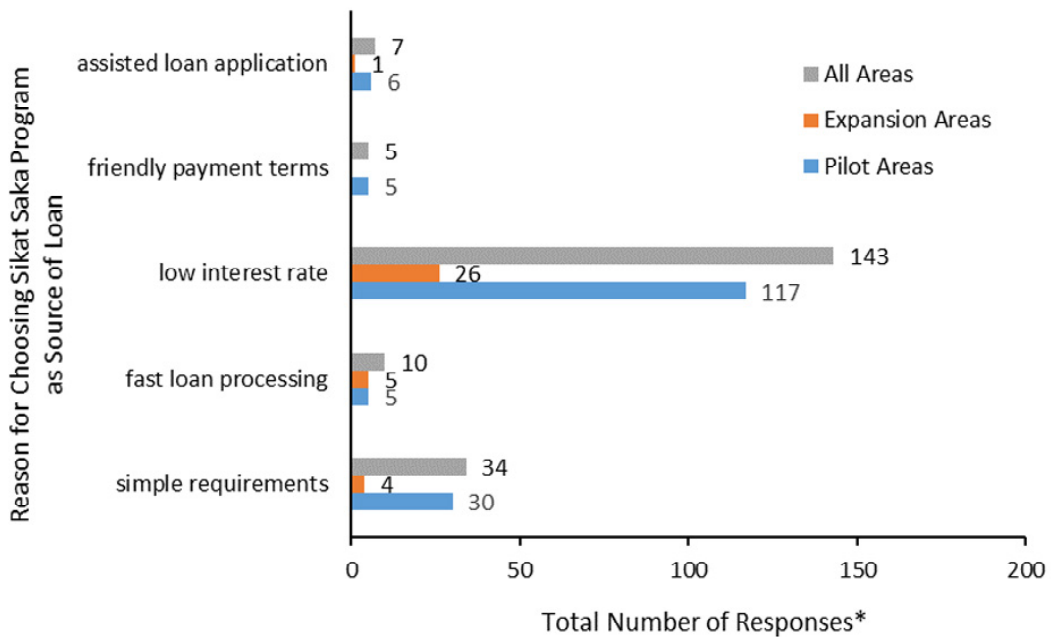


Figure 5. Reasons for choosing *Sikat Saka Program* (LBP) as source of loan by implementation site, Philippines, 2015 (n=185 respondents)

*multiple responses allowed (199 responses)

Overall, the results of the study show that the Sikat Saka Program has been designed with outputs and components tailored fit to target beneficiaries' capabilities and needs. Although there are few program components that are not conducive for small palay farmers, the implementing agencies have shown flexibility in program implementation, particularly in its marketing component.

Satisfaction of Farmer-Borrowers with the Sikat Saka Program

The positive response of the farmer-respondents to the program's eligibility criteria and loan features suggests an alignment between what the Sikat Saka Program offers (supply) and what the small palay farmers need and want (demand). To further evaluate the program outputs and components, this study also assessed the level of farmers' satisfaction with the program, specifically in terms of meeting farmers' program expectations and needs as beneficiaries.

A five-point scale rating, in which 1 is the lowest score indicating "very dissatisfied" and 5 is the highest indicating "highly satisfied," was used in the

assessment. For each aspect of the program, the ratings were grouped into three categories: "dissatisfied", "neither dissatisfied/satisfied," and "satisfied." The results show that most farmers were satisfied with all the services and components of the program as indicated by the mean ratings ranging from 4.07 to 4.75 (table 7). An overall satisfaction rate of 93 percent was reported, with an overall program satisfaction rating of farmers averaging at 4.53.

Table 7. Farmers' satisfaction rating for *Sikat Saka* program by service or component, Philippines, 2015

Service/Component	Dissatisfied (1-2 points)	Neither Dissatisfied/ Satisfied (3 points)	Satisfied (4-5 points)	Mean Rating
Program orientation/seminar	1	2	181 (98)	4.75
Assistance of IA	2	2	178 (98)	4.69
Assistance of LandBank LC	1	4	180 (97)	4.69
Assistance of NIA	3	2	179 (97)	4.69
List of documentary requirements	5	7	128 (91)	4.44
Screening and endorsement process	4	10	171 (92)	4.47
Amount of loan approved	1	4	179 (97)	4.59
Loan processing time	9	3	173 (94)	4.55
Timeliness of loan release	9	7	168 (91)	4.36
Market assistance provided	11	10	164 (89)	4.29
Irrigation service provided	15	25	138 (78)	4.07
Overall Satisfaction	3	9	169 (93)	4.56

Note: Values in parentheses are percentage of respondents to total number of respondents.

Of all the items, only "market assistance" and "irrigation service" received a satisfaction rating from less than 90 percent of participating farmers (table 7). The farmers who were not satisfied said that they did not receive any form of market assistance from the program. The issue of low NFA buying price was another source of dissatisfaction. Irrigation service had the lowest satisfaction rate of 78 percent. One of the reasons for this dissatisfaction was the delay in farm irrigation, which stretched from one to sixty days.

All farmer-respondents were also asked if they planned to apply for the Sikat Saka loan in the next cropping season. The survey shows that 75 percent of them will be applying for a loan (figure 7). Among the six implementation areas, Davao del Sur recorded the lowest percentage of farmers who planned to borrow (49

percent) and the key reason for this was that they had another loan source, their IAs. They preferred borrowing from the IAs because the loan requirements are relatively simpler and a character loan is available. Other reasons for not borrowing include their non-eligibility (e.g., past due loan), incomplete requirements (e.g., collateral), and inadequacy of own capital.

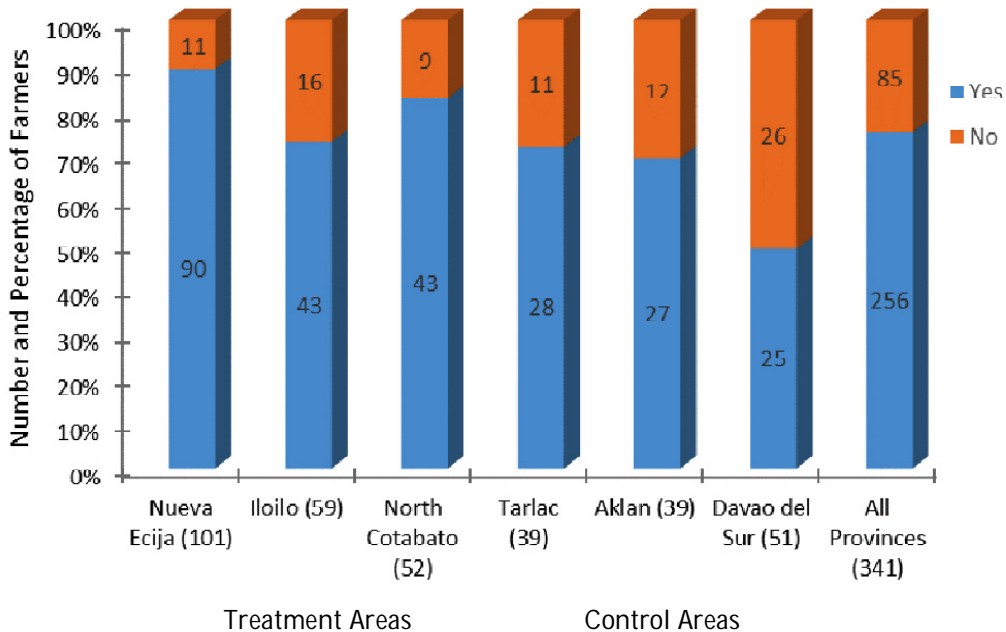


Figure 6. Proportion of farmer-respondents planning to apply for *Sikat Saka* loan next cropping season, by implementation site, Philippines, 2015 (341 farmer-respondents)

Note: Data labels on bars indicate number of farmers, while values in parentheses are total number of respondents in the provinces. Nine farmers had no answer.

The farmer-borrowers expressed their high satisfaction with the Sikat Saka Program, which implies that the program is being implemented in a manner that the target beneficiaries generally expect it to be. It is also an indication that the program's product and services reach them successfully, which means that they have been delivered in an effective way. Given the positive feedback of the farmers with the program, it was a common remark or suggestion during the survey that the implementation of the Sikat Saka Program be continued to help more small farmers in the country.

Immediate Impacts of the Sikat Saka Program on Farmer-Borrowers

The level of program acceptance and satisfaction of the farmers are positive indicators of the appropriateness and responsiveness of the Sikat Saka Program to its target end-users. In support of these findings, the short-term impacts of the program on its beneficiaries were also examined to determine if the program has progressed in terms of realizing its development objectives, particularly in relation to providing better access to timely, adequate, and affordable production credit; improving the viability of palay production; and establishing farmers' credit-worthiness with a financial institution.

Two assessment methods were used in the analysis. One was through the perception-based assessment of the farmer-respondents using the Likert scale method, and the other was through a quantitative impact evaluation using Least Squares (LS) and Instrumental Variable (IV) or Two-Stage Least Squares (2SLS) regression methods. The latter method particularly evaluated the impact of the program on farmers' palay yield, gross palay sales, and net farm income.

Perceived Program Impacts on the Farmers

The perceived impacts of the program on farmers were elicited from the farmer beneficiaries who participated in the survey. Ten statements describing the program impacts on palay production and marketing and the financial status of small farmers were considered in the assessment. On the whole, farmers perceived that the program had a positive impact on their financial access and inclusion, farm production and marketing, and farm income. All the statements received a mean rating of 4 out of the highest possible score of 5 (table 8).

Through the Sikat Saka Program, small farmers were able to have a direct access to a formal financial provider (i.e., the LBP). They now maintained a savings bank account and used the ATM for their financial transactions. In terms of palay production, the farmers agreed that their production improved and their yield increased mainly because they were able to buy their production inputs with the program loan. Consequently, the farmer beneficiaries also felt that their farm income increased as a result of the program.

Similarly, the farmers expressed an overall positive response to the program's contribution in improving their farm knowledge and practices and palay marketing. It should be noted, however, that among all the impact statements, agreement with the marketing-related statements appear to be relatively the weakest. This could be related to the non-satisfaction of some farmers with the program's marketing component.

Table 8. Farmers' perceived impacts of *Sikat Saka* Program, Philippines, 2015

Impact Statement	Disagree (1-2 points)	Neither Agree/ Disagree (3 points)	Agree (4-5 points)	Mean Rating
On financial access and inclusion				
My formal credit access improved because of Sikat Saka Program.	8	6	171 (92)	4.46
My credit-worthiness was established/improved because of Sikat Saka Program.	3	12	169 (92)	4.49
Sikat Saka Program has enabled me to have/to increase my bank savings.	13	37	135 (73)	4.13
Borrowing becomes easier and less costly because of Sikat Saka Program.	3	5	177 (96)	4.60
On farm production				
My palay production improved/expanded because of Sikat Saka Program.	15	9	161 (87)	4.36
My palay harvest/yield increased because of Sikat Saka Program.	15	12	158 (85)	4.31
My farm knowledge and farm practices improved because of Sikat Saka Program.	9	11	163 (89)	4.35
On marketing				
My market access improved because of Sikat Saka Program.	15	30	140 (76)	4.03
I was able to sell my palay at a higher price through Sikat Saka Program.	20	37	128 (69)	3.94
On farm income				
My farm income increased because of Sikat Saka Program.	15	11	159 (86)	4.34

Note: Values in parentheses are percentage of respondents to total number of respondents.

Program Impacts on Farmers' Palay Yield, Gross Palay Sales, and Net Farm Income

The immediate impact of the program was also quantitatively evaluated in terms of three outcome variables, namely: (1) palay productivity in terms of yield per hectare (ha) in one cropping (kg per ha per cropping); (2) gross palay sales in one cropping, computed based on the total volume sold multiplied by the selling price (PHP per cropping); and (3) net farm income (PHP per cropping) as estimated by the farmer himself (all in logarithmic form).²

The program impact on each of the outcome variable was measured using the treatment variable, "availing of loan" (1 if the farmer availed a Sikat Saka loan and 0 otherwise), which was estimated using the LS and IV (2SLS) regression models. Other exogenous factors, which included the demographic and farming characteristics of the farmers, were added to the models. These were household size; farmer's sex, age, and years of schooling; and the type of seed planted, tenurial status of farm land, and years of rice farming experience. Some of the explanatory variables (e.g., age, number of years in rice farming) were squared to capture any quadratic relationship or spillover effect of the variable. The variables were chosen based on what were commonly used in past evaluation studies on credit programs (e.g., Coleman 1999, Montgomery 2005, Kondo et al. 2008).

The results show that, controlling for demographic and farming characteristics of farmers (age, sex, education, household size, years of rice farming experience, and tenurial status of farm land), availing of a Sikat Saka loan had a positive impact on the gross palay sales and net farm income of farmers. The LS coefficients indicate that farmers who availed of the loan increased their gross palay sales by 49.37 percent and their net farm income by 24.34 percent in one cropping (table 9). These coefficients were both found to be significant at the 1 percent and the 5 percent probability level, respectively. A detailed discussion of this estimation procedure and results is available upon request from the authors.

In terms of palay productivity, availing of a loan does not show any significant impact on the yield of farmers. The result implies that borrowing under the program does not immediately translate into improvement in the palay yield of the farmer-borrowers. This could be expected, especially among farmers who were first-time borrowers. Based on the regression results, it could therefore be deduced that the positive impacts on net farm income per cropping of the farmers are more likely to be caused by other factors, such as the reduction of production costs incurred due to the more affordable Sikat Saka loan rather than due to the increase in palay yield or marketable surplus. For gross palay sales, it can likewise

Table 9. Impact of availing *Sikat Saka* loan on farmers' *palay* yield, gross *palay* sales and net farm income

Outcome Variables	Treatment Variable 1: Availed loan (1= participating farmer, 0 otherwise)			
	LS Estimates		IV (2SLS) Estimates	
	Coefficient	Std. Error	Coefficient	Std. Error
Yield per hectare (kg/ha/cropping)	0.0180	0.0562	-0.0711	0.1087
Gross palay sales (PhP/cropping)	0.4937***	0.1257	0.5184***	0.2695
Net farm income (PhP/cropping)	0.2434**	0.1089	0.3061***	0.2393

Note: ***, **, * indicate significance at 1%, 5% and 10% probability level.

be thought that the sales improvement may have been an outcome of farmer-beneficiaries' wider options with regard to their market outlets resulting from the termination of their credit tie-up with traders rather than attributing the the increased sales to yield improvement. Another reason could be that since farmers were able to secure cheaper loans from the LBP, some of them may have afforded to process and sell their palay in dried and milled forms which command better prices during the harvest season.

In the IV (2SLS) model, the instruments used were the farmers' awareness of the *Sikat Saka* Program and the land area of their palay farms since both can affect a farmer's access to a loan. First, having knowledge about the program allows the farmer to explore the possibility of borrowing under the program. Second, given that there is a farm size requirement (0.5 to 5 hectares only) to become eligible to borrow, a farmers' farm size is assumed to affect his ability to avail of the loan. Consistent with the LS regression, IV (2LS) estimation results showed a significant positive impact of the treatment variable – availing of loan – on farmers' gross palay sales and net farm income per cropping. However, compared to LS estimates, IV (2SLS) coefficients generated higher standard errors and wider confidence intervals (not shown in the results). Hence, LS regression estimates are deemed more efficient than the IV (2SLS) estimates.

Farmers' Program Access Barriers and Related Issues

While the *Sikat Saka* Program appears to be working well as a whole, the program is not without issues. On the demand side, barriers to the ability and willingness of the farmers to access credit from the program and problems with some implementation issues were raised during the interviews.

Collateral requirement. The difficulty in complying with the collateral requirement due to lack of land title or vehicular or animal assets, especially in the three expansion areas of the program, was one of the key constraints for not being able to access a Sikat Saka loan. Although the collateral requirement had already been previously relaxed, the farmers suggested further lowering or, if possible, entirely removing it in favor of a character endorsement from their IAs or the use of their credit track record.

Marketing-related issues. The issue on the required marketing contract agreement with the NFA caused apprehensions among small farmers in the expansion areas, particularly those who have not borrowed yet under the program. As they expect the requirement to be strictly implemented, the farmers are afraid of losing their freedom of market choice, believing that they will be forced to sell to the NFA because of the purchase order requirement. A related issue was the lack of marketing assistance from the program. Farmers are seeking support in making the NFA a stable and profitable market for their produce; however, the NFA is operating separately from the program. Establishing a special arrangement with the NFA, such as price support for the beneficiaries of the program, is something that the farmers suggested.

Lack of capacity building activities. Based on the survey, most of the farmers said that no farmers' trainings or seminars were organized under the program except for the program orientation and financial management training required by the DA/ATI. Farmers expressed their interest in attending trainings or seminars on organic agriculture, farming technologies, climate change resiliency, entrepreneurship and livelihood, marketing strategies, and organizational strengthening.

Inadequacy of loan personnel in the field. In Nueva Ecija, in particular, the inadequate number of loan officers and staff was identified as a key problem. Given that this area represented the largest number of borrowers, some farmers complained about the inefficiencies of the loan personnel and felt that more staff should be added to accommodate all of them and give them better quality service. In relation to this, the poor recordkeeping of the NIA was another concern raised by the farmer-beneficiaries. Some farmers said that they experienced having to resubmit a requirement because it was lost during the process of their loan application. These issues, in turn, result in longer processing times of loan applications and delays in the release of loans, as shared by the farmers. To resolve these issues, Nueva Ecija farmer-beneficiaries proposed that additional loan officers and staff be hired and assigned in the area to better serve them.

Geographical distance from the loan source. In Iloilo, a major problem was the distance of farmers to the LBP. On average, the distance of a farmer at home to the LBP was recorded at 26 kilometers. This is an example of the downside of direct

lending when the program does not involve private institutions, like cooperatives or farmers' organizations, as credit retailers. In the survey, Iloilo recorded the highest cost for a loan application among the six provinces, with each farmer having to spend an average of PHP 1,176.49 when applying for a Sikat Saka loan. The bulk of this cost was made up of the transportation expenses of the farmer. This is not to mention the opportunity cost of the time spent in going back and forth to the LBP. Given the situation, the farmers suggested that loan officers be assigned in the field or that they make personal visits to facilitate loan transactions. They also wanted the LBP to put up ATMs that are closer to the beneficiaries' residences.

Management takeover concerns. The management takeover agreement between farmers and their IAs was a concern for both the farmers and the program implementing agencies (e.g., the LBP, the NIA, and the IAs) in North Cotabato. Although no management takeover has been done yet, all parties feel that such a condition is not suitable in the area as this will only cause conflict. Besides, they believe that taking over the farms of the beneficiaries will just further push a farmer into debt and poverty because he will lose control over his farm, which is his main source of income.

Other issues. Some issues related to transparency also came out from the interviews. These include the issues on the cadre or palakasan system in accommodating loan applications; cases of loan releases to farmers who are not supposed to be eligible; and beneficiaries whose identity as "small farmers" are questionable. Such issues were revealed in Nueva Ecija and Tarlac. Other minor issues included costly loan application, changing sets of loan requirements, delayed indemnity claims from crop insurance resulting in defaults in loan repayment, and misuse of the Sikat Saka loan.

Conclusion and Recommendations

The research findings suggest that since its implementation in 2012 the Sikat Saka Program has so far been effective in terms of reaching its intended beneficiaries, delivering appropriate and useful credit and other services that satisfy small palay farmers' demands, and making positive short-run impacts on them in terms of improving their credit access, gross palay sales, and net farm incomes.

Unlike the early generation DCPs, the Sikat Saka Program is implemented by a government financial institution (the LBP) in cooperation with a non-financial government agency (the DA). The LBP remains an effective fund administrator providing financial services to smallholders, with the necessary infrastructure and knowledge for such lending. Even without the presence of private financial

institutions or organizations as credit retailers, the program effectively reached its target beneficiaries through the helpful facilitation of IAs as loan aggregators and facilitators. Its design is holistic in approach, complementing its credit services with non-financial mechanisms to support the farmers, which are delivered in partnership with various government agencies and institutions, although this has not fully materialized yet in implementation. Contributions to financial inclusion can also be easily seen in the Sikat Saka Program as it has effectively shifted the farmers from being “unbanked” to being “banked” through the LBP.

With the acceptable design and implementation process of the program, common problems experienced in past DCPs have not been observed in the Sikat Saka Program. The program achieved low loan portfolio delinquencies; was able to sustain the availability of credit funds and to increase the flow of credit as reflected in its loan releases and coverage expansion; and reached the intended beneficiaries with increasing numbers of borrowers.

All the results lead to the conclusion that the program as a DCP has been successful in providing access to timely, adequate, and affordable production credit for small palay farmers, which is a key development objective of the program, thereby achieving an effective demand for its products and services. This is despite farmers' minor concerns in complying with a few program requirements. However, as a component of the FSSP, the program still has to improve in terms of its other two non-credit components –marketing and capacity building services. The minor dissatisfaction and issues raised by farmers were also found to be related to these components.

In view of the foregoing, the following recommendations are suggested to further improve the Sikat Saka Program:

1. Revisiting the minimum farm size, collateral and marketing contract requirements, as well as the management takeover agreement may again be necessary to reduce barriers to credit of small farmers.
2. The integrity of the screening process of the program must be maintained through stringent monitoring and evaluation of the ACPC to keep ineligible persons from gaining access to the program.
3. In addition to human resources, financial infrastructure and other technology for the program must be made accessible to the intended beneficiaries to facilitate more convenient and less costly transactions.
4. The non-financial components of the program need to be strengthened. Enhancing the integration of the activities of the partner agencies, especially the NFA, with the undertakings of the DA and the LBP is

necessary if the program also aims to improve the viability of palay production of small farmers in support of the FSSP. More conducive marketing arrangements and the pricing strategies of the NFA with the farmer-beneficiaries can be explored. Likewise, a capacity building program must be in place to complement the financial and marketing component of the program in order to achieve all the program objectives.

Acknowledgment

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Notes

- 1 Though it was originally planned to have equal proportions of beneficiaries and non-beneficiaries across the six areas, the number of farmers interviewed by type of respondent was adjusted based on the total number of beneficiaries available in each area. Some areas did not reach the target sample size due to lack of available respondents and, in cases like this, replacements had to be made either by getting more samples from the non-beneficiaries group or from the other provinces within the same group.
- 2 Due to the differences in the number of times farmers plant palay in a year and in their planting and harvesting months, only the highest yield for the last three cropping seasons was considered in the analysis. To get the gross sales of palay, farmers' gross revenues from selling their wet palay, dried palay, and milled rice during the last harvest season at the time of interview were totaled for each farmer. For farm income, the estimated net farm income during the cropping season with the highest yield was used as the outcome variable.

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Appendix Table 1. Demographic characteristics of farmer-respondents by implementation site, Philippines 2015

Characteristics	Farmer Beneficiaries (number of farmers)			Non-Beneficiaries (number of farmers)			All Farmers	
	Pilot Areas	Expansion Areas	All Farmer Beneficiaries	Pilot Areas	Expansion Areas	All Non- Beneficiaries	No.	%
Gender								
Male	106	22	128	47	76	123	251	72
Female	45	12	57	19	23	42	99	28
Total	151	34	185	66	99	165	350	100
Civil status								
Single	6	3	9	5	10	15	24	7
Married	127	31	158	57	85	142	300	86
Others	18	0	18	4	4	8	26	7
Total	151	34	185	66	99	165	350	100
Educational attainment^a								
Elem. Level	5	3	8	1	4	5	13	4
Elem. graduate	21	3	24	7	11	18	42	12
HS level	14	3	17	7	9	16	33	9
HS graduate	31	14	45	22	29	51	96	27
College level/ vocational	41	2	43	15	18	33	76	22
College graduate & postgraduate	39	9	48	14	28	42	90	26
Total	151	34	185	66	99	165	350	100
Farmer's age (in years)								
	55	52	54	54	54	54	54	
Household size (in persons)								
	4.08	4.71	4.20	4.09	4.80	4.52	4.35	
Annual household income (PhP)								
	503,463	548,557	511,750	312,429	313,201	312,892	418,003	
Annual farm income (PhP)								
	359,519	276,256	344,217	221,584	211,593	215,589	283,578	

^a Elem. = Elementary; HS = High school

Revitalizing Directed Credit Approach: Lessons Learned from
the Department of Agriculture's Sikat Saka Program

Appendix Table 2. Farming characteristics of farmer-respondents by implementation site, Philippines 2015

Characteristics	Farmer Beneficiaries (number of farmers)			Non-Beneficiaries (number of farmers)			All Farmers	
	Pilot Areas	Expansion Areas	All Farmer Beneficiaries	Pilot Areas	Expansion Areas	All Non-Beneficiaries	No.	%
Number of Rice-based Parcels								
One (1)	93	19	112	47	65	112	224	64
Two (2)	29	6	35	11	23	34	69	20
Three (3)	17	4	21	8	4	12	33	9
More than 3	12	5	17	0	7	7	24	7
Total	151	34	185	66	99	165	350	100
Tenurial Status of Farm								
Owner (fully paid)	99	19	118	43	56	99	217	62
Amortizing (partially paid)	6	0	6	2	3	5	11	3
Leaseholder	18	2	20	5	7	12	32	9
Tenant	27	12	39	14	32	46	85	24
Others ^a	1	1	2	2	1	3	5	1
Total	151	34	185	66	99	165	350	100
Type of Rice Seed Used								
Hybrid seed	49	13	62	17	35	52	114	33
Certified inbred	93	20	113	47	54	101	214	61
Good seed	7	0	7	2	5	7	14	4
Home-saved seed	0	0	0	0	4	4	4	1
Mixed ^b	2	1	3	0	1	1	4	1
Total	151	34	185	66	99	165	350	100
Rice farming experience								
(in no. of years)	28	25	28	26	26	26	27	
Area harvested to rice (in ha)	2.13	1.83	2.07	1.36	1.26	1.31	1.72	

^a "Others" include maintainer, caretaker

^b "Mixed" means both hybrid and inbred seeds were planted

Appendix Table 3. Disposal of fresh *palay* from the major rice-based parcel of farmer-respondents by implementation site, 2014-2015

Characteristics	Farmer Beneficiaries (number of farmers)			Non-Beneficiaries (number of farmers)		
	Pilot Areas	Expansion Areas	All Farmer Beneficiaries	Pilot Areas	Expansion Areas	All Non- Beneficiaries
Number of Farmers with Palay Sold^a	149 (99)	32 (94)	181 (98)	64 (97)	91 (92)	155 (94)
Major Market Outlet						
NFA	7	2	9 (5)	0	1	1 (1)
Trader	124	28	152 (80)	56	87	143 (91)
Cooperative	5	0	5 (3)	1	1	2 (1)
Assembler	14	1	15 (8)	5	1	6 (4)
Others ^b	5	4	9 (5)	2	3	5 (3)
Total	155	35	190 (100)	64	93	157 (100)
Volume Sold per Farmer (in kg/cropping)						
	8226.61	7011.08	8037.37	5,787.81	5,580.15	5,666.22
Selling Price (PhP/kg)						
	16.04	16.44	16.10	16.37	18.37	17.53

Note: Values in parentheses are proportions (%) of the farmer-respondents

^a Other market outlets/buyers include creditor/lender, miller, and seed company