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The Study of the Effect of Small Business Credit Scheme on the Performance of Corn Farming In North Lombok Regency – Indonesia

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Abstract. This research is aimed at: (1) determining the farmers' behavior in utilizing and allocating the use of Small Business Credit Scheme for and their own capital in financing of corn farming; (2) determining the effect of the using Small Business Credit Scheme on corn farming productivity; (3) finding of Break Even Point of corn farming; (4) analyzing the effect of Small Business Credit Scheme on corn farming performance; (5) determining the loyalty of farmers in complying the credit agreement with banking institutions. The respondents of this research were 84 farmers granted with Small Business Credit Scheme from Bank NTB selected through open sampling technique. The data were collected through interview, desk study, and observation. The data and the information were analyzed using statistical descriptive, break even point and rentability. The research showed that (1) farmers optimize the use of production facilities along with the constraints caused by the financial scheme of Small Business Credit Scheme together with their own capital; (2) Small Business Credit Scheme could improve the production as high as 65.84% up to 69.27%; (3) Break Even Point revenue is IDR 9.285.250/ha, Break Even Point production is 2.857 kg/ha at the farmers level of price at IDR 3.250/kg; (4) Small Business Credit Scheme had positive effect on performance corn farming as from 5.910 kg/ha to 8.375 kg/ha of dry peel harvest; (5) farmers have a high level of loyalty (> 90%) in fulfilling the agreement to pay back the credit.

Keywords: break even point, dry peel harvest, financing, loyalty, productivity,

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I. Introduction

Technology transfer is aimed at transferring the technology of research finding to the community, such as technology that has economic value, meets requirements and is easily to develop (Fidrianto, *et al.*, 2016). Technology transfer to the community is carried out through dissemination training and mentoring (Adibroto, 2002), in which transferring technology of research finding conducted by the Human Resource Development and Agricultural Instructor.

In the transfer of agricultural technology, the agents of change or human resources are needed (Yatna, 2010), such as human resources that are able to transform research finding into stages of the adoption process through an inter-institutional collaboration as cooperation between Research Institution and Community Service of Mataram University - Bank NTB - PT Sygienta and Agricultural Instructor in the development of corn agribusiness in North Lombok (Rosmilawati, *et al.*, 2017). The collaboration of the four institutions is a manifestation of four elements in management, they are 4-M (*material, man, money, and method*). Of the four elements, money is often a problem for farmers.

In every planting season, farmers complain about the limited capital (money) they have in optimizing the use of agricultural production facilities as well as to expand their farming land. In reality, capital constraints are problems in the past, however at present it can be overcome through credit scheme services provided by banking financial institutions. What is meant by the limited amount of capital by farmers is capital that can be accessed for free (without interest) or grants (Tajidan, *et al.*, 2017).

The government of the Republic of Indonesia has issued a regulation requiring government banking financial institutions to provide credit facilities to micro, small and medium enterprises including farmers. It is named Small Business Credit Scheme (SBCS) and called *Kredit Usaha Rakyat (KUR)* in Indonesian. That is, SBCS is financing provided by banking financial institutions for feasible productive economic business activities (*feasible*), yet it has not met criteria of 5'C banking bankable (*character, capability, capital, collateral and condition*) (Riyanto, 2010). Regulations issued by the Government of the Republic of Indonesia provide fiscal incentives for banks that channel SBCS in form of interest subsidies and SBCS guarantor companies. Through the policy of SBCS interest subsidy, SBCS interest continues to decrease from 16% in 2010 to 12% in

2012 and decrease again to 9% in 2016. It applies to all banks channels; BRI, BNI, Mandiri banks and provincial government-owned bank such as bank NTB. What is different is the services that each bank provided including the targets, requirements and distribution procedures of SBCS (<http://www.paduanbank.com/kredit-usaha-rakyat>; accessed on January 1st, 2018).

With the decrease of SBCS interest as well as the easier and faster service bring new hope for farmers to fulfill the financing corn farming in North Lombok Regency. In the planting season 2016/2017, SBCS has been distributed to 221 corn farmers. Of these, there were 216 farmers who were able to return their principal and interest obligations, 4 persons returned some of the principal and interest, and only 1 farmer had not returned the money he got from SBCS due to farming failure. For this success, in the planting season 2017/2018, the distribution of SBCS by Bank NTB in North Lombok Regency has been expanded become 500 corn farmers with a target area of 1,000 ha of farming land (Bank NTB, 2018).

To improve the quality of SBCS services to farmers, a multi-institutional collaboration consisting of university – Bank NTB - Production Facility Supply Company (*Supplier*) – traders – agriculture instructor has been built. University as technology providers, bank NTB as financial provider, supplier as supplier of production facilities (hybrid seeds, fertilizers and pest control substances), trader as buyer of corn products, and agricultural instructor is responsible for transferring technology to farmers.

Transferring the technology of research finding to the public should not be restricted in the contract (Indah Y., *et al.*, 2016), with an intention to provide maximum satisfaction to the community (farmers) as the recipient of the technology (acceptor). The Regional Government as the facilitator of the technology transfer can reject a contract containing the technology transfer restriction clause (<http://media.neliti.com/.../26553-ID-larangan-pembatasan-kontrak-dalam-alih-teknologi>; accessed on March 19th, 2018).

Through this service collaboration, it is hoped that the entire SBCS service system can be carried out properly and will satisfied the corn farmers. Since for the stakeholders, farmers are the main target (object) of service. In this current era of financing competition, credit offer (supply) continues to increase in one side. Therefore, the banking sector is incessantly promoting and innovating services through simplifying requirements and facilitating service procedures.

Through the SBCS service, it is expected that all the needs for corn farming production facilities can be fulfilled and gives a positive impact on improving the performance of the farming business. Theoretically, if the available resources are unlimited, the businessmen will optimize the use of production facilities to achieve maximum farming productivity.

In the farming system, productivity is a measure of farming performance that is most widely adopted by agricultural socio-economic experts. Increasing agricultural productivity is more important than increasing production, because increasing productivity gives an impact on improving the welfare of farmers and their families. Increased productivity implies the efficiency of input use in each production unit that is produced or it decreases the main cost of production to which it is expected increase the farming income.

With the availability of funding from banking financial institutions, means the capital constraint has been overcome. Hence, farmers are more flexible in utilizing capital from the family (their own capital). Combining loan capital and own capital, theoretically will improve farm performance. However, it is necessary to do research on the study of the Impact of Small Business Credit Scheme (SBCS) on Corn Farming Performance in North Lombok Regency.

The general objective of the study was to determine the impact of Small Business Credit Scheme (SBCS) on the performance of corn farming in North Lombok Regency.

Specific objectives to be achieved are:

- a. To know the behavior of farmers in utilizing and allocating the use of Small Business Credit Scheme (SBCS) and their own capital to fulfill the financing needs of corn farming;
- b. To know the impact of using SBCS on the corn farming productivity;
- c. To know the Break Even Point acceptance and production of corn farming;
- d. To analyze the impact of SBCS on the corn farming performance;
- e. To know the farmers' loyalty in complying credit agreement with banking financial institutions.

II. Research Methods

Research Location

In addition to Sumbawa and East Lombok Regency, North Lombok Regency is also known as a corn producer in West Nusa Tenggara Province, specifically in North Lombok in Bayan and Kayangan sub-district as the corn production center. Thus, these two sub-districts are determined as the research locations. The determination is done by purposive sampling technique. As sample of the villages, there are two villages with more SBCS users compared to other villages in one sub-district. Hence, the number of samples becomes four villages.

Selection of Respondents

The respondents in this study are 40 farmers who obtain SBCS from Bank NTB and use it for corn farming in the planting season of 2017/2018. Farmers who use loan capital from SBCS for farming are selected by simple random sampling technique by utilizing the frame sampling available in the Field Agriculture Instructor as a farmer companion. The number of farmer samples per village is determined by proportional techniques based on the population in each village.

Data collection technique

Data collection is done by combining several techniques as below:

- a. The survey technique means the data collection is done by structured interview with respondents who get and use SBCS to fulfill the corn farming financing.
- b. The technique of in-depth interview that is carried out to field agricultural instructor who assists farmers in the process of proposing SBCS and how it is used in corn farming.
- c. Desk study or literature review and secondary data from research results and scientific journals which are relevant to the research topic.
- d. Direct observation at the corn farming location.

Data Analysis

To achieve the research objectives, data and information analysis are carried out as follows:

- a. To achieve the first goal, that is to know the behavior of farmers in utilizing and allocating the use of SBCS and their own capital to fulfill the financing needs of their farms, the method used is descriptive statistics.
- b. To achieve the second goal, that is to know the impact of using SBCS on corn farming productivity; it is done by measuring the average productivity parameters compared to productivity data issued by Central Bureau of Statistics in North Lombok.
- c. To find out the Break Even Point of revenue and the number of production units in order to achieve the third research objective, BEP analysis is used. The amount of revenue equal to the total production cost per hectare and the amount of production when the total cost is equal to the total revenue. BEP analysis uses the following formulation (Ahmad, 1997):

$$BEP(Q) = \frac{TVC}{P - AVC} \times 1 \text{ unit}$$

$$BEP(IDR) = \frac{TVC}{H - TVC/S} \times 1 \text{ IDR}$$

Legend:

- BEP = Break even point
- TFC = Total fixed cost
- TVC = Total variable cost
- AVC = Average variable cost
- P = Price per unit of production
- S = Sales turnover
- Q = Amount of production
- IDR = Rupiah

- d. To achieve the fourth and fifth objectives of knowing the impact of SBCS on the performance of corn farming and knowing the effect of farming performance on farmer loyalty in fulfilling financial obligations, then the rentability analysis is carried out with the following formulations:

Economic Rentability (Er)

$$Er = \frac{L}{Ic + Ec}$$

Business Effort (Bu)

$$Bu = \frac{L - (Ci + Tx)}{Ic}$$

Legend

- L = Profit
- Ic = Internal capital
- Ec = External capital
- Ci = Credit interest (loan)

Tx = Tax

III. Results and Discussion

Characteristics of SBCS Customers

Small Business Credit Scheme (SBCS) is a credit program specifically for small and medium enterprises and cooperatives. SBCS is one of credit schemes number aimed to promote economic growth, create employment and increase productivity. SBCS is a subsidized loan in which part of the loan interest is financed from the State Budget (APBN) that is stated in the ministry / institution program. Especially for SBCS (food) consisting of rice, corn, livestock and other food commodities, the loan interest subsidy is borne by the Ministry of Agriculture. As one of a bank services, SBCS must meet the credit eligibility requirements known as 5 'C, namely Character Capital Collateral and Condition Each element of 5'C will be described as follows:

Character

Character is the values of honesty within the customer. Customer honesty is difficult to measure or to know, except from the experience or association concerned on holding firm commitments or promises. Experience in dealing with business with other parties can be used as a reference in assessing the character of the customer. Therefore it is necessary to know the past record (track record) concerned on fulfilling their obligations to other parties.

Based on the survey results of Bank Nusa Tenggara Barat (Bank NTB), customers who have obtained SBCS for financing corn farming shows that 82.5% of Bank NTB customers who get SBCS in 2017-2018 have experience in obtaining loans from other banks before getting SBCS credit from Bank NTB, while 17.5% customers borrow the capital from the Bank for the first time.

Table 1. Farmers' Experience in Obtaining Credit from a Bank or Cooperative

No	Description	Bank / Cooperative
1.	Experience in borrowing capital / credit	
	Ever 2 x	50.0
	Ever 1x	32.5
2.	Credit Status	
	Paid off	92.5
	Not paid off yet	7.5

Based on the respondents' acknowledgment, 92.5% stated that the credit they had received from the bank or cooperative had paid off, only 7.5% stated that it had not been paid off due to farming failure or other causes, consisting of 5% at Bank NTB and 2.5% at Bank Rakyat Indonesia (BRI), while the other banks have paid off.

From the data of the farmers experience in obtaining credit from banking financial institutions and cooperatives, it is indicated that the farmers who receive SBCS credit are generally honest, meaning that the fulfill their commitment to fulfill financial obligations in banking financial institutions and non-banking financial institutions.

The selection of SBCS customers has been carefully selected by involving community leaders and using trusted trustworthy informants such as Field Agricultural Instructor or key informants who know the customers well.

Capacity

Capacity is the ability of farmers to manage their farming business. Capacity is measured from their farming experience at least in the last 2 (two) years. In addition, provision for SBCS eligibility is experience minimum of 6 (six) months or in one time planting season. From the survey results, the average experience of farmers in corn farming is 20 planting seasons (Table 2), or almost every year they do corn farming in lading or in their own fields or others (rent, mortgage, cash and / or use loans).

The capacity of farmers to manage their farms can also be determined from the wide area of farming that they have been trying to cultivate. The average area of the largest farming they have ever cultivated is 1.88 hectares (ha) / planting season.

In line with the development of population which has impacted on agricultural land pre-segmentation, the area of corn farming per household has changed. In the 2017/2018 planting season, the average land area of corn farming is 0.81 ha with a range of 0.10 ha to 2.63 ha. The average and range of corn farming land area shows that the capacity of farmers to manage corn farming is still measured at the household scale, not included in the corporate category yet. Associated with the size of the farm credit per hectare and the nominal value of the SBCS loan realized shows that the nominal value of the loan disbursed is in the range that is still being tolerated, but exceeds the recommended average of IDR 7,000,000 / ha. The average nominal value of SBCS distributed is IDR 9,421,000 / per farmer equivalent to IDR 11,791,000 / ha.

Table 2. SBCS Customer Track Record at Bank NTB

No	Description	Bank / Cooperative
1.	Experience of corn farming (planting season)	20
2.	The average large area of corn farming which has ever cultivated Credit status	1.88
3.	The average cultivation of the last corn cultivated (in 2017/2018)	0.81
4.	Total Corn/Year	
	1x season/year (%)	77.5
	2x seasons/year (%)	22.5
5.	Experience of corn farming failure	
	Ever (%)	40.0
	Never (%)	60.0

Corn farming on dry land as the condition in North Lombok District especially in Bayan and Kayangan sub-district, where most farmers try to farm faced with the risk of water shortages especially after planting over 9 (nine) weeks. The survey result shows that 40% of farmers had failed farming due to water scarcity as a result of late rainfall, or did not rain in a few weeks after the plants reached the primordial phase. The risk of farming failure does not occur in 60% of farmers, meaning that those farmers' lands get groundwater irrigation or deep ground water pumps.

Based on secondary data obtained from the bank NTB shows that the number of Bank NTB customers who get SBCS in 2017/2018 for corn farming is 466 people consisting of 139 people in Kayangan sub-district IDR 1,222,750,000 and in Bayan sub-district IDR 2,950,000,000 with a total amount of IDR 4,172,750,000, - average loan size per farmer IDR 8,795,760, - in Kayangan sub-district and IDR 9,021,400 in Bayan sub-district.

The nominal average SBCS received by farmers both from primary data and secondary data still can be tolerated. The primary data obtained has validation liability whereby the average sample does not deviate significantly from the population average (Grefenstette, 1988).

Capital

Farmers' ability to cultivate capital for fulfilling the financing needs of farming is very limited. Farmers are faced with limited capital to fulfill all farming costs from preparation to harvest. This is understandable because the capital turnover in farming activities is very slow, which takes up to six months. Expenditures are carried out continuously starting from the land cleaning until the harvest is sold and receive cash payments. The slow capital turnover resulted in more cash outflows compared to cash inflows, especially at the beginning of the planting season to harvest. The accumulation of these expenditures after adding up shows a relatively large nominal number compared to the capital capacity owned by farmers.

Table 3. Capital Ownership of Internals and Foreign Capital of Corn Farmers

No	Type of Capital	Amount (IDR)	Percentage (%)
1	Capital	4,180,000	30.73
2	External Capital (Credit Scheme)	9,420,000	69.26
	Total	13,600,000	100.00

The technology of corn cultivation has grown rapidly in terms of the use of superior hybrid seeds, balanced fertilizers, plant pest control spacing arrangements or planting systems and regulation of cropping patterns. The use of agricultural production facilities (seeds, fertilizers and pesticides) has led farmers to increase the productivity of corn farming. As the intensification consequence, it increases the amount of capital needed because the available production facilities are products imported from industrial companies. The price of seeds and expensive fertilizers with the right dosage requires considerable costs. The amount is exceeded (not equal to) fertilizing the farmers' capital. In order to increase productivity, the choice is to find out the availability of capital from credit.

The average amount of self-capital disbursed for farming activities is 30.73% of the capital requirement of IDR16,791,000 / ha / planting season per hectare. To meet these capital requirements need additional capital from banking financial institutions or other IDR11,631,000 / ha / planting season.

The term of self-capital above means the operational capital used for farming outside of economic value of goods owned by farmers. The operational capital does not include capital in the form of agricultural land, livestock, and farmers' equipment. Farmers' land and equipment can be used as collateral.

Collateral

SBCS is a government credit program to alleviate poverty, create employment and increase productivity. As a program credit, a relatively cheap and easy policy has been formulated. Cheap seen from the way the applied fees and interest rates is handled, and easy seen from the terms and interest rates of credit (Gordy, 2000). The relatively few requirements while the loan interest is 6% a year, far lower than other types

of loans, because some of the interest is borne by the government and budgeted every year in the Program Entry List.

It is not required for collateral if the loan nominal is maximum IDR 25 million, while if the loan nominal is more than IDR25 million collateral requirements is applied. For this reason, SBCS proposed by farmers is a maximum of IDR25 million, so no one prepares collateral, meaning that farmers are still reluctant to propose loans of more than IDR25 million because the collateral is required.

Conduciveness

The situation of the regional and national economy supports the development of corn farming in North Lombok District in particular and West Nusa Tenggara Province in general. During the leadership of Governor West Nusa Tenggara has placed that the commodity of corn as a superior commodity in addition to cattle and seaweed (the Incandescent Program). The accelerated increase in corn production has gained widespread support among the community, because it is a superior program of regional governments, and nationally, the need for corn commodities is still quite high and continues to increase, especially as a direct demand of animal feed needs which also increase from year to year.

The various facilities available make it possible for farmers to develop their farming businesses, especially for the advantage of superior hybrid corn such as *bisi*, pioneer, NH122 and so forth.

From the survey results, it is informed that in general, farmers agree with the statement that it is easy to obtain seed farming production facilities, on the other hand, fertilizers are difficult to get on time. The scarcity of fertilizer is felt by some farmers, especially those not listed in the Definitive Plan for Group Activities (RDKK) proposed by the Field Agricultural Instructor because to obtain subsidized fertilizers, farmers must be members of the Farmer Group and registered in RDKK proposed by the Farmers Group and get Field Agriculture Instructor approval.

Table 4. Conduciveness of Corn Farming

No	Element	TB	TS	S	SS
1	It is easy to get seeds	12.5	5.0	72.5	10.0
2	It is easy to fertilizer	12.5	42.5	45.0	0.0
3	It is easy to get workers	12.5	2.5	82.5	2.5
4	It is easy to sell corn products	12.5	2.5	82.5	2.5
5	It is easy to get corn payments from buyers	12.5	2.5	82.5	2.5
6	It is easy to get credit	12.5	2.5	80.0	5.0

Legend:

- TB = Not compatible
- TS = Disagree
- S = Agree
- SS = Strongly agree

Furthermore, another thing that is felt by farmers is getting workers outside the family, because with the number of workers in the family still allows farmers to be able to carry out their farming business, since the area of farming is on a household scale. With an average farm area of 0.81 ha, it is possible for workers in the family to be able to carry out all their farming activities without using outside family labor, except for farmers with a farm area of more than 1.2 ha.

The most urgent thing in supporting the development of farming is the availability of markets and easy selling of the products they produce. Up to now, the demand for corn is wide and the price of corn is quite high, so many farmers are turning to cultivating lading rice and peanuts into corn commodities. In addition to the ease of selling commodities produced by farmers, farmers also agree that they feel easy to get payments, because buyers generally pay cash shortly after their production is weighed and or paid before they take the harvest.

The corn production capacity and productivity are still possible to be improved, because of the availability of idle land and marginal land as the location to develop it. Government policies that support the development and acceleration of corn production increment are felt by farmers in the form of direct assistance of superior seeds (DASS) and subsidized fertilizer assistance distributed by the Office that handles agriculture through farmer groups. The DASS program and Subsidized Fertilizer are the choices for farmers. However the DASS program does not reach neither all farmers nor all farms. Furthermore, to meet the needs of farmers for seeds and fertilizers, the government provides credit facilities named the Small Business Credit Scheme (SBCS). Credit facilities provided are in the form of a low interest rate of 6% / year or 0.5 per month, without collateral up to a nominal credit amount of IDR25 million per person, the grace period of return is 6 (six) months up to 12 months, returns can be paid in installments privately with the system of interest payments decreasing, the realization and installments of non-cash loans, the requirements are quite easy as follows:

1. Fill out the form by attaching:
 - a. Photocopy of wife / husband's electronic ID card,
 - b. Photocopy of family card,
 - c. Pas photo (Color),
 - d. Business information,
 - e. Stamp IDR6.000,-.
2. Not having a loan at a bank / cooperative (passing BI Checking)
3. Get approval from the ministry of agriculture (white list)
4. Have experienced experience of at least 6 (six) months or one planting season
5. Get guidance from institutions / government agencies or universities / other institutions
6. The type of business is included in the program credit category and is economically feasible to obtain financing in terms of character, capacity and economic conditions (Crauhy, *et al*, 2000).

SBCS is a program credit intended for individuals, not intended for Institutions / groups, so that the credit agreement is per person. Administration of loans is carried out between the bank and individual farmers or UMKM, cannot be represented by groups or cooperatives.

In accordance with the provisions contained in the Guidelines of Credit Distribution, the farmers conducting corn farming in the 2017/2018 farming season were granted the 5'C and 4'C credit scheme for the feasibility in terms of honesty, capacity, capital, collateral, and local and national economic conditions that meet the necessary requirements. Besides, they have a commitment to return, long experience in corn farming, operational capital above 50% of the amount of credit and 75% of operational costs, as well as policy support from the central and regional governments. The market conditions also allow competitive prices, as well as production activities above the main return point.

Farmers' behavior

1. Selecting the Financing Sources

Monetary and fiscal developments show an increasing number of banking financial institutions and non-bank financial institutions, as well as increasing competition in obtaining customers (Rahman, 1999). The development of the number of banking financial institutions provides many choices for farmers in obtaining financing sources. Competition in getting customers occurs both in state banks and private banks. The competition also occurs in between state banks as program credit providers.

Some alternative financing sources for farmers are:

- a. Own capital or capital that comes from the family,
- b. Loan capital sourced from People's Credit Banks (BPR),
- c. Loan capital sourced from Government Commercial Banks,
- d. Loan capital sourced from private commercial banks,
- e. Loan capital from the Community Development Partnership Program (PKBL) of Corporate Social Responsibility (CSR) of State-Owned Enterprises (BUMN) and Regional-Owned Enterprises (BUMD).

The most attractive choice for farmers is credit program with easy requirements, and with low interest. Of the various alternative sources of financing available, most facilities are as CSR from Government-Owned Company and from Government Commercial Banks.

The requirements to get additional capital from PKBL of PT Telkom CSR are as follows:

- a. Filling the form
- b. Attaching passport size photos of and along with wife/husband's ID card or certificate of domicile
- c. Attaching a copy of the family document or marriage certificate
- d. Creating a savings account in Bank Mandiri
- e. Attaching a business certificate
- f. Having a Telkomsel cell phone number (simPATI, AS)

2. The Allocation of Finance Utilization

In principle, the program or Small Business Credit Scheme (SBCS) must not be used for other businesses. The Program can only be used to meet the financing of an agreed business. For example, SBCS for corn farming can only be used to meet the financing needs of corn farming. The program should not be used for other businesses, especially not for consumer needs that are not related to corn farming.

In relation to the principle of credit utilization above, the allocation of financing utilization in this study means the proportion of the amount of credit used by farmers to buy seeds, fertilizer, and to pay labor wages on corn farming.

Based on the survey results it is known that the average nominal credit received by farmers is IDR8,954,390 (Table 5). From the nominal average of SBCS received, it was used for operational capital of

production facilities amounting to IDR 6,637,940 (74.13%), the remaining IDR2,316,450 (25.87%) was used for wages for non-family labor and living expenses tillage till harvest.

Table 5. SBSCS of Bank NTB for Corn famers during the season 2017/2018 (Bank NTB)

No	Notes	Bayan	Kayangan	Total
1	Number of Farmers	327	139	466
2	The average of credit	9,021,400	8,796,760	8,954,390
Total Credit		2,950,000,000	1,222,750,000	4,172,750,000

To assess the appropriateness of allocation of financing utilization as described above, it is necessary to have a comparison standard that is used as a reference, such as a technology package recommended by agencies / institutions acting as a companion to the corn farming development program.

Table 6. The Evaluation of the Allocation of Financing Utilization

No	Component	Credit Scheme (IDR/ha)	Allocation (IDR/ha)
1	Hybrid Seed	1,500,000	2,175,000
2	Urea Fertilizer	600,000	1,006,940
3	Ponska Fertilizer	660,000	1,036,000
4	Solid Organic Fertilizer	600,000	0
5	Liquid Organic Fertilizer	140,000	0
6	HPT Insecticide	500,000	554,410
7	Man power (wages)	3,500,000	4,586,500
8	Transport		277,770
Total		7,000,000	9,359,550

From the evaluation, it is determined that the allocation of financing utilization exceeds the credit score on all financing components. The use of all components goes beyond the recommended scheme. To fulfill the shortage of fund of the credit scheme they received, the bank has launched loans of more than IDR 7 million per person and farmers are looking for other sources of financing besides the credit schemes they received from both internal and external capital. The amount of external capital is IDR 9,420,000 (Table 3), while what they allocate to meet the needs of corn farming is IDR 9,359,550 (Table 6).

Credit schemes that are channeled to real farmers from the creditor side because farmers' contribution is needed in financing, besides preventing the misuse of credit schemes as well as developing farmers' self-assistance in meeting their financing needs. The credit scheme is only able to meet around 75% of farmers' operational costs, about 25% is financed from other sources including internal capital and / or borrowing from other parties.

Farmers' Loyalty

Farmers are very concerned about fulfilling all the required components. Farmers understood that requirements had no impact on preventing them from obtaining loan capital from the Small Business Credit Scheme of the Executing Bank. This understanding is included with threats resulting in farmers with all their abilities trying to fulfill all the required components of the requirements. In terms of fulfilling the completeness of these requirements, careful approaches have been made by the Chairperson of the Farmer Group, Field Facilitator (PL), and officers of Bank NTB.

Table 7. Farmers Loyalty

Indicator	Achievement (%)	Criteria
Completeness of Administration	100.00	Very loyal
The accuracy of Utilization	67.67	Loyal
Returning before the expiry date	92.50	Low Loyal

Source: Primary Data

Farmers' needs are not merely to meet the operational costs and investment costs of corn farming, but the needs of farmers are very complex. Funding which was originally planned to meet the operational needs of his farm could change along with various urgent needs.

In the credit contract, the loan period is one semester or six months from November 2017 to May 2018, while the age of the corn plant is four months. Harvest is estimated to be no later than April 2018, so there is a remaining one month until the due date arrives. Some farmers had already repay all their loans before the due date. The results of the survey in May 2018 showed that 97.50% of farmers had repaid their loans; only 2.50% of them who had not repay their loans for the consideration that it is not expired yet.

Break event Point of Corn Farming

1. Production, Production Value, and Production Cost

An important component in the analysis of farming is production. The average production of dry pipil corn harvest is 8,375 kg / hectare or 6,784 kg per cultivated land area (0.81 ha / farmer household). Production multiplied by the prices per unit of production is equal to production values. The average price of dry pipil corn harvest is IDR 3,250 / kg. The average value of corn farming products is IDR 27,218,750 / ha.

Table 8. Production and Production Value of Corn Farming

No	Components	Size of Corn farming (0.81 ha)	Production per Hektar
1	Production (kg)	6,784	8,375
2	Price (IDR/kg)	3,250	3,250
3	Production Value (IDR)	22,084,590	27,218,750

2. Production Cost

In the costing concept, the cost consists of fixed costs and variable costs. Fixed costs are costs that are not directly related to production and are not used up in one production process. The fixed costs includes land rent and wages of farmers as management of farming. The average dry land rent at the study site is IDR4,000,000 /ha while the farmer's salary as manager is assumed to be IDR 2,000,000 per hectare. The survey show that the average land rent is IDR4,090,750 / ha. Thus, the total fixed cost is IDR6,090,750 / ha. In this analysis, the depreciation costs of tools are excluded because they use equipment belonging to workers outside the family, so that they are inclusive in labor costs (variables). Property Tax (PBB) is also not included as a fixed cost, because it will be included in the component of profitability analysis.

Variable costs are costs that are directly related to farming activities or operations. variable costs Includes the cost of production facilities, labor costs (farm laborers), transportation costs, and other costs which are used up in one production process (semi-variable costs). Data on fixed costs and variable costs are denoted in Table 9.

Table 9. Cost of corn farming during the crop period of 2017/2018

No	Components	Size of Corn farming (0.81 ha)	Convert to a hektar
1	Fixed Cost	4,858,000	6,090,750
	Land Rent	3,238,000	4,090,750
	Manager wages	1,620,000	2,000,000
2	Cost of Variables	7,581,250	9,359,550
	Production equipment	3,866,175	4,773,050
	Seed	1,761,750	2,175,000
	Fertilizer	1,655,350	2,043,640
	Urea Fertilizer	815,625	1,006,940
	Ponska/NPK Fertilizer	839,725	1,036,700
	Pesticide	449,075	554,410
	Man Power	3,715,075	4,586,500
	Transportation	225,000	277,770
3	Total Cost	12,664,250	15,728,070

The proportion of variable costs to the overall cost is 59.86%. The implication is that BEP acceptance and BEP production are lower compared to higher fixed costs. Farmers understand the implications of their experience in farming, so costs are kept to a minimum, even on natural resources and human resources owned by farmers, such as land and labor in the family.

3. Main cost of production and the margin of contribution

The main cost of production (MCP) is equal to production costs. MCP per unit is the same as production cost per unit, while overall of MCP is equal to the total production cost. MCP per unit is calculated from the total production costs divided by the amount of production. The MCP total value is in Table 10.

Table 10. main Cost of Production (MCP) of Corn farming in 2017/2018

No	Components	Size of farming (0.81 ha)	Convert to a hektar
1	Total Cost of Production (IDR)	12,664,250	15,728,070
2	Production (kg)	6,784	8,375
3	Main Cost of Production (IDR/kg)	1,867	1,878
4	Selling price of products (IDR/kg)	3,250	3,250
5	Benefit (IDR/kg)	1,383	1,372

MCP of Corn ranges from IDR 1,867/kg to IDR 1,878/kg. With the price of harvested dried corn IDR 3,250, farmers have obtained positive profit of amount from IDR 1,372/kg up to IDR 1,383 / kg. With a productivity of 8,375 kg / ha, farming profits are in the range of IDR11,490,500 / ha to IDR 11,582,625 / ha.

Contribution margin is the difference between the selling price per unit and the average variable costs. Margin of contribution (MC) is an important component in BEP analysis. The value of the MC is in Table 11.

Tabel 11. Marjin Kontribusi Usahatani Jagung Tahun 2017-2018

No	Components	Size of farming (0.81 ha)	Convert to a hektar
1	Total Cost of Variables (IDR)	7,581,250	9,359,550
2	Production (kg)	6,784	8,375
3	The Average Cost of Variables (IDR/kg)	1,118	1,118
4	Selling Price (IDR/kg)	3,250	3,250
5	Margin of Contribution (IDR/kg)	2,132	2,132

The MC analysis is useful to determine the minimum selling price in order that business activities can continue, meaning that in a tight competitive situation where corn prices are very low due to abundant supply. In order that farmers can rise from losses, at least they should sell the product at a price of IDR2,132 / kg. If the price of corn is equal to or less than the value of the MC, the farmer should make a decision to postpone the sale until the price returns to normal, because if it is sold at prices below IDR 2,132, then it can be ascertained that farmers have difficulty covering operational costs.

3. BEP of Benefit and BEP of Production

Analysis of Break Even Point (BEP) is used to get an idea of the potential benefits or losses of each business-oriented activity. Achievement of revenue or production above or below the Break Even Point (BEP) illustrates that the business activity is in a profit position or at a loss position, that is if the receipt is above the BEP, the business activity is in a profit position, on the contrary if the receipt is below the BEP business activities are at a position of loss.

Some of the assumptions used in BEP analysis are as follows:

- a. The relationship between the quantity of use and production with production is linear;
 - b. Prices of production facilities and labor wages are constant;
 - c. Productivity is constant in every addition to the area of farming land;
 - d. The cost of renting land is IDR 4,090,750 / ha / planting season;
 - e. Constant product price of IDR 3,250 / kg;
 - f. The salary of the manager / farmer managing corn farming is IDR 2,000,000 / ha / season;
- The above assumption was arranged in accordance with the survey with the parameter of the average. With graphic method, the analysis of BEP showed the following:

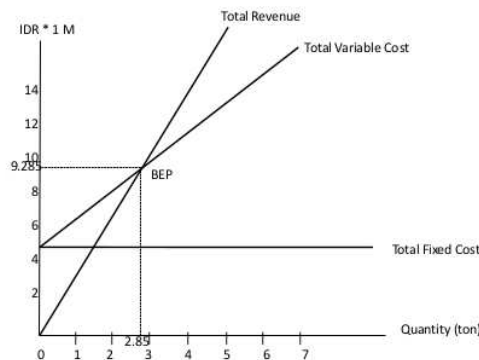


Figure 1. Graphic of Break Even Point of Corn Farming

With mathematical calculations using the contribution margin approach, it is possible to do a BEP analysis with the same results using the graph method. The mathematical calculations showed as in Table 12.

Table 12. Calculation of BEP of Revenue dan BEP of production (Primary Data Analysis)

No	Components of Calculation	BEP of Revenue	BEP of Production
1	Fixed Total Cost (IDR/ha)	6,090,750	6,090,750
2	The Average of Variable Cost (IDR/kg)	-	1,118
3	Production (kg/ha)	-	8,375
4	Selling price (IDR/kg)	-	3,250
5	Margin of Contribution	0,6560	2,132
6	Breal Even Point	IDR 9,285,250	2,857 kg

Considering to the Total Cost Variable (IDR9,359,550 / ha), and the amount of foreign capital (IDR9,420,000) BEP Revenue (IDR9,285,250 / ha) with similar parameters, indicates that farmers have optimized the resources they have for achieving maximum productivity, while loan capital sourced from Small Business Credit Scheme (SBCS) is only IDR7,000,000 / ha. Farmers try to increase financing from other sources in order to achieve maximum productivity.

Thus, the availability of SBCS had a significant contribution in the opportunities for using facilities and optimizing labor. Therefore, the provision of SBCS for fulfilling the needs of farming funding needs to be maintained and extended in the development of corn farming and other economic commodities, market opportunities. There is a certainty of buyers of the products produced by farmers.

To fulfill the above sustainability requirements, cooperation between various parties is necessary, including government policy support, banking financial institutions, processing industries, and marketing institutions supported by management of related institutions (good practice).

Table 13. Calculation of Benefit of Corn Farming

No	Components of Calculation	BEP	Activities /ha/MT
1	Fixed Total Cost (IDR)	6,090,750	6,090,750
2	Variables of Total Cost (IDR)	3,195,500	9,363,250
3	Total Cost (IDR)	9,285,250	15,454,000
4	Revenue (IDR)	9,285,250	27,218,750
5	Benefit (IDR)	-	11,764,750

The technology of jajar legowo spacing had significantly increased farming productivity (Sudirman, *et al.*, 2018). It is those that is supported by the use of superior hybrid varieties of Bisi and NH122. The productivity of corn farming applying the Jajar Legowo planting system reaches 8,375 kg / ha. Productivity of corn farming mentioned above had the BEP production of 2,857 kg / ha. Beside technological factors, the timeliness of planting also supports the increase of production since corn plants grow better for sufficient water.

The effect of SBCS on the Productivity and Performance of Corn Farmers

The effect of SBCS on the Productivity of Corn farmers

In measuring the effect of SBCS on the productivity of corn farming, it is necessary to compare between the productivity data of corn farming that gets SBCS and that of those who do not get SBCS. Farmers who get SBCS means that their financing constraints have been overcome, while those who do not get SBCS still have the opportunity to face financing constraints. Limited financing will have effect on the use of input of production. Theoretically, the limitation of financing will reduce the ability of farmers to fulfill the needs of production facilities and labor.

Table 14. Contribution of SBCS on productivity of Corn farming in 2017/2018

No	Components and sub-components	Quantitative	Contribution
1	Capital (IDR/LLG)	13,600,000	1,0000
2	Own Capital (IDR/LLG)	4,180,000	0,3073
3	Loan Capital (IDR/LLG)	9,420,000	0,6927
	SBCS (IDR/LLG)	8,954,390	0,6584
	Others (IDR/LLG)	465,610	0,0342
4	Production (kg/LLG/LLG)	6,784	-
5	Contribution of SBCS (kg/LLG)	4,467	-

The contribution of SBCS to corn farming productivity is 65.84% to 69.27%, while in the absence of SBCS, productivity reaches only 30.73% to 34.16%. Therefore, the contribution of SBCS to productivity improvement is considered significant. Beside increasing productivity, SBCS also increases the money supply in the community through wages of labor outside the family and the circulation of money from the sale of corn output. The analytical tool commonly used to measure the positive or negative effect of credit is rentability. Comparing the value of Business Rentability (BR) and Economic Rentability (ER) provides an overview of the benefits of credit.

Table 15. Calculation of Business Rentability (BR) and Economic Rentability (ER) of Corn Farming (Primary Data Processing)

No	Components / Sub Components	BR	ER
1	Capital (IDR/LLG)	13,600,000	13,600,000
2	Own capital (IDR/LLG)	4,180,000	-
3	Loan Capital (IDR/LLG)	9,420,000	-
4	SBCS (IDR/LLG)	8,954,390	-
5	Others (IDR/LLG)	465,610	-
6	Benefit	11,764,750	11,764,750
7	Interest	268,632	-
8	Tax	40,500	-
9	Rentability	2.4659	0.8651

Small Business Credit Scheme (SBCS) had a positive effect on increasing profits on corn farming by 246.59% while without SBCS it only provides profits of 86.51%, meaning that there is an increase in profits of 2.85 times.

The effect of SBCS on the Performance of Corn farmers

There are several indicators that can be used to measure the performance of farming business. The common indicators are productivity, farm revenue (profit), added value and producers' surplus. On this occasion, the added value and producer surplus will be used.

Added value is the sum of farm revenue (profit) with labor wages and land rent. The calculation of the value added of corn farming is as in Table 16.

Table 16. Added value and Producers' Surplus in Corn Farming in 2017/2018.

No	Components/ Sub-components	Added value (IDR/ha)	Producers' Surplus (IDR/ha)
1	Profits	11,764,750	11,764,750
2	Wages of labor	4,586,500	-
3	Wages of manager	2,000,000	2,000,000
4	Land rent	4,090,750	4,090,750
5	Total	22,442,000	17,855,500

The selling price of corn is quite high at IDR3,250 / kg and the increasing productivity is above 6 tons/ha in which technology and management fostering had contributed to creating conduciveness for corn farming development that have effect on the improvement of farming performance as denoted by the aspects of productivity, profit, added value and producers' surplus. To find out the effect of each factor of production on improvement of farming performance, a simultaneous regression analysis is needed.

IV. Conclusions and Suggestion

Conclusion

1. Farmers had optimally used the production facilities related to financing constraints with SBCS and from their own capital;
2. SBCS could increase farm productivity by 65.84% to 69.27%;
3. BEP of revenue is IDR9,285,250 / ha, BEP of production is 2,857 kg / ha at the selling prices of IDR3,250 / kg at farm level in 2018;
4. SBCS had a positive effect on improvement of the performance of corn farming from 5,910 tons / ha to 8,375 tons / ha of harvested dry ear;
5. Farmers have a high level of loyalty (> 90%) in fulfilling credit agreement.

Suggestion

1. The scheme of the Small Business Credit Scheme (SBCS) provides benefits for the increasing of the productivity, profit, added value and producers' surplus of corn farming, therefore it is expected that the SBCS policy will continue for the development of corn farming and other farming of high economic value agricultural commodities including horticultural commodities (vegetable and fruit);
2. Benefitting SBCS on farms increases the efficiency of capital utilization by more than 200%, therefore it is recommended that farmers take chance to get SBCS as additional capital in corn farming;
3. SBCS is complementary to agricultural cultivation technology, thus it is highly expected that the involvement of government institutions or non-governmental organizations assist the implementation of technology and facilitate farmers in obtaining the production facilities and marketing the products;
4. The use of superior hybrids, balanced fertilizers with the right dosage and the Jajar Legowo planting system are supported by the provision of funding in a system of cooperation (net working) among stakeholders, training then is suggested to continue by implementing the management information systems.

5. To find out the effect of SBCS on the performance of corn farming, simultaneous regression is necessary to employ in the analysis.

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