

## **FEASIBILITY AND SENSITIVITY STUDY OF FARMING SYSTEM TO INCREASE ACCESSIBILITY OF SMALL COFFEE FARMERS TO THE FINANCIAL INSTITUTIONS**

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### **Abstract**

The objectives of this study were: (1) to analyze financial feasibility and sensitivity of small coffee farming; (2) to identify the role and the relationship between financial institutions and small coffee farmers. The analytical methods were NPV, net B/C, IRR, payback period, sensitivity, and Venn diagram. The results of this study showed that coffee farming system in the Sidomulyo village and Pace village were financially feasible and were not sensitive to the changes of costs and selling prices. Financial institution that had close relationship and important role in Pace Village was trader collectors. Meanwhile in the Sidomulyo Village were trader collectors and Cooperative of Buah Ketakasi. The right financial model of small coffee farmers established a network of financial cooperation with the principle of "win -win solution" among the relevant institutions.

Keywords: feasibility; sensitivity; financial institutions; role; relationship.

### **Introduction**

Indonesia, one of the biggest coffee exporters in the world has 1.309.505 ha of land cultivated with coffee. This area is spread over 31 provinces. This makes Indonesia the 2<sup>nd</sup> largest coffee trader in terms of utilized area for coffee plantation. Even though Indonesia is the world's 2<sup>nd</sup> largest coffee trader in terms of cultivated area, in terms of production and export it is only at 4<sup>th</sup> position out of the big five exporters. However, in the past few years coffee commodity productivity has declined significantly. Hence, this problem needs further investigation to ascertain the reasons behind the decline in productivity. Currently, Indonesia's coffee productivity of 792 kg dry coffee bean per hectare is far bellow that of Columbia (1.220 kg/ha/year), Brazil (1.000 kg/ha/year) and even Vietnam (1.540 kg/ha/year) (Kopi Indonesia, 2008)

Coffee is one of strategic commodities and plays an important role for the national economy, particularly as a provider of employment, income and foreign exchange. As a provider of employment, coffee plantations can provide employment for more than 4 (four) millions head of family farmers and give them a decent income, create jobs for traders to exporters, estate workers and laborers of the coffee processing industry (Wahyudi et al, 2006).

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Indonesia is dominated by coffee plantations with a total plantation area of 1.06 million ha or 94.14%. Meanwhile, the plantation areas of the country and the private estates of each area are 39.3 thousand ha (3.48%) and 26.8 thousand ha (2.38%). Plantation area is managed by an estimated 2.12 million farmer households. Thus, the small scale enterprises are important in coffee farming. These conditions show that at least a coffee plantation has provided employment opportunities to more than 2 million households of farmers and hundreds of thousands of job opportunities in large plantations, traders to exporters (Directorate General of Plantation Production Development, 2001).

According to FAOSTAT data (2006), Indonesia became the country's fourth largest coffee producer after Brazil, Vietnam, and Colombia. Domestic production of each country in 2006 respectively was 2592 tons / year, 835 500 tons / year, and 652 668 tons / year. One potential area of Indonesia that produce coffee is Jember regency. Jember is the fourth largest coffee producer in East Java, after Malang, Lumajang, and Banyuwangi. Based on data from BPS Province of East Java in 2007, the total area of coffee plantation and coffee production in the four regencies such as 11.888 ha and 9.245 tones; 5352 ha and 3090 tones; 3644 ha and 2806 tones; 6012 ha and 2644 tones. The coffee production and productivity in Jember had decreased despite of the coffee total area had increased. Here are data on production, productivity and land area in Jember regency.

Table 1. Coffee Commodities Production, Productivity And Total Area In Jember Year 1994 – 2006

Year	Production (Kw)	Total Area (Ha)	Productivity (kw/ha)
1994	21.205,79	4.213,38	5,03
1995	20.331,35	4.213,44	4,83
1996	21.060,68	4.239,96	4,97
1997	29.189,66	4.215,97	6,92
1998	13.885,60	4.431,11	3,13
1999	16.291,70	4.493,35	3,63
2000	20.259,50	4.894,24	4,14
2001	20.652,70	4.906,98	4,21
2002	20.090,00	4.911,28	4,09
2003	22.549,00	5.363,84	4,20
2004	21.738,22	5.481,17	3,97
2005	19.768,68	5.524,01	3,58
2006	16.628,21	5.474,52	3,04
2007	17.010,91	5.535,25	5,30
2008	17.052,26	5.591,99	5,30
Total	297.714,26	73.490,49	62,33
Rata2	19.847,62	4.899,37	4,16

Source: Forestry and Plantation Department, 2009

The decreasing of coffee production and productivity are caused by many things, such as (1) heterogeneous condition of the coffee plantation such as variety of coffee, age, technology, management and harvesting, (2) limited capital and a relatively small-scale farmers for a good crop management, (3) Many plants have damaged because the age of the coffee plants was too old.

According to Wibowo (2007), the continuous use of land without adequate input return on coffee cultivation will result in reduced levels of soil fertility. In the end, this condition will cause decreasing of the land productivity. This situation is felt by many farmers in East Java, especially the farmers who have small land ownership. They will cultivate coffee plants with less considering the balance of nutrient content, so the impact on the result of low productivity.

Decreasing of coffee productivity can actually be said to lead to capital constraints. Based on the results of research conducted Choiri and Aryo (2008), the use of the majority of coffee farmers' capital derived from its own capital and borrow to the family or other farmers. Of course the farmer-owned capital to finance the coffee farms were limited in number, so they do not maximize cultivation. In turn, the revenue generated can not reach the maximum. Therefore it becomes necessary to conduct feasibility and sensitivity study on coffee. Thus, finance institution will be interested to distribute funds to coffee farmers.

Most of the small farmers have limited accessibility to formal financial institutions. Results of research conducted Supriatna (2003), indicating that the source of funds is the oldest at the village level informal institutions, such as the Daily Bank, moneylenders, grain merchant, merchant production facilities, and rice mills. Formal institutions were cooperatives formed later in 1977, BPR in 1988, BRI village unit in 1996, and pawn shops in 2001. Generally, small farmers and landless farmers access informal institutional. Informal institutional scheme offering loans at high interest rates, but very suitable for small farmers, such as unsecured, the procedure was simple and fast realization. Instead of small farmers cannot access formal institutions that have provided loans at low interest rates, because among other things: (a) they do not have the collateral required by the scheme, particularly the land certificate, (b) Repayment of loans each month are not suitable for farming rice with seasonal production cycle, and (c) they are not familiar with the procedure convoluted credit. Many small farmers expect credit to guarantee the items move (not a certificate of land), interest rate of 18-24 percent per year, credit in the form of cash, and short-term credit.

Actually, many institutions with different capital loan schemes offered to farmers, but in reality only accessible to certain groups while small farmers are still difficulties. For credit repair services, need to do a study on the identification of financial institutions, particularly regarding the roles and relationships between financial institutions and the coffee farmers. In the end, it will be found divulging the exact model of financing to help the coffee farmers finance, so the farmers can achieve maximum revenue.

### Methodology

This study took place in Silo sub district Jember regency, especially in the Sidomulyo village and Pace village because the area were a center of coffee commodities in Jember. The research method used descriptive method, analytic and correlation. Data collection methods used in this study includes in-depth interview, FGD and observation. The proportioned random sampling method was used to analyze the feasibility and sensitivity of coffee farming. The number of populations and samples taken at the coffee farming were presented in the following table:

Table 2. The Number Of Population And Samples On Coffee Farming In Silo Sub District Jember Regency

Village	Population (persons)	Sample (persons)
Sidomulyo	5162	40
Pace	2403	19
Total	7565	59

Analysis methods used as follows:

1. Feasibility analyses (Soetriono, 2002):
  - a. NPV (Net Present Value) is used to analyze the current value with the following formulation:

$$NPV = \sum_{t=1}^n \frac{Bt - Ct}{(1 + i)^t}$$

Descriptions:

- NPV = Net Present Value  
 Ct = Total Cost (IDR)  
 Bt = Benefit Total (US)  
 n = Time (Years)  
 i = Interest rate (%)

Criteria decision making:

- NPV > 0, the small coffee farming is feasible and profitable.

- NPV = 0, the small coffee farming does not get loss and profit (breakeven).
- NPV < 0, the small coffee farming is not worth and profitable.

b. Net B / C was used to analyze the feasibility of using the formulation:

$$\text{Net B/C} = \frac{\sum_{t=1}^n \frac{B_t - C_t}{(1+i)^t}}{\sum_{t=1}^n \frac{C_t - B_t}{(1-i)^t}} \text{ for } B_t - C_t > 0$$

Descriptions:

B = Benefits

C = Costs

B<sub>t</sub> = benefits at the time of the n

I = Interest Rate

n = Time to n

t = Time

Criteria decision making:

- B/C > 1, the small coffee farming is feasible to develop.
- B/C < 1, the small coffee farming are not eligible to be developed.

c. IRR (Internal Rate of Return) is used to analyze the level of interest rates with the following formulation:

$$IRR = i^i + \frac{NPV^i}{NPV^i - NPV^{ii}} (i^{ii} - i^i)$$

Description:

I<sup>i</sup> = Interest lowest capital

I<sup>ii</sup> = Interest highest capital

NPV<sup>i</sup> = NPV calculation at the lowest interest rate

NPV<sup>ii</sup> = NPV calculation on the highest interest rate

Criteria decision making:

- IRR > the interest of capital, the small coffee farming is feasible and profitable to cultivate.
- IRR < the interest of capital, the small coffee farming is not worth and not profitable.

d. PP (Payback Periods) is used to calculate the payback period with the following formulation:

$$PP = \frac{\text{Invest}}{\text{Total of net benefit / n years}}$$

2. To explain the sensitivity of the small coffee farming to the economic changes is used sensitivity analysis as follows:
  - a. Production costs increased 10%, while the other parameters being equal.
  - b. Coffee beans selling price decreased 10%, while the other parameters being equal.
3. To explain the role and the relationship between financial institutions and coffee farmers use Venn diagram.

## Result and Discussion

### Feasibility of the Small Coffee Farming in Sub District Silo Jember Regency

The appraisal of the small coffee farming in the sub district Silo Jember regency intended to identify costs and benefits in order to see the small coffee farming feasible or not are to be continued. Here were the results of the feasibility analysis of small coffee farming with 14.85% interest rate in effect at the time of the study (in 2009).

Table 3. The Calculation Of Npv, Net B/C, And Irr In Silo Sub District Jember Regency

Analyses	Nilai		Description
	Pace	Sidomulyo	
NPV (IDR)	9,754,423	8,224,495	feasible
Net B/C	1.47	1.63	feasible
IRR (%)	19.31	19.85	feasible
Payback Period (year)	2.51	4.07	

Table 3 showed that the NPV of the small coffee farming in the Pace village and Sidomulyo village had a positive NPV value amounting to IDR 8,224,495.00 9,754,423.00. It meant the benefit of the small coffee farming in Pace village and Sidomulyo village were IDR 9,754,423.00 and IDR 8,224,495.00. NPV value greater than 0, it indicated that total revenue was greater than the total expenditure, so the small coffee farming was feasible to continue because the enterprises were able to cover all costs incurred by farmers.

Net value of B/C on a discount rate of 14.85% in the village of Pace was 1.47. It meant that the benefits were accepted 1.47 times from the costs incurred for production activities. Meanwhile, the Net B/C of the small coffee farming in the village of Sidomulyo was 1.63. Net value of B/C indicated that the small coffee farming deserve to be continued.

IRR or internal rate of return on the small coffee farming in the Pace village and Sidomulyo village were 19.31% and 19.85%. It meant that the small coffee farming was still worth continuing, and still be able to return on capital expenditures that were used to

the prevailing interest rate amounting to 19.31% and 19.85%. At the rate the small coffee farming would be at the breakeven point of enterprises, where the business would not suffer a loss or profit. The investments payback period for a fixed fee on the small coffee farming in the Pace village and Sidomulyo village were 2.51 years and 4.07 years.

Financial feasibility analyses results in both villages showed that the small coffee farming in the village of Pace and Sidomulyo village were feasible to proceed with the investment criteria of  $NPV > 0$ ,  $Net\ B / C > 1$ , and  $IRR >$  of the bank rate prevailing at the study performed (14.85%). Pace village NPV value was greater than the Sidomulyo village NPV because the coffee average area of land in the Village of Pace greater than the coffee average area of land Sidomulyo Village. Average area of land in the village pace was 3 ha, while the average land area in the Village of Sidomulyo was 1 ha. Hence, the production and farmer's income would increase if the area of land increased too. This had implications for the duration of the investment that could be returned. Payback period of the small coffee farming in the village of Pace was faster than payback period of the small coffee farming in the village of Sidomulyo.

#### **Sensitivity of The Small Coffee Farming in Sub District Silo Jember Regency**

Economic changes can cause changes in the small coffee farming viability. Changes of cost and price can cause changes of the small coffee farming feasibility. The results of calculation of NPV, IRR, Net B/C, and the payback period with a increasing of the production cost by 10% and a decreasing of coffee prices by 10% can be seen in Table 4 and 5.

Table 4. The Results Of The Small Coffee Farming Sensitivity Analyses Cost Production Increase Amounting To 10% In Silo Sub District Jember Regency

Analyses	Value (Village of )		Description
	Pace	Sidomulyo	
NPV (IDR)	4,043,383	2,836,372	feasible
Net B/C	1.18	1.20	feasible
IRR (%)	16.43	16.54	feasible
Payback Period (years)	3.02	5.33	

Table 5. The Results Of The Small Coffee Farming Sensitivity Analyses Of Sale Price Decrease Amounting To 10% In Silo Sub District Jember Regency

Analyses	Value (Village of )		Description
	Pace	Sidomulyo	
NPV (IDR)	2,784,454	1,561,631	feasible
Net B/C	1.13	1.12	feasible
IRR (%)	16.03	15.87	feasible
Payback Period (year)	3.13	5.55	

The results of sensitivity analyses of the small coffee farming to increase production costs by 10% and decrease selling prices by 10%, indicated that the small coffee farming in the village of Pace and village of Sidomulyo were still feasible. This was because the value of the investment criteria of  $NPV > 0$ ,  $Net\ B/C > 1$ , and  $IRR >$  of the bank rate prevailing at the study (14.85%). Acquisition of sensitivity analysis results showed the NPV value of the small coffee farming of Pace village still had greater than the NPV value of the small coffee farming of Sidomulyo Village. NPV values with an increase in production costs by 10% in Pace village and Sidomulyo village each of IDR 4,043,383.00 and IDR 2,836,372.00. NPV values with a decrease in coffee prices by 10% in Pace village and Sidomulyo village each of IDR 2,784,454.00 and IDR 1,561,631.00. A change in production cost and selling price of coffee caused the coffee farming NPV obtained by people in Pace village and Sidomulyo village was very volatile. The impact of price reductions to NPV fell sharply compared to the impact of an increase in production costs. This meant that the benefits of small coffee farming in both villages more easily affected by changes in coffee prices.

Sensitivity analysis resulted with an increase in production costs and the prices showed the value of Net B/C and IRR in the two villages had decreased. However, although the value of Net B/C and IRR were declining, the small coffee farming were still decent coffee farming to proceed due to  $Net\ B/C > 1$  and the IRR were still above the 14.85% interest rate. The investment payback period for the small coffee farming in the village of Pace and villages of Sidomulyo became longer due to an increase in production costs and reduced selling prices.

### Performance of Financial Institutions

Financial institutions are grouped into two: formal and informal financial institutions. Formal financial institutions are legal institutions established by governments or individuals and have a legal entity. Informal institutions are the institutions that emerged



in a society in line with the demand for capital farmers to farm. Here are the institutions that exist in the Village of Pace and Village of Sidomulyo Silo sub district Jember Regency.

Tabel 6. Financial Institutions In Silo Sub District Jember Regency

Institutions	Pace Village	Sidomulyo Village
Formal	Credit Comittee (BKD) Cooperative (KSU)	Cooperative of Buah Ketakasi
Informal	Trader collectors	Trader collectors

Table 7. The Existance Of Financial Institutions In Pace Village And Sidomulyo Village

1	2	3	Financial institution performance			
			4	5	6	7
Desa Pace:						
Traders collectors	87	-	1 district	3,500,000	826	4,237,288
moneylenders	96	-	1 village	520,000	350	1,485,714
Farmer groups	03	-	1 group	57,208	325	147,426
KSU	04	Save-loan	1 village	25,000	29	862,068
BKD	92	Invests and consume	1 village	150,000	50	3,000,000
Desa Sidomulyo:						
Traders collectors	92	-	1 district	1,515,000	550	2,754,545
Cooperative of Buah Ketakasi	07	Save-loan	1 village	107,000	50	2,140,000

Description:

1 = Financial Institutions

2 = Year

3 = Skim

4 = Range of Services

5 = The value of credits channeled (IDR 000)

6 = Number of Borrowers (persons)

7 = The Loan per person

Table 8. Financial Institutions Characteristic In Silo Sub District

Institutions	characteristic of credit skim					
	1	2	3	4	5	6
Desa Pace						
Traders collectors	100-3000	-	money	2-8	price cut	money /product
moneylenders	10-500	-	money /input	4-12	50	money
Farmer groups	5-200	-	money	2,5-12	0,5-2	money
KSU	25-100	-	money	10	1	money
BKD	10-300	-	money	3	1	money
Desa Sidomulyo						
Traders collectors	100-3000	-	money	2-8	price cut	money /product
Cooperative of Buah Ketakasi	10-500	A	money	4; 6; 10	0,625; 0,458; 2	money

## Description:

1 = limit value (in thousands of rupiahs)

2 = Type of collateral

3 = The form of credit

4 = Long loan (months)

5 = The interest rate (% / month)

6 = The form of return

A = securities or BPKB

Each of financial institutions has a different role and relationship to the coffee farmers. Roles and relationships between coffee farmers and financial institutions could be described in a Venn diagram (Figure 2). Financial institutions that had the most important role to coffee farmers in the village of Pace was a trader collectors, while in the village of Sidomulyo were trader collectors and Cooperative of Buah Ketakasi. Traders collectors had the greatest role in financing the coffee farmers in the village of Pace because traders collectors were informal institutions rooted in society and have been formed since 1987 and survived up to now. When compared with other financial institutions, trader collectors had the most extensive range of services (including one sub-district). It had the largest credit channeled (IDR 3,500,000,000.00). It had the most number of credit recipient (826 credit recipients) and the most of credits received (IDR 4,237,288.00 per person). The second institution that had important role to farmer financing was moneylenders. Moneylenders have given credit to villagers Pace only. Since 1996, moneylenders have channeled the credits as many as IDR 520,000,000.00. The borrowers of credit were 350

people with credit scores of IDR 1,485,714.00. The third financial institutions that had important role to Pace's farmers was Rural Credit Agency (BKD). BKD only able to reach a village located in Pace village. Credit score that could be channeled to farmers amounting to IDR 150,000,000.00 and the number of borrowers were 50 people. Each of borrower obtained funds amounting IDR 3,000,000.00. Thus, although the number of borrowers slightly but everyone could get a credit score greater than moneylenders. All-round cooperative (KSU) and farmer groups have little effect on the financing role of farmers as a credit score that could be distributed to farmers, the small relative amount of IDR 25,000,000.00 and IDR 57,208,792. The number of people who borrow to KSU as many as 29 people with credit scores of IDR 862,068.00 per person. The number of people who borrowed the farmer groups as many as 325 people with credit scores of IDR 147,426.00 per person. Credits earned from five financial institutions used to finance farming, but farmers also used credits earned from KSU, BKD and moneylenders for consumption purposes and other needs. The fifth procedure borrowing to finance institutions was very easy. Farmers who borrowed money to all financial institutions did not include a collateral, unless the Cooperative of Buah Ketakasi. Collateral required by the Cooperative of Buah Ketakasi only letters BPKB (Evidence of Ownership of Motor Vehicles). The collateral was not mostly the burden of farmers and almost everyone had BPKB. All of these institutions rely on trust borrowers. The interest rates charged to farmers were very diverse. Most moneylenders charge interest as high as 50% per month. It was emerging at the time of monetary crisis, during which many people are experiencing economic downturns. Through increasing numbers of alternative financial institutions, farmers began to shift its lending to other institutions for interest to be paid to moneylenders was very high. In addition, if a farmer in arrears in the payment of moneylenders the arrears would be subject to interest. In fact, the level of non performing loan (NPL) > 5 % occurs in many trader collectors and moneylenders.

Trader collectors and Cooperative of Buah Ketakasi had a major role for farmers in the village Sidolmulyo financing. Range of merchant services of the trader collectors was greater than the cooperative of Buah Ketakasi. Credit score that could be channeled by the trader collectors was IDR 1,515,000,000.00. The number of borrowers was 550 people. Trader collectors channeled loans as many as IDR 2,754,545.00 per person. Credit score that could be channeled by the trader collectors of IDR 107,000,000.00 and the number of borrowers by 50 people. Cooperative of Buah Ketakasi channeled loans as many as IDR

2,140,000.00 per person. Channeled credit score, the number of borrowers and value per person of the trader collectors greater than the Cooperative of Buah Ketakasi. However, the cooperative of Buah Ketakasi also had a major role to coffee farmers for a period of two years, co-operative Buah Ketakasi able to channel funds to farmers in large numbers and credit received by each person was also great. The cooperative have developed rapidly. Gradually, the role of the trader collectors will be shifted by the cooperative of Buah Ketakasi.

When assessing the closeness of the relationship can be found that the trader collectors in village of Pace had a very close relationship with farmers because of easy accessibility, with no collateral and no certainty of obtaining funds from the trader collectors. Financial institutions in the village of Pace who had close relationship to distant respectively moneylenders, farmers' groups, KSU and rural credit agency (BKD). Types of financial institutions that had a very close relationship of the coffee farmers in the village of Sidomulyo were trader collectors and Cooperative Buah Ketakasi. Coffee farmers had easy access and raise capital from both institutions. Capital provided by trader collectors and Cooperative Buah Ketakasi was large enough that the requirements imposed could be met entirely by the coffee farmers in the village of Sidomulyo.

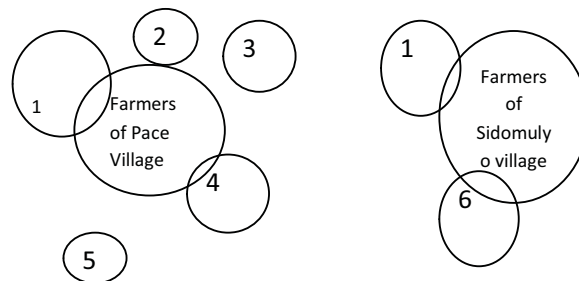


Figure 1. Financial Institutions Venn Diagram

**Description:**

The size of the circle: the benefit/the role of institutions

Distance circle: institutions relationship

1 = Traders collectors

2 = Farmer Groups

3 = BKD

4 = Moneylenders

5 = KSU

6 = Cooperative of Buah Ketakasi

Coffee farmers more financial institutions that choose to had the type requirements and ease of access to funds. Here were the factors which underlie farmers to access to financial institutions.

Table 9. The Percentage Of The Farmers Underlying Factors To Access Financial Institutions

No	Factors	Percentage (%)
1	Types of requirements and ease of access	30,56
2	The interest rate	16,67
3	Type of collateral	13,89
4	The value of credit ceiling	13,89
5	Urgent need	11,11
6	Distance institutions	8,33
7	The participation of a member	5,56
Total		100

### Coffee Farmers Financing Model in Silo Sub District Jember Regency

Coffee farming in the village of Pace and village of Sidomulyo was feasible, so that coffee farmers' actual eligible to receive funding from banks. However, the banks/formal institutions provide fewer funds to farmers. These results indicated that the informal institutions had close relationship and great role. Therefore, the farmers need the intervention of government through the Department of Plantation and Forestry to help coffee farmers in financing farming activities. Here is an alternative model that can be applied in an effort to assist farmers in raising capital that can increase farmers' income.

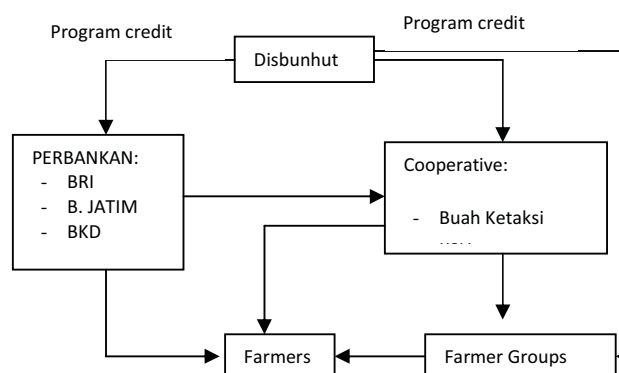


Figure 2. Scheme of Coffee Farmers Financing Model in the Silo Sub District

Figure 2 explains that the capital increase of farmers can be done if there is cooperation between the various financial institutions that exist in the Sub District of Silo to the principle of "win-win solution". The Government through the Department of Forestry and Plantations has to give out loans through the government program. This program can be channeled by cooperative or banks. Actually, the banks can provide loans with low interest rates, but farmers are constrained by the complexity of the loan application procedure. Some banking institutions such as BRI and Bank of East Java have had a credit program that can be distributed to farmers. At the time of this study, the credit program did not touch farmers in Pace Village and Sidomulyo village. Only farmers who had a broad scale and had guarantee can access credit from commercial banks. Accepted credit was not a credit program, but the general credit. Therefore, researchers develop models of financing schemes in the Sub District of Silo illustrated in Figure 2. If no program credit of the government, cooperative may request the help to the banking. Furthermore the cooperatives can lend its own funds to farmers' groups. Thus the funds available, so that farmers can increase their members in this regard are the farmer can raise funds that can be used for farming activities. Farmers who have no guarantee can borrow funds to farmers' groups, whereas for farmers who have insurance can easily access loans directly to banks or cooperatives. Farmers can pay installments each harvest or depending on mutual agreement. If the mechanism can be effective then the moneylenders and trader collectors who lend it will be abandoned by farmers. This is because both institutions were less profitable for farmers.

## **Conclusion**

Based on the results of research that has been done to obtain a conclusion that the coffee farming in the village of Pace and village of Sidomulyo was feasible, seen from the investment criteria that meet the  $NPV > 0$ ,  $Net\ B/C > 1$ , and  $IRR >$  of interest bank rate prevailing when the study was conducted (14.85%). Small coffee farming people still feasible despite the increase in production costs by 10% and decreased selling prices by 10%. Small coffee farming was not sensitive to economic change. Financial institution that had close relationship and important role in Pace Village was trader collectors. Meanwhile in the Sidomulyo Village were trader collectors and Cooperative of Buah Ketakasi. The right financial model of small coffee farmers establishes a network of financial cooperation with the principle of "win-win solution" among the relevant institutions.

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### **References**

- Choiri and Aryo, *Performance of Coffee Agribusiness and Marketing Prospects of the World*. Journal of Social Economics of Agriculture Vol 2/3 November. Jember: Socio-Economic Department of Agriculture Unej, 2008.
- Kopi Indonesia, 139/Th XIII/Februari-Maret-April. BPP AEKI, Jakarta, 2008.
- Nurmanaf, R, *Microfinance Informal Institutions Closer to the farmer*. Journal of Agricultural Policy Analysis, Volume 5 No.. 2, June 2007: 99-109. New York: Center for Socio Economic and Agricultural Policy, 2007.
- Soetrisno, et al, I. *Analysis of Benefits and Costs* Jember: Jember University, 2002.
- Supriatna, *Accessibility of Small Farmers in the Agricultural Credit Sources at the Village Level: The Case of Rice Farmers in West Nusa Tenggara*. Jakarta: Center for Agricultural Technology Assessment and Development, 2003.
- Wibowo, R. , *Plantation Commodities revitalization of East Java*. Jakarta: Indonesia Agricultural Economics Association, 2007.