

Farming under constrained budgets: Practices of agricultural credit users in Central Lombok, Indonesia

Bertani dengan anggaran terbatas: Praktik pengguna kredit pertanian di Lombok Tengah, Indonesia

Taslim Sjah

Faculty of Agriculture, University of Mataram, Indonesia

Iain Russell and Donald Cameron

School of NRSM, University of Queensland, Gatton, Australia

Abstrak

Petani Indonesia telah lama bergantung kepada kredit untuk membiayai usahatani mereka. Tulisan ini mendeskripsikan kegiatan bertani yang dilakukan oleh petani pemakai kredit di Lombok Tengah, Indonesia. Survei telah dilaksanakan pada Juli 2001 – Maret 2002 terhadap 65 petani pemakai kredit pemerintah atau swasta di tiga desa dalam kabupaten tersebut. Data dari petani dikumpulkan melalui wawancara secara tatap muka dan semi terstruktur dan dianalisis secara deskriptif. Hasil-hasil survei menunjukkan bahwa secara rata-rata petani mempunyai status sosial ekonomi yang rendah, seperti yang ditunjukkan oleh penguasaan lahan yang rendah dan kurangnya modal. Akibat keterbatasan modal, produsen biasanya menggunakan kredit untuk melangsungkan kegiatan pertaniannya, dan dengan menerapkan tingkat input yang lebih rendah dari yang direkomendasikan. Akibatnya, usahatani mereka menjadi kurang produktif dan pendapatan beserta kemampuan membayar hutang mereka menjadi menurun. Karena keterbatasan pendapatan tersebut maka petani selayaknya diberikan bantuan dana gratis alias tanpa kewajiban membayar kembali.

Key Words: Usahatani, Kredit Pertanian, Lombok Tengah

Abstract

There has been a long dependency on credit by Indonesian farmers as a result of the lack of capital to apply proper farming practices. This paper describes the farming activities applied by agricultural credit users in Central Lombok, Indonesia. A survey was conducted during July 2001- March 2002 of 65 farmers making use of government or private credit in three villages within the Regency. Data from the farmers were collected using face-to-face, semi-structured interviews, and were analysed descriptively. Survey results indicated that on average, farmers had low socio economic status, such as small land holding and lack of capital. As a consequence of their capital constraints, farmers were commonly making use of credit to finance their farming activities, in which farmers generally applied less than recommended amount of inputs. As a result, their farms become less productive and

their income and repayment capability of loans diminished. Due to such low income the producers should be granted funds rather than providing them with credit with repayment responsibility.

Key Words: Farming, Agricultural credit, Central Lombok

Introduction

Food security has been a primary purpose of Indonesian economic development (Booth 1998, Piggot et al. 1993). In particular, the Government of Indonesia attempts to increase agricultural production (especially rice) and in turn to improve farmers' income. One of many policies implemented to achieve these goals has been to provide credit to farmers throughout the country (World Bank 1992, Sumodiningrat 1999). Credit was intended to help farmers to implement improved practices, in the belief that farmers were constrained by insufficient capital. In addition, farmers are expected to be able to repay their loans from income earned from improved farming practices.

Agricultural credit provision has increased substantially in recent years, from below Rp 400 billion (A\$ 80 million) in 1997/1998 and before, to Rp 7 and 8 trillion (A\$ 1.4 and 1.6 billion) respectively in 1998/1999 and 1999/2000 (Kompas, 7 February 2000; 20 March 2000). However government credit was made available only to selected farmers in certain locations. For example, there were only a few farmer groups who could borrow government credit in the beginning of 2001 in the Province of West Nusa Tenggara, all of them were in the Regency of Central Lombok (Bimas WNT 2001). Farmers who could not obtain government credit borrowed from other sources, including private money-lenders with higher borrowing costs. In contrast to credit demand some farmers were reluctant to use credit, perceiving that credit from any source is risky (Sjah 1998, Sjah et al. 2003, Sjah et al. 2006).

As a result of the limited availability of credit and also farmers' reluctance to borrow, farmers tend to rely heavily on their own capital and only use credit as a last resort. This leads to minimising farm cost allocation and practising improper husbandry. Given the differing available amounts of farmers' funds, their farm practices could be expected to be somewhat varied.

The study reported in this paper was designed to investigate why farmers who use credit in Central Lombok, Indonesia, carried out their actual farming practices. In the regency of Central Lombok the most recent government farm credit was provided in 2001 and fell due in the following year.

Methods

This investigation applied a survey method (Babbie 1990, Fink and Kosecoff 1998, Mosher and Kalton 1985) and was conducted in face-to-face mode with 65 agricultural producers making use of farm credit, from either government or private sources in Central Lombok. This survey mode was applied in recognition of the low

level of literacy amongst respondents, language sensitivity, and the lack of telephones. In addition, the face-to-face format afforded opportunities for mixed languages (local dialect and Indonesian) to clarify understanding according to the particular situation.

Farmers were selected from three villages of three districts in Central Lombok (Table 1). Information on which farmer groups borrowing government credit and their repayment records was available from government offices (the Bank of Indonesian People (*Bank Rakyat Indonesia, BRI*) and the Departments of Agriculture and Cooperatives) in the Regency. Farmer groups were purposively selected according to their repayment levels (high, medium, and low). Individual farmer from each group was randomly chosen following the completion of lists of farmer group members. Lists of farmers were obtained from farmer group leaders. Furthermore, farmers who were using private credit were selected by using snow ball sampling, based on information provided by other interviewees. Data were collected from July 2001 to March 2002, through in-depth, semi-structured interviews with farmers, as well as from secondary information available from relevant government offices and other publications. Data were analysed using descriptive statistics, as appropriate.

Table 1. Respondent distribution by credit sources and locations of survey

Credit schemes	Number of respondents in each village			TOTAL
	Plambik (Praya Barat Daya)	Beraim (Praya Tengah)	Sengkerang (Praya Timur)	
Government	19	11	22	52
Private	3	3	7	13
Total	22	14	29	65

Agricultural climate

Farming practices cannot be detached from climate. Each crop requires certain conditions of climate, and agricultural producers need to adapt their crop choices and husbandry practices to the conditions.

The climate in Central Lombok is tropical with distinct wet and dry seasons. The wet season normally starts in October and ends in April. In the dry season, rain can still occur a few days a month. In 2001, there was 1559 mm of rainfall in 136 days (CBS Central Lombok 2002). The rainfall conditions favour rice production during rainy seasons and secondary food crops during dry seasons. Although rainfall appears to be sufficient for three crops per year, 64% of the 53,000 ha of cropping lands could only be farmed twice a year, with the rest planted once. Irrigation could not supply water to enable the third planting during the year, despite the average crop production period allowing for the possibility of planting the third crop.

Characteristics of farmers

The farmer respondents' age averaged 40 years (ranged from 20 to 60 years), of which on average 20 years had been spent in farming (ranged from 2 to 43 years). The average length of formal education of respondents was 5.9 years, ranging from 0

to 16 years. Almost half (45%) of the respondents could be categorized as functionally illiterate, for they did not attend any formal school or did not complete elementary school (ie. up to grade 5). Farming experience mostly started as a teenager, and was sometimes delayed by education.

Some farmers had jobs other than farming, provided they had a better education and consequently qualified for the jobs, such as working in village offices. In total, there were 54 family farmers who had off-farm jobs, including small trading, laboring in building development sites or on other people's farms, home industries, and others activities. All on and off-farm jobs were done by family heads (husbands), with wives and children sometimes involved. On average, there were two working persons per family out of four members per family. Total family members ranged from two (husband and wife, as virtually all of them were married) to nine (including children and other immediate relatives). The busy periods of the year were at planting and harvesting (particularly for rice), when casual non-family labor readily available was mostly required. At other times of the year family farmers were frequently underemployed, and were engaging themselves outside their own farms in attempts to earn additional incomes for families.

The main asset of farmer respondents was farmland, on which they grow seasonal food crops of many kinds. All but one farmer possessed land of this type. The average size of cropping land owned by respondents was 0.69 ha. In addition, there were three farmers who also had plantation land, which was grown mainly with perennial plants such as fruit trees and bamboo, and was cultivated less intensively than cropping land (which could usually be cropped three times within a year). Two farmers had 0.50 ha each and another had 6.00 ha. Including this land increases average cropping land possession to 0.79 ha.

There were considerable variations of farm holdings between the farmers. While the majority of farmer respondents possessed crop farm land below 1.00 ha, there were 16 farmers (25%) who had 1.00 ha or over, with the largest being 3.00 ha and the second largest 2.20 ha. The remaining 14 farmers possessed between 1.00-2.00 ha.

In addition to their land asset, some farmers also had livestock, including cattle or buffaloes (seven farmers with two head each), horses (five farmers with one each), and goats (two farmers with 7 head each). Other assets were horse-drawn carriages (five farmers), motorbikes (2 farmers), tractor (one farmer), sewing machine (one farmer), and tobacco oven (one farmer).

In short, although farmers had sufficient experience in farming, their limited assets and working capital affected their capacity to practice proper husbandry, and accordingly outside funds were required. Proper husbandry was (and still is) recommended by the Government of Indonesia. For example, the recommended practice for rice production was to plough and level farm land twice, and to apply sufficient fertilizer (300 kg Urea, 100 kg TSP (Triple Super Phosphate), and 75 kg KCl (Kalium Chloride) per hectare farm). In addition to this, farmers are required to

protect their crops from weeds, pests, and diseases. The Government has also provided recommendations for application in other crops.

The use of credit

Interviews with farmer respondents indicated that all of them had experienced borrowing before the current credit they received. A total of 83% of the respondents had experience with government credit and 58% with private sources, and nearly half of them (27 out of 65 respondents) had borrowed from both sources. Among many reasons for borrowing outside funds, the main and general one given was that farmers did not have sufficient capital to finance their farming activities or even to continue living before their farms produced the next crop (Sjah et al. 2003).

It was evident that the amount of agricultural credit supply to farmers was insufficient. In general, farmers could only obtain about 50% of the government credit they were willing to take (Rp 450,000 out of Rp 860,000). In contrast, farmers borrowing from private sources could fulfil almost all of desired credit amount of over Rp 1 million. The amount of funds that farmers wanted to borrow was based on meeting not only farm costs, but also for covering costs to run non-farm businesses and for living (30%), matching with their repayment capabilities (26%), and meeting their farm needs at the time (24%).

The obtained and desired amount of borrowings were still far from sufficient to apply proper husbandry practices. It was calculated by the government that one hectare of land requires costs of Rp 2.50 and 2.05 million respectively for growing rice and soybean (Prakosa 2000). With 0.69 hectare of cropping land, the total costs would be approximately Rp 1.4 million. Indeed, lack of capital was reported as the major problem (mentioned by 22 out of 65 farmers) constraining their farm activities.

Farming practices

The farm situation, farmers' preferences, and other external factors (eg. government policy on food production) have been reflected in farming activities in Central Lombok. On cropping lands all farmers grow rice during the rainy season (locally called 'first planting season'), commencing in October. Rice was still an exclusive choice of farmers in the second planting season, at which 47 of 65 farmers (72%) grew the crop. The exclusive choice of rice in the wet season, as in other regions, is mainly directed by the fact that this crop is the most suitable for the high moisture condition, when other crops faced with high risk of production failure. Rice is also a staple food for the Indonesian people so that if not sold, family farmers would consume it (Sjah 1998, Sjah et al. 2002, Sjah et al. 2006). In addition, this study found that rice was the most profitable crop to grow (Table 2).

Table 2. Production and income earned from crops grown in Central Lombok, 2001

Crop	Regency yield (Kg/ha) ¹	Respondent yield (Kg/ha)	Planting ²	Gross income (Rp/ha)	Cost (Rp/ha)	Net income (Rp/ha)
Rice	4,693	4,074	109	3,791,800	1,446,288	2,345,512
Soybean	1,134	566	48	1,096,360	436,799	659,561
Mung Bean	570	276	12	931,302	264,728	666,574
Tobacco	Na ³	Na ³	6	4,200,000	4,282,667	-82,667
Sweet potato	Na ³	Na ³	2	666,667	341,667	325,000

Note: ¹CBS Central Lombok (2002); ²Counted for each farmer in each season; ³Data not applicable

In the second planting season, the remaining farmers who did not plant rice chiefly grew soybean (14 farmers). Mungbean, sweet potatoes, and tobacco were each planted by one farmer.

In the third planting season there was no rice growing at all. Among the secondary food crops planted, soybean was a dominant choice of farmers (52%). This was followed by mungbean, tobacco, and sweet potato, with 11, 5, and 1 farmer respectively. Some farmers left their land fallowed for insufficient moisture for crop production in this season. The choice of soybean and mungbean was due to their relative drought resistance. As well, both crops required low production costs (Table 2).

Farmer respondents' production was lower than the average for the Regency, with soybean and mungbean performing at half the Regency yield level. This may be due to reduced level of intensification as a result of capital constraints. Input costs that farmers allocated were far less than the recommended level, mainly through reduced use of inorganic fertilisers. In turn, farmers' earnings from crops become low and insufficient to repay their debt if they financed farming activities totally from outside funds.

Farmers' income

In response to limited income earned from the main source (crops), 54 farmers also earned income from off-farm sources (for practical purposes, off-farm income was counted for all income other than from crop enterprises). The off-farm income contributed 36% of total household income of Rp five million. This was earned mainly from working outside the agricultural sector, particularly in trading activities, which were practised at the farmers' homes or outside at nearby local markets. Work in building development was mainly found outside farmers' own villages, including in Bali. Home industries, which were mainly carried out by housewives or daughters, were done at home.

Table 3. Farmers' income from all sources

Source of income	Average amount (Rp1000)	Number of households (n)
On-farm	3,387	65
Off-farm	2,251	54
Trading	1,722	23
Laboring at building development	1,349	16
Home industries	783	15
Working in village offices or others	1,945	8
Laboring on other people's farms	521	7
Others	1,837	16
Aggregate	5,258	65
	= A\$1,052 [*]	

^{*}A\$1 = Rp 5000 in December 2001

Repayment and impact of credit

The average repayment rate of 47 farmers whose credit had fallen due was 60%. It ranged from 0-100%, but scattered around the two extremes. There was also a pattern that farmers tended to behave similarly to others in their groups in repaying credit. For example, while all members of a farmer group in the Village of Plambik (in Praya Barat Daya District) had totally repaid their loans, all members of a farmer group in the Village of Sengkerang (in Praya Timur District) had not met their debt obligation at all. Other farmers from other groups had mixed repayment rates.

Farmers who had not fully repaid or only partly repaid their loans stated that they were doing so due to financial difficulties. They did not have sufficient funds to meet their debt obligations. Furthermore, some of farmers who had fully repaid their loans admitted that they could only do so by taking other borrowings (from different sources). In other words, some farmers made credit repayments not because income from their farming enterprises was sufficient, but due to other motivations. Included in these motivations were a commitment to a promise made, and wanting to be eligible for credit in the future.

The use of farm credit has a small impact. Farmers estimated themselves that credit they used increased agricultural production by 11% and farm income by 5%, on average. The improvement sourced from better farming practices, they described as more chemical use (inorganic fertilizers and pesticides), the use of high quality seeds, and more crop maintenance. The use of credit has also enabled farmers to farm without delaying activities. Income improvement was less than production increase because additional production required more costs or crop prices were lower when production increased.

There were 30 farmer respondents who observed that using credit had no impact on increasing agricultural production and farm income (counted as zero in the above calculation). These farmers observed no difference in their farm production level with or without credit. The majority of these farmers (16 respondents, 53%)

applied the same level of intensification from year to year, such that the production they observed remained the same. There were 10 farmer respondents who experienced production failures due to disease attacks or adverse weather conditions at the time of credit use. Finally, four respondents reported no production differences, explaining this in terms of the small size of their farms and the fact that they were always in debt.

Farmers frequently cited that the greater role of credit is not in increasing agricultural production or improving their income, but in helping them to sustain farm production and their living.

Discussion

This research has shown that farmers in Central Lombok have been trapped into a poverty circle under which they could become poorer as time goes on. Limited asset holdings and small earnings caused farmers to rely on outside funds to continue practicing their farming activities (and sometimes to continue their family living), and this dependence on credit has been a lifelong experience for the majority. Using outside funds brings a consequence of paying an extra cost (i.e. interest), which is much higher when farmers borrow from private sources. Farmers were reluctant to take credit even that from government, bearing in mind that they may not be able to repay the loans and could lose valuable assets put up as collateral. In a difficult situation of not having sufficient of their own capital, farmers cautiously decided to borrow credit. The amount of credit farmers wanted to take was below the recommended amount (about Rp 1 million or less out of Rp 1.4 million or over, depending on crops). Still farmers could not meet their desire for extra capital, since providers could not supply fully. Consequently, farmers tend to apply less than the recommended farming inputs, farm productivity falls (Table 2), and farmers lost the opportunity to earn a better farm income. Low income diminishes farmers' capability to repay loans, and even to finance their next farm activities. This leads to a circle of debt as once again, farmers need to look for outside funds, and so on.

Farmers were not expected to be able to make total repayment of their loans. Farmers earned the highest income from rice production (Table 2) as much as Rp 2.3 million per hectare, or Rp 1.6 million per land holding. If farmers financed their rice production totally using credit, their borrowing would be Rp 1.7 million (0.69 ha farm times Rp 2.5 million). This calculation indicates quite clearly that farmers would not be able to fully repay their loans if farming activities are totally financed through credit. It also appears that farmers' income level is insufficient for fulfilling family consumption needs. Accordingly, outside funds are required to help farmers in one way or another. Credit provision can be proposed, yet this is not a very realistic solution given the low income generation capacity of farmers. An alternative is that agricultural producers need to be granted funds without repayment obligation. This country should do this as a form of looking after its poor people, as guided the country's fundamental regulation (*Undang Undang Dasar 1945*). The granted funds appear to be better than provision of credit, which is predictively unreturnable.

Conclusion

The survey of farmers in Central Lombok found that on average, farmers had experienced farming for 20 years of their 40 year life, but lacked formal education. Their main asset was cropping land (average 0.69 ha). Due to internal capital constraints, farmers in Central Lombok were making use of credit to finance their farming activities, including production of rice as the main crop and of secondary food crops. Farmers applied less than the recommended farming practices and were limited in doing so by available funds. As a result, their farms become less productive and their repayment capability for loans diminishes.

Of 65 farmer respondents, 54 could earn extra income by engaging in a variety of activities outside their own cropping enterprises, which on average contributed 36% to family incomes of over Rp 5 million (A\$ 1 thousand).

The average credit repayment rate made by agricultural producers was 60%. The repayments did not always reflect farm production capacity, but sometimes were supported by other borrowings. The greater role of credit was not in increasing agricultural production or improving farmers' income, but in helping them to sustain farm production and their living at existing levels.

The income level generated from using credit on farms was insufficient for making loan repayment, and it appears to be not insufficient for meeting family consumption needs, too. Therefore, the producers need to be granted funds without repayment responsibility. This type of fund provision is a realistic way of helping this disadvantage community groups.

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