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NOTE

AGRICULTURAL CREDIT IN RAMJERD (FARS PROVINCE, IRAN)-SOME POLICY CONSIDERATIONS¹

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ABSTRACT

The impact of formal lending on farmers' income distribution in Ramjerd (Fars province, Iran) in 1973 was studied. The data, collected through interviews with 38 farmers, were analyzed using such criteria as credit per ha and credit/operating cost-ratios. The results revealed that formal lending had an adverse effect on farmers' income distribution.

تحقیقات کشا ورزی ایران

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اعتبارات کشا ورزی در رامجرد (فارس) - جنبه‌های ارزیابی استگزار آن

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خلاصه

اثروا مه‌ای رسمی بر روی توزیع درآمد زارعیین در منطقه رامجرد فارس در سال ۱۳۵۲ مورد مطالعه قرار گرفت. در این بررسی از اطلاعات بدست آمده از مصاحبه با ۳۸ زارع استفاده شد و در تحلیل معیارهایی نظیر مقدار اعتبار در هکتار و نسبت اعتبار به هزینه‌های جاری بکار گرفته شده است. نتایج نشان می‌دهند که وام‌های رسمی اثر معکوس بر روی توزیع درآمد زارعیین داشته است.

INTRODUCTION

The impact of formal lending on income distribution is one of the important questions that policy-makers should answer with the support of empirical data. If agricultural credit programs help to concentrate incomes, policy-makers should

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look for ways to correct this through such devices as adjusting interest rates (1, 2, 6, 7, 12, 13).

Formal lendings to farmers in Iran largely started with the establishment of Agricultural Credit Organization of Iran in 1933. In 1969, the Agricultural Development Fund of Iran was established as well for the purpose of providing large loans. These two credit institutions, though with different names, were consolidated at the end of 1979 under the new name of Agricultural Bank. Table 1 shows the situation of formal agricultural loans in Iran for the years 1961-1982. As this table shows, the value of agricultural loans has increased from 1230 million rials in 1961 to 184334 million rials in 1982. (In 1961 one US dollar was equal to 75 rials, in 1982 it was equal to 85 rials). Agricultural credit as the percent of gross domestic products has increased from 1.3% in 1961 to 16.8% in 1977 and dropped back to 9.6% in 1982.

Due to the largeness of the volume of formal agricultural credit and the policy-makers' emphasis on the improving of income distribution, studies are required to explore the impact of these loans on income distribution. This paper reports on a study carried out to obtain more information on this matter.

MATERIALS AND METHODS

This study was conducted in Ramjerd, an agricultural region located in the northwest of the city of Shiraz in the Fars province. The data utilized were obtained through interviews with 38 small farmers in the region in 1973.

The farmers in this region had used some modern inputs in 1973. Ploughing and most other land preparation activities were done by tractors and harvesting of wheat and barley were also largely mechanized. Chemical fertilizers and herbicides were used by all farmers, and most of them used improved seeds, at least for their wheat production. The farmers' main sources of income were made up by crops,

Table 1. Agricultural loans - volume and as percentage of gross domestic product (GDP) from agriculture 1961-1982[†]

| Year | GDP from agriculture at current price billion rials | Total agricultural loan [‡] million rials | Value of total loan/GDP from agriculture % | Year | GDP from agriculture at current price billion rials | Total agricultural loan million rials | Value of total loan/GDP from agriculture % |
|------|---|--|--|------|---|---------------------------------------|--|
| 1961 | 92.4 | 1230 | 1.3 | 1972 | 201.8 | 16126 | 8.0 |
| 1962 | 96.6 | 1381 | 1.4 | 1973 | 235.0 | 22643 | 9.6 |
| 1963 | 98.1 | 3427 | 3.5 | 1974 | 303.3 | 48069 | 15.8 |
| 1964 | 110.3 | 4131 | 3.7 | 1975 | 333.9 | 54713 | 16.4 |
| 1965 | 119.7 | 5479 | 4.6 | 1976 | 426.3 | 68267 | 16.0 |
| 1966 | 121.5 | 5167 | 4.2 | 1977 | 459.3 | 77133 | 16.8 |
| 1967 | 128.3 | 5188 | 4.0 | 1978 | 543.2 | 58310 | 10.7 |
| 1968 | 139.1 | 5318 | 3.8 | 1979 | 767.5 | 96479 | 12.6 |
| 1969 | 147.9 | 5735 | 3.9 | 1980 | 1083.2 | 123530 | 11.4 |
| 1970 | 163.1 | 9745 | 6.0 | 1981 | 1525.6 | 149640 | 9.8 |
| 1971 | 172.3 | 10690 | 6.2 | 1982 | 1912.1 | 184334 | 9.6 |

[†] Derived from various issues of the Annual Report and Balance Sheets of Central Bank of Iran.

[‡] Loan paid by Agricultural Credit Organization of Iran plus loan and equity share participation by Agricultural Development Bank of Iran.

livestock, off-farm jobs, and carpet weaving. Most farmers regularly bought some of the inputs and sold part of their outputs. Considering the characteristics cited, these small farmers could be viewed as semi-commercial. Their demand for credit has already increased as a result of expansion in economic activities. To use the term suggested by Patrick (8) and Penny (9), the credit market of the region was in the "demand-led" situation. The small farmers of the same region were also efficient in allocation of their resources (10).

The present paper is an analysis of loan distribution among the farmers and uses values of credit per ha and credit/operating-cost ratios. Regression coefficients were determined where needed (5).

RESULTS AND DISCUSSION

Loan Distribution

Table 2 shows that the total loan value was skewed toward the larger sized loans. It also indicates that 11% of the farmers did not receive any loan and that 34% of them received only 16% of the total amount of credit. The average amount of credit received, from formal as well as informal sources, was 24056 rials per farmer.

With regard to formal loans, rural cooperatives and banks were the only two sources available to these farmers. The farmers, on the average, received 2384 rials of formal credit. This figure constitutes 10% of the total credit obtained by the farmers. Among the 38 farmers under study, only 15 (less than 40%) of them received formal loans. The 15 formal borrowers included 12 who borrowed from cooperatives and three from banks. The pay-back period for formal loans was less than a yr and the nominal interest rate was six percent. Charges other than interest rate might have been imposed on formal loans received from rural cooperatives.

As for informal loans, a sugar processing factory,

Table 2. Loan distribution, amount of credit per ha, and credit/operating-cost ratios for Ramjerd, 1972-73.

| Total amount of credit per farmer (rials) | No. of farmers | % of farmers | % of total amount of credit | Value of total credit/farm (rials) | Formal credit/total credit % | Value of total credit/ha (rials) | Credit/operating-cost ratios [†] |
|---|----------------|--------------|-----------------------------|------------------------------------|------------------------------|----------------------------------|---|
| Non-borrowers | 4 | 11 | - | - | - | - | - |
| 0-20000 | 13 | 34 | 16 | 11192 | 14 | 2341 | 0.32 |
| 20001-40000 | 13 | 34 | 42 | 29154 | 7 | 5040 | 0.65 |
| 40001-60000 | 7 | 18 | 36 | 46946 | 14 | 6238 | 0.96 |
| Over 60000 | 1 | 3 | 7 | 61000 | - | 22182 | 4.20 |
| Total | 38 | 100 | 101 [‡] | - | - | - | - |
| Average | - | - | - | 24056 | 10 | 4258 | 0.51 |

[†]Total credit divided by crop production costs. More than 95% of the costs are cash operating costs.

[‡]Not 100 because of rounding.

peddlers and shops supplied credit to 20 (about 53%) of the farmers. The amount of informal credit per farm was 21627 rials. The sugar-processing factory did not charge interest for the relatively small loans. The interest rates for loans from peddlers and shops varied from 10 to 20%. For most of the loans more interest was also charged through higher prices on the commodities bought from the farmers.

Credit Per Ha and Credit/Operating-Cost Ratios

As illustrated in Table 2, credit per ha and credit/operating-cost ratios increased as the amount of credit per farm increased. Table 3 presents summary statistics for credit per ha and credit/operating-cost ratios for different sizes of cultivated land. As observed, the credit per ha and credit/operating-cost ratios decreased as the size of the cultivated land increased. Regressions were run to find out signs of

Table 3. Land distribution, credit per ha values, and credit/operating-cost ratios for Ramjerd in 1972-73.

| Size of cultivated land per farmer (ha) | No. of farmers | % of farmers | % of land | % of total amount of credit | Formal credit/total credit % | Value of total credit/ha (rials) | Credit/operating-cost ratios [†] |
|---|----------------|--------------|------------------|-----------------------------|------------------------------|----------------------------------|---|
| 0 - 2.50 | 2 | 5 | 2 | 3 | - | 6300 | 1.32 |
| 2.51 - 5.00 | 13 | 34 | 19 | 37 | 5 | 6779 | 1.11 |
| 5.01 - 7.50 | 8 | 21 | 17 | 19 | 10 | 3583 | 0.53 |
| 7.51 - 10.00 | 4 | 11 | 12 | 13 | 12 | 3531 | 0.44 |
| Over 10.00 | 11 | 29 | 51 | 28 | 16 | 1663 | 0.30 |
| Total | 38 | 100 | 101 [‡] | 100 | - | - | - |
| Average | - | - | - | - | 10 | 4258 | 0.51 |

[†]Total credit divided by crop production costs. More than 95% of the costs are cash operating costs.

[‡]Not 100 because of rounding.

the impact of farm size on credit per ha and credit/operating-cost ratios. As Table 4 indicates, a negative impact of farm size on the two mentioned factors is evident. These results are consistent with the findings of another study which used 1971-72 data for the same region (11).

The results imply that credit is demanded to satisfy not only crop operating-costs, but also other credit needs for livestock, carpet production, and household consumption. Credit/operating-cost ratios of larger than one support this point. Credit/operating-cost ratios of more than one illustrated in Table 3 belong to the farmers who cultivated less than five ha of land. These farmers, who comprise 39% of the sample, heavily rely on borrowings for their cash costs; yet, they acquire zero to a maximum of five percent of their credit from formal sources. That is, although the farmers under the

Table 4. The effects of farm size on credit per ha value and credit/operating-cost ratios for Ramjerd 1972-73.

| No. of observations | Constant term | Regression coefficients | SEE | F | R ² |
|---|---------------|-------------------------|------|-------|----------------|
| Credit per ha as the function of farm size | | | | | |
| 38 | 8147 | - 511 | 144 | 12.6* | 0.26 |
| Credit/operating-cost ratios as the function of farm size | | | | | |
| 38 | 1.45 | - 0.90 | 0.03 | 10.4* | 0.23 |

*Significant at 1% level of probability.

study on the average benefited very little from formal loans (10% of total loans), smaller farmers (under five ha of cultivated land) were still in a worse situation. These farmers received zero to a maximum of five percent of their credit from formal sources.

CONCLUSION AND RECOMMENDATIONS

Since formal lendings had adverse effect on farmers' income distribution, changes in credit regulations or non-credit policies in order to correct the adverse effects should have been considered. It should be pointed out that as a result of the 1979 Islamic Revolution in Iran, changes in goals, laws and regulations have been made with regard to credit (3, 4). Further studies are needed to determine the impact of agricultural credit after the revolution.

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