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Estimation of the Credit Requirements of Small Farm Households in the FAO/ University Project Area

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Abstract: To assess the credit requirements of small farm households, data collected from eight villages of the district Faisalabad were analyzed. The results of the study showed that per acre credit requirements at existing level of input use were Rs. 1412.00 and 3027.00 on the progressive and conventional farms. Per acre credit requirements of the progressive and conventional farmers at recommended level of input use were worked out to be Rs. 1473.07 and 4462.34 showing that the progressive farmers were using the inputs close to the recommended level.

Key Words: Small Farmer, Credit, Cost and Income

Introduction

Pakistan is situated in a beautiful and bountiful tract of the land where flora and fauna have been strengthening the economic base of the people since time immemorial. Thus agricultural sector can rightly be taken as the backbone of the economy of Pakistan. All other sectors directly or indirectly owe their development to the contribution of the agriculture. This sector at present shares 24.6 percent to the national GDP. Forty seven percent of the rural households are engaged in actual farming and another 15 percent are small livestock holders. Thus over 50 percent of rural population belongs to the category of those who do not own land or have only a marginal stake in the agricultural economy (Economic Survey, 1998- 99).

Moreover, number of mouths to be fed by this sector is increasing at a rate of 2.8 percent annually, further increasing the dependence on this important sector. Particularly those settled in the rural areas, constituting three fourth of the total population of the country, have no other source to defeat hunger. Thus agriculture sector has to increase its growth rate at least up to 3 percent annually to meet these requirements. (Report of National commission on agriculture, 1988). Pakistan must realize the self sufficient goals in major agricultural products but it does not seem achievable in near future because of the fact that agricultural productivity of Pakistan is still among the lowest in the world.

Our country is a land of small farmers. About 81 percent farmers are below five hectares and further 12 percent are between five and ten hectares. The proportion of the farms over 10 hectares is only 7 percent. Thus the farmers cultivating land up to 10 hectares account for the 93 percent of the total farmers in the country (Agricultural Statistics, 1998). The small farmer whether defined in terms of his family income earned or in terms of his land holding is readily recognizable in the country side. He stands out by his perennial struggle against adversity, both in realm of his environment as well as in the social sector in which he is located. The main causes of the low productivity in agriculture may be of many folds such as non availability of inputs in time, insufficient irrigation water, traditional agricultural practices, improper plant protection measures, adulterated pesticides and low fertilizer application. All these factors in turn stem from lack of funds and technical know how. Our small farming community is unable to adopt new technology at large scale. A high proportion of our framers are unable to eke out a surplus which is hardly enough to meet their personal cash obligations for household expenses. What to speak of acquiring farm machinery, pumping sets and related farm implements, they even lack the finance to purchase biochemical technologies i.e. better and healthy seed varieties, chemicals, fertilizers and remedial measures for the crops.

Outside funds in the form of credit are thus required for boosting the economy of this poor section of the society. The history of modern world has witnessed the huge expansion in the production made4 possible chiefly by the instrumentality of the credit. Access to the adequate credit however is one of the major instruments of our small farmers for the successful development of the agriculture in the country and for the well being of the farmers. In nutshell agriculture is typically hungrier and needs more loans than the other sectors of the economy. A number of the studies assessing the credit requirement of different farm categories were conducted but with the passage of time adoption of modern inputs, credit requirements of the farmers seemed to have changed. Hence a fresh study is proposed to meet the actual conditions.

Materials and Methods

Farmers in our country, particularly the small ones, are facing a tremendous challenge to modernize agriculture because improved agricultural practices/ inputs need more finance and this is only available through borrowing. Thus a study should have been conducted through out Pakistan to estimate the credit requirements of the farming community in general and that of small ones in particular. The present study is an endeavor towards the same end. The study area was confined to eight villages in one location of the university/ project

area i.e. district of Faisalabad. The selected area is fairly representative of the developed and semi developed regions of Pakistan, especially of the Punjab province. The selected villages consist of 2504 farm households, of which nearly 1925 were having land holding less than 12.5 acres. Of these, 100 farmers were selected randomly for the purpose of study. The respondents were categorized into progressive and conventional. These farmers were then surveyed regarding the adoption of he improved agricultural practices like improved seeds, chemical fertilizers, plant protection measures, tube well and tractor cultivation. An interview schedule was prepared and information regarding the farm enterprises was obtained from each respondent. The data then collected were used for the estimation of the credit requirement of the selected farmers by the following procedure:

- Estimation of the gross household income: While estimating the gross household income, the farm threshold was taken to compute the values of the field crops. Income from animals and actual remittances received from the members working off farm jobs were also considered.
- Farm expenditures: all those expenses which were incurred at the farm for the purpose of production like seed, fertilizers, pesticides, labor, electricity, harvesting etc. were also considered.
- Household consumption expenditures were also considered.
- To arrive at the disposable income farm expenses were deducted from the gross household income. Past obligations, if any, the repayment of which fell due in year of study were accounted.
- Then net available resources for financing farm operations and investment were calculated by deducting household consumption and past debt obligations from the disposable income.
- Physical input gap unfulfilled financial needs were calculated by deducting present level of input use.
- Finally, credit requirement was calculated by deducting the net available resources from physical input gap. For the estimation of the frequency of various traits of the respondents and for the sake f making comparisons among the variables, percentages and simple averages were used.

Results and Discussion

The analysis revealed that household adult unit was 4.70 and 4.75 for progressive and conventional farmers. Percentage employment in the agriculture in case of conventional farmers was more as compared to progressive farmers. Level of education may affect the planning and managerial abilities of the farmers. In progressive farmers literacy rate was higher than conventional farmers. While analyzing the farm business, the land utilization is one of the important indicators used to measure the degree of efficiency and success in farming. Land use pattern was better in progressive framers i.e. 152 percent as compared to conventional farmers which was 125 percent. The difference in the cropping intensity may be attributed to better management, timely and quicker operations on progressive farms. Cropping pattern also constitute one of the economic indicators reflecting the credit requirement of the farmers because the credit requirements depends upon the type and value of the crop grown on the farm. For maximum production higher doses of inputs are required and to use higher doses of inputs more amount of capital is needed which reflects the production credit needs of the farmers. The area under wheat crop on progressive and conventional farms was of the order 40.85 and 45.31 percent of the total cropped area respectively and sugarcane 15.17 and 15.89. The area under maize and cotton was estimated as 9.33 and10.73 percent and 4.66 and 1.74 percent respectively. Fodder accounted for 28.01 and 25.99 percent of the total area. Oil seed crop was estimated as 1.94 and 0.95 percent respectively on progressive and conventional farms. Livestock with farmers not only provides the supplementary earnings but also fulfills the food requirements. For the conventional farms it acts as a major source of drought power. The strength of the livestock is also an indicator for the determination of the credit worthiness of the farming firm. There was a minute difference in the livestock holding of both categories. On an average per farm average strength of the adult animals on progressive and conventional farms was 1.50 and 2.0 respectively. The percent farm strength of the milch animals on the respective farms was 2.96 and 2.54. Similarly the strength of the young ones was found to be 1.92 and 1.84 and the average strength of the other animals was found to be 1.08 and 0.36 respectively.

Magnitude of the production cost is a good indicator of the progressiveness, as the improved agricultural practices are more expensive and require more finance. The cost of production is money value of good and services acquired and used in the crop and livestock production. The production cost of a farming enterprise include the costs such as labor, seed fertilizer, hiring of implements, irrigation etc. The contribution of the family labor was found to be higher in case of progressive farmers as compared to the conventional farmers i.e. 66.70 percent in conventional and 80 percent in progressive farmers. Remaining was the share of the casual hired labor. No permanent hired labor was found. For the progressive farmers input use (seed, fertilizer, improved implements, and protection measures) was closer to recommended level but for the conventional farmers input use level was low. Cost on the animals at the sample farms was Rs. 15526 and Rs. 9465.26 with respect to the progressive and conventional farmers respectively. Gross household income constitute two major sources, first is the income from crops and livestock, second is the off farm income includes the income from business and non agricultural jobs. Gross household's income was calculated as Rs. 195923 for progressive farmers and 105779 for the conventional farmers. Level of the farm expenditures depends upon the scale of the farm, nature of farming activity and efficiency of farm resource use. Per farm expenditures on the progressive farms were calculated as Rs. 150534 and Rs.84887 on the conventional farms. Household expenditure on the on progressive and conventional farm categories came to Rs. 53474 and 36343 respectively. The size and consumption of the family plays an

important role in determining the level and consumption of family expenditures. Per farm consumption expenditures of the respondents on the two categories was estimated as Rs. 53474 and 36343 respectively indicating thereby that the consumption level of the progressive farmers was higher than that of the conventional ones. This one was due to the higher status of the life. Major contribution towards the totals household consumption was on food items, festivals, education and marriages in both farm categories.

Disposable income was calculated by deducting the farm expenditures from the gross household income. Per farm disposable income of two farm categories was Rs. 45389 and Rs. 20892 respectively, on per acre basis this figure stood at Rs. 5371 and Rs. 3833 respectively for both the categories. Per cropped acre disposable income of the conventional farmers was less due to their low cropping intensity as compared to the progressive farmers.

Past debt obligations and household expenditures were deducted from the disposable income in order to reach at the saving. Saving or net available resources on the respective farms were found to be negative. On per acre basis the net available resources were calculated as Rs. -1412.00 for progressive and Rs. -3027.76 for the conventional farmers. Net available resources on all the farms were fond to be negative and this finding of the study was consistent with the studies of Kotwal (1989), Nawaz (1991) and Wajahat (1998). Physical input gap is the difference in the money value between the operational cost of production at recommended level and at operational cost of production at present level. The gap between the present optimum levels of input use was estimated on per acre basis which was Rs. 61.06 in progressive farmers and Rs. 1434 in the conventional farmers. The gap was found to be less in progressive farmers because they were using inputs close to the recommended level.

Credit requirements were calculated by deducting the net available resources from the physical input gap. Per acre credit requirements at existing level of input use were Rs. 1412 and 3027 on the progressive and conventional farms respectively. Per acre credit requirement of the progressive and conventional farmers at recommended level of input use were worked out to be Rs. 1473.07 and 4462.34.

Table 1: Disposable Income on Farms (In Rs.)

Particulars	Gross households income	Farm expenses	Disposable income
Progressive			
Per farm	195923.00	150534.00	45389.00
Per acre	23185.47	17814.67	5371.47
Conventional			
Per farm	105779.01	84887.20	20892.01
Per acre	19408.97	15575.63	3833.39

Table 2: Physical Input Gap (In Rs.)

Farm categories	Per farm	Per acre	Per cropped acre
Progressive	516.02	61.06	40.15
Conventional	7818.47	1434.58	1146.40

Table 3: Total Credit Requirement for Sample Farms (In Rs.)

Particulars	Production cost		Net available resources	Physical input gap	Credit requirements	
Farm categories	At present level	At recommended level			At present level	At recommended level
Progressive						
Per farm	78990.00	79506.02	11931.56	516.02	11931.56	12447.58
Per acre	9347.92	9408.99	-1412.01	61.06	1412.01	1473.07
Conventional						
Per farm	42839.53	50658.0	16501.31	7818.3	16501.31	24319.7
Per acre	7860.39	9295.04	-3027.76	1434.5	3027.76	4462.34

Supply of agricultural credit is still less than That of its demands. Study revealed That on per acre basis the gap between credit availability and credit need Was Rs. 348.89 and 1546.87 for the progressive and conventional farmers respectively

Table 4: Estimation for Farm Categories Credit Needs, Credit Supply and Credit Gap

Farm categories	Credit needs	Credit supply	Credit gap
Progressive			
Per farm	12447.58	7963.00	4484.58
Per cropped acre	968.68	619.60	348.99
Percent	100.00	63.97	36.02
Conventional			
Per farm	24019.7	13770.00	10549.7
Per cropped acre	3565.94	2019.06	1546.87
Percent	100.00	56.62	43.37

About 75 percent of the small farmers were not happy with the credit provisions to them. Nearly 62.20 and 81.30 percent progressive and conventional farmers considered the interest rate of loans as high enough to act as a hindrance in obtaining and utilizing loans. Another 54 and 56.20 percent of the respondents complained against the complicated procedure of obtaining loans.

Suggestions:

- There exist a big gap between the credit supply and its need from institutional sources and bulk of credit requirement are still being met by non institutional sources. The farmers also complaint about the cumbersome procedure of the obtaining loans. The mark up of loans is also considered high by the majority of the farmers. So keeping all these factors in view the govt. agencies should take steps to simplify the procedure of obtaining loans with easy conditions and amount loaned should also be revised upward to narrow down the gap between its supply and need.
- Extension services play a very important role in the development of agriculture but in our country this dept. is not working up to the mark. So certain changes should be brought in the training of the extension staff so that they can supervise the farmers for the productive use of the loans.
- Regular Agricultural Credit surveys should be conducted in order to ascertain the genuine credit requirements of the farmers particularly the smaller ones. This will serve as good guideline for the policy makers to ear mark the credit needs of the farmers and will also help to identify the problems areas in the flow of agricultural credit.

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